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100ms Metering – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1000	Current, Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1001	Current, Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1002	Current, Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1003	Current, Neutral	1	Integer	RO	N	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1004	Current, Ground	1	Integer	RO	N	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1005	Current, 3-Phase Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Calculated mean of Phases A, B & C
1006	Current, Apparent RMS	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Peak instantaneous current of Phase A, B or C divided by $\sqrt{2}$

100ms Metering – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1020	Voltage, A-B	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Fundamental RMS Voltage measured between A & B
1021	Voltage, B-C	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Fundamental RMS Voltage measured between B & C
1022	Voltage, C-A	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Fundamental RMS Voltage measured between C & A
1023	Voltage, L-L Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Fundamental RMS 3 Phase Average L-L Voltage
1024	Voltage, A-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Fundamental RMS Voltage measured between A & N 4-wire system only
1025	Voltage, B-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Fundamental RMS Voltage measured between B & N 4-wire system only
1026	Voltage, C-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Fundamental RMS Voltage measured between C & N 4-wire system only
1027	Voltage, N-G	1	Integer	RO	N	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Fundamental RMS Voltage measured between N & G 4-wire system with 4 element metering only
1028	Voltage, L-N Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Fundamental RMS 3-Phase Average L-N Voltage 4-wire system only

100ms Metering – Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1040	Real Power, Phase A	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PA) 4-wire system only
1041	Real Power, Phase B	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PB) 4-wire system only
1042	Real Power, Phase C	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PC) 4-wire system only
1043	Real Power, Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system = PA+PB+PC 3 wire system = 3-Phase real power
1044	Reactive Power, Phase A	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QA) 4-wire system only
1045	Reactive Power, Phase B	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QB) 4-wire system only
1046	Reactive Power, Phase C	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QC) 4-wire system only
1047	Reactive Power, Total	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system = QA+QB+QC 3 wire system = 3-Phase real power
1048	Apparent Power, Phase A	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SA) 4-wire system only
1049	Apparent Power, Phase B	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SB) 4-wire system only
1050	Apparent Power, Phase C	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SC) 4-wire system only
1051	Apparent Power, Total	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767	4-wire system = SA+SB+SC 3 wire system = 3-Phase real power

100ms Metering – Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1060	True Power Factor, Phase A	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1061	True Power Factor, Phase B	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only

1062	True Power Factor, Phase C	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1063	True Power Factor, Total	1	Integer	RO	N	-	0.001	1,000 -2 to 2	Derived using the complete harmonic content of real and apparent power
1064	Alternate True Power Factor, Phase A	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1065	Alternate True Power Factor, Phase B	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1066	Alternate True Power Factor, Phase C	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1067	Alternate True Power Factor, Total	1	Integer	RO	N	-	0.001	0 – 2,000	Derived using the complete harmonic content of real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

100ms Metering – Frequency

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1080	Frequency	1	Integer	RO	N	-	0.01Hz 0.10Hz	(50/60Hz) 4,500 – 6,700 (400Hz) 3,500 – 4,500 (-32,768 if N/A)	Frequency of circuits being monitored. If the frequency is out of range, the register will be -32,768. Value is measured only if configured in register 3239.

1s Metering – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1100	Current, Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1101	Current, Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1102	Current, Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	RMS
1103	Current, Neutral	1	Integer	RO	N	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1104	Current, Ground	1	Integer	RO	N	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1105	Current, 3-Phase Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Calculated mean of Phases A, B & C
1106	Current, Apparent RMS	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Peak instantaneous current of Phase A, B or C divided by $\sqrt{2}$
1107	Current, Unbalance, Phase A	1	Integer	RO	N	-	0.10%	0 – 1,000	
1108	Current, Unbalance, Phase B	1	Integer	RO	N	-	0.10%	0 – 1,000	
1109	Current, Unbalance, Phase C	1	Integer	RO	N	-	0.10%	0 – 1,000	
1110	Current, Unbalance, Max	1	Integer	RO	N	-	0.10%	0 – 1,000	Percent Unbalance, Worst

1s Metering – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1120	Voltage, A-B	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	RMS Voltage measured between A & B
1121	Voltage, B-C	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	RMS Voltage measured between B & C
1122	Voltage, C-A	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	RMS Voltage measured between C & A
1123	Voltage, L-L Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	RMS 3 Phase Average L-L Voltage
1124	Voltage, A-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	RMS Voltage measured between A & N 4-wire system only

1125	Voltage, B-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	RMS Voltage measured between B & N 4-wire system only
1126	Voltage, C-N	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	RMS Voltage measured between C & N 4-wire system only
1127	Voltage, N-G	1	Integer	RO	N	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	RMS Voltage measured between N & G 4-wire system with 4 element metering only
1128	Voltage, L-N Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	RMS 3-Phase Average L-N Voltage
1129	Voltage, Unbalance, A-B	1	Integer	RO	N	-	0.10%	0 – 1,000	Percent Voltage Unbalance, Phase A-B
1130	Voltage, Unbalance, B-C	1	Integer	RO	N	-	0.10%	0 – 1,000	Percent Voltage Unbalance, Phase B-C
1131	Voltage, Unbalance, C-A	1	Integer	RO	N	-	0.10%	0 – 1,000	Percent Voltage Unbalance, Phase C-A
1132	Voltage, Unbalance, Max L-L	1	Integer	RO	N	-	0.10%	0 – 1,000	Percent Voltage Unbalance, Worst L-L
1133	Voltage, Unbalance, A-N	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	Percent Voltage Unbalance, Phase A-N 4-wire system only
1134	Voltage, Unbalance, B-N	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	Percent Voltage Unbalance, Phase B-N 4-wire system only
1135	Voltage, Unbalance, C-N	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	Percent Voltage Unbalance, Phase C-N 4-wire system only
1136	Voltage, Unbalance, Max L-N	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	Percent Voltage Unbalance, Worst L-N 4-wire system only

1s Metering – Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1140	Real Power, Phase A	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PA) 4-wire system only
1141	Real Power, Phase B	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PB) 4-wire system only
1142	Real Power, Phase C	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Real Power (PC) 4-wire system only
1143	Real Power, Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	4-wire system = PA+PB+PC 3-wire system = 3-Phase real power
1144	Reactive Power, Phase A	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QA) 4-wire system only
1145	Reactive Power, Phase B	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QB) 4-wire system only

1146	Reactive Power, Phase C	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Reactive Power (QC) 4-wire system only
1147	Reactive Power, Total	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767	4-wire system = QA+QB+QC 3 wire system = 3-Phase reactive power
1148	Apparent Power, Phase A	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SA) 4-wire system only
1149	Apparent Power, Phase B	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SB) 4-wire system only
1150	Apparent Power, Phase C	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Apparent Power (SC) 4-wire system only
1151	Apparent Power, Total	1	Integer	RO	N	F	kVA/Scale	-32,767 – 32,767	4-wire system = SA+SB+SC 3-wire system = 3-Phase apparent power

1s Metering – Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1160	True Power Factor, Phase A	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1161	True Power Factor, Phase B	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1162	True Power Factor, Phase C	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1163	True Power Factor, Total	1	Integer	RO	N	-	0.001	1,000 -2 to 2	Derived using the complete harmonic content of real and apparent power
1164	Alternate True Power Factor, Phase A	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1165	Alternate True Power Factor, Phase B	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1166	Alternate True Power Factor, Phase C	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

1167	Alternate True Power Factor, Total	1	Integer	RO	N	-	0.001	0 – 2,000	Derived using the complete harmonic content of real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1168	Displacement Power Factor, Phase A	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1169	Displacement Power Factor, Phase B	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1170	Displacement Power Factor, Phase C	1	Integer	RO	N	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1171	Displacement Power Factor, Total	1	Integer	RO	N	-	0.001	1,000 -100 to 100	Derived using only fundamental frequency of the real and apparent power
1172	Alternate Displacement Power Factor, Phase A	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1173	Alternate Displacement Power Factor, Phase B	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1174	Alternate Displacement Power Factor, Phase C	1	Integer	RO	N	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1175	Alternate Displacement Power Factor, Total	1	Integer	RO	N	-	0.001	0 – 2,000	Derived using only fundamental frequency of the real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

1s Metering – Frequency & Temperature

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1180	Frequency	1	Integer	RO	N	-	0.01Hz 0.10Hz	(50/60Hz) 4,500 – 6,700 (400Hz) 3,500 – 4,500 (-32,768 if N/A)	Frequency of circuits being monitored. If the frequency is out of range, the register will be -32,768.

1181	Temperature	1	Integer	RO	N	-	0.1°C	-1,000 – 1,000	Internal unit temperature

1s Metering – Analog Inputs

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1190	Auxiliary Analog Input Value, User-Selected Input 1	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1191	Auxiliary Analog Input Value, User-Selected Input 2	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1192	Auxiliary Analog Input Value, User-Selected Input 3	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1193	Auxiliary Analog Input Value, User-Selected Input 4	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1194	Auxiliary Analog Input Value, User-Selected Input 5	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1195	Auxiliary Analog Input Value, User-Selected Input 6	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1196	Auxiliary Analog Input Value, User-Selected Input 7	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1197	Auxiliary Analog Input Value, User-Selected Input 8	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1198	Auxiliary Analog Input Value, User-Selected Input 9	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.
1199	Auxiliary Analog Input Value, User-Selected Input 10	1	Integer	RO	N	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	Present value of user-selected auxiliary analog input. This value will be included in Min/Max determinations.

Power Quality – THD

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1200	THD/thd Current, Phase A	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion, Phase A Current Expressed as % of fundamental
1201	THD/thd Current, Phase B	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion, Phase B Current Expressed as % of fundamental
1202	THD/thd Current, Phase C	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion, Phase C Current Expressed as % of fundamental
1203	THD/thd Current, Phase N	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion, Phase N Current Expressed as % of fundamental 4-wire system only
1204	THD/thd Current, Ground	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion, Ground Current Expressed as % of fundamental
1207	THD/thd Voltage, Phase A-N	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1208	THD/thd Voltage, Phase B-N	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1209	THD/thd Voltage, Phase C-N	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1210	THD/thd Voltage, Phase N-G	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1211	THD/thd Voltage, Phase A-B	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion Expressed as % of fundamental
1212	THD/thd Voltage, Phase B-C	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion Expressed as % of fundamental
1213	THD/thd Voltage, Phase C-A	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion Expressed as % of fundamental
1215	THD/thd Voltage, 3-Phase Average L-N	1	Integer	RO	N	-	0.10%	0 – 32,767 (-32,768 if N/A)	Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1216	THD/thd Voltage, 3-Phase Average L-L	1	Integer	RO	N	-	0.10%	0 – 32,767	Total Harmonic Distortion Expressed as % of fundamental

Transformer Heating

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1218	K-Factor, Current, Phase A	1	Integer	RO	N	-	0.1	0 – 10,000	Updated with spectral components.
1219	K-Factor, Current, Phase B	1	Integer	RO	N	-	0.1	0 – 10,000	Updated with spectral components.

1220	K-Factor, Current, Phase C	1	Integer	RO	N	-	0.1	0 – 10,000	Updated with spectral components.
1221	Crest Factor, Current, Phase A	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor
1222	Crest Factor, Current, Phase B	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor
1223	Crest Factor, Current, Phase C	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor
1224	Crest Factor, Current, Neutral	1	Integer	RO	N	-	0.01	0 – 10,000 (-32,768 if N/A)	Transformer Crest Factor 4-wire system only
1225	Crest Factor, Voltage, A-N/A-B	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1226	Crest Factor, Voltage, B-N/B-C	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1227	Crest Factor, Voltage, C-N/C-A	1	Integer	RO	N	-	0.01	0 – 10,000	Transformer Crest Factor Voltage C-N (4-wire system) Voltage C-A (3-wire system)

Fundamental Magnitudes & Angles – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1230	Current Fundamental RMS Magnitude, Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1231	Current Fundamental Coincident Angle, Phase A	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N/A-B Voltage Angle
1232	Current Fundamental RMS Magnitude, Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1233	Current Fundamental Coincident Angle, Phase B	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N/A-B Voltage Angle
1234	Current Fundamental RMS Magnitude, Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1235	Current Fundamental Coincident Angle, Phase C	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N/A-B Voltage Angle
1236	Current Fundamental RMS Magnitude, Neutral	1	Integer	RO	N	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1237	Current Fundamental Coincident Angle, Neutral	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,768 if N/A)	Referenced to A-N 4-wire system only

1238	Current Fundamental RMS Magnitude, Ground	1	Integer	RO	N	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	
1239	Current Fundamental Coincident Angle, Ground	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,768 if N/A)	Referenced to A-N

Fundamental Magnitudes & Angles – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1244	Voltage Fundamental RMS Magnitude, A-N/A-B	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1245	Voltage Fundamental Coincident Angle, A-N/A-B	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N (4-wire) or A-B (3-wire)
1246	Voltage Fundamental RMS Magnitude, B-N/B-C	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1247	Voltage Fundamental Coincident Angle, B-N/B-C	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N (4-wire) or A-B (3-wire)
1248	Voltage Fundamental RMS Magnitude, C-N/C-A	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1249	Voltage Fundamental Coincident Angle, C-N/C-A	1	Integer	RO	N	-	0.1°	0 – 3,599	Referenced to A-N (4-wire) or A-B (3-wire)
1250	Voltage Fundamental RMS Magnitude, N-G	1	Integer	RO	N	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1251	Voltage Fundamental Coincident Angle, N-G	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,768 if N/A)	Referenced to A-N4-wire system only

Fundamental Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1255	Fundamental Real Power, Phase A	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1256	Fundamental Real Power, Phase B	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1257	Fundamental Real Power, Phase C	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1258	Fundamental Real Power, Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	
1259	Fundamental Reactive Power, Phase A	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

1260	Fundamental Reactive Power, Phase B	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1261	Fundamental Reactive Power, Phase C	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1262	Fundamental Reactive Power, Total	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767	

Distortion Power & Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1264	Distortion Power, Phase A	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1265	Distortion Power, Phase B	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1266	Distortion Power, Phase C	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1267	Distortion Power, Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	
1268	Distortion Power Factor, Phase A	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1269	Distortion Power Factor, Phase B	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1270	Distortion Power Factor, Phase C	1	Integer	RO	N	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1271	Distortion Power Factor, Total	1	Integer	RO	N	-	0.10%	0 – 1,000	

Harmonic Current & Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1274	Harmonic Current, Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1275	Harmonic Current, Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1276	Harmonic Current, Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1277	Harmonic Current, Neutral	1	Integer	RO	N	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only

1278	Harmonic Voltage, A-N/A-B	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1279	Harmonic Voltage, B-N/B-C	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1280	Harmonic Voltage, C-N/C-A	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1281	Total Demand Distortion	1	Integer	RO	N	-	0.10%	0 – 1,000	Calculated based on Peak Current Demand Over Last Year entered by user in register 3233
1282	Harmonic Power Flow	1	Bitmap	RO	N	-	-	0x0000 – 0x0F0F	Describes harmonic power flow per phase and total 0 = into load, 1 = out of load Bit 00 = kW Phase A Bit 01 = kW Phase B Bit 02 = kW Phase C Bit 03 = kW Total Bit 04 = reserved Bit 05 = reserved Bit 06 = reserved Bit 07 = reserved Bit 08 = kVAr Phase A Bit 09 = kVAr Phase B Bit 10 = kVAr Phase C Bit 11 = kVAr Total Bit 12 = reserved Bit 13 = reserved Bit 14 = reserved Bit 15 = reserved

Sequence Components

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1284	Current, Positive Sequence, Magnitude	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1285	Current, Positive Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1286	Current, Negative Sequence, Magnitude	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
1287	Current, Negative Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1288	Current, Zero Sequence, Magnitude	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	

1289	Current, Zero Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1290	Voltage, Positive Sequence, Magnitude	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
1291	Voltage, Positive Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1292	Voltage, Negative Sequence, Magnitude	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
1293	Voltage, Negative Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1294	Voltage, Zero Sequence, Magnitude	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
1295	Voltage, Zero Sequence, Angle	1	Integer	RO	N	-	0.1	0 – 3,599	
1296	Current, Sequence, Unbalance	1	Integer	RO	N	-	0.10%	0 – 10,000	(Negative Sequence + Zero Sequence) / Positive Sequence
1297	Voltage, Sequence, Unbalance	1	Integer	RO	N	-	0.10%	0 – 10,000	(Negative Sequence + Zero Sequence) / Positive Sequence
1298	Current, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 10,000	Negative Sequence / Positive Sequence
1299	Voltage, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 10,000	Negative Sequence / Positive Sequence

Minimum – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1300	Minimum Current, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1301	Minimum Current, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1302	Minimum Current, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1303	Minimum Current, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1304	Minimum Current, Ground	1	Integer	RO	Y	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	Minimum calculated RMS ground current
1305	Minimum Current, 3-Phase Average	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	Minimum calculated mean of Phases A, B & C
1306	Minimum Current, Apparent RMS	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	Minimum peak instantaneous current of Phase A, B or C divided by √2
1307	Minimum Current Unbalance, Phase A	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1308	Minimum Current Unbalance, Phase B	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1309	Minimum Current Unbalance, Phase C	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1310	Minimum Current Unbalance, Max	1	Integer	RO	Y	-	0.10%	0 – 1,000	

Minimum – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1320	Minimum Voltage, A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Minimum fundamental RMS Voltage between A & B
1321	Minimum Voltage, B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Minimum fundamental RMS Voltage between B & C
1322	Minimum Voltage, C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Minimum fundamental RMS Voltage between C & A
1323	Minimum Voltage, L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Minimum fundamental RMS Average L-L Voltage
1324	Minimum Voltage, A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Minimum fundamental RMS Voltage between A & N 4-wire system only

1325	Minimum Voltage, B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Minimum fundamental RMS Voltage between B & N 4-wire system only
1326	Minimum Voltage, C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Minimum fundamental RMS Voltage between C & N 4-wire system only
1327	Minimum Voltage, N-G	1	Integer	RO	Y	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Minimum fundamental RMS Voltage between N & G 4-wire system with 4-element metering only
1328	Minimum Voltage, L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Minimum fundamental RMS L-N Voltage 4-wire system only
1329	Minimum Voltage Unbalance, A-B	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1330	Minimum Voltage Unbalance, B-C	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1331	Minimum Voltage Unbalance, C-A	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1332	Minimum Voltage Unbalance, Max L-L	1	Integer	RO	Y	-	0.10%	0 – 1,000	Minimum percent Voltage Unbalance, Worst L-L Depends on absolute value
1333	Minimum Voltage Unbalance, A-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1334	Minimum Voltage Unbalance, B-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1335	Minimum Voltage Unbalance, C-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1336	Minimum Voltage Unbalance, Max L-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	Minimum percent Voltage Unbalance, Worst L-N Depends on absolute value (4-wire system only)

Minimum – Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1340	Minimum Real Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Real Power (PA) 4-wire system only
1341	Minimum Real Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Real Power (PB) 4-wire system only
1342	Minimum Real Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Real Power (PC) 4-wire system only
1343	Minimum Real Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	4-wire system = PA+PB+PC 3 wire system = 3-Phase real power
1344	Minimum Reactive Power, Phase A	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Reactive Power (QA) 4-wire system only
1345	Minimum Reactive Power, Phase B	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Reactive Power (QB) 4-wire system only

1346	Minimum Reactive Power, Phase C	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Reactive Power (QC) 4-wire system only
1347	Minimum Reactive Power, Total	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	4-wire system = QA+QB+QC 3-wire system = 3-Phase reactive power
1348	Minimum Apparent Power, Phase A	1	Integer	RO	Y	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Apparent Power (SA) 4-wire system only
1349	Minimum Apparent Power, Phase B	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Apparent Power (SB) 4-wire system only
1350	Minimum Apparent Power, Phase C	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767 (-32,768 if N/A)	Minimum Apparent Power (SC) 4-wire system only
1351	Minimum Apparent Power, Total	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767	4-wire system = SA+SB+SC 3-wire system = 3-Phase apparent power

Minimum – Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1360	Minimum True Power Factor, Phase A	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1361	Minimum True Power Factor, Phase B	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1362	Minimum True Power Factor, Phase C	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power. 4-wire system only
1363	Minimum True Power Factor, Total	1	Integer	RO	Y	-	0.001	1,000 -2 to 2	Derived using the complete harmonic content of real and apparent power
1364	Minimum Alternate True Power Factor, Phase A	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1365	Minimum Alternate True Power Factor, Phase B	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1366	Minimum Alternate True Power Factor, Phase C	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

1367	Minimum Alternate True Power Factor, Total	1	Integer	RO	Y	-	0.001	0 – 2,000	Derived using the complete harmonic content of real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1368	Minimum Displacement Power Factor, Phase A	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1369	Minimum Displacement Power Factor, Phase B	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1370	Minimum Displacement Power Factor, Phase C	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1371	Minimum Displacement Power Factor, Total	1	Integer	RO	Y	-	0.001	1,000 -2 to 2	Derived using only fundamental frequency of the real and apparent power
1372	Minimum Alternate Displacement Power Factor, Phase A	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1373	Minimum Alternate Displacement Power Factor, Phase B	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1374	Minimum Alternate Displacement Power Factor, Phase C	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1375	Minimum Alternate Displacement Power Factor, Total	1	Integer	RO	Y	-	0.001	0 – 2,000	Derived using only fundamental frequency of the real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

Minimum – Frequency & Temperature

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1380	Minimum Frequency	1	Integer	RO	Y	-	0.01Hz 0.10Hz	(50/60Hz) 4,500 – 6,700 (400Hz) 3,500 – 4,500 (-32,768 if N/A)	Minimum frequency of circuits being monitored. If the frequency is out of range, the register will be -32,768.

1381	Minimum Temperature	1	Integer	RO	Y	-	0.1°C	-1,000 – 1,000	Minimum internal unit temperature

Minimum – Analog Inputs

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1390	Minimum Auxiliary Analog Input Value, User-Selected Input 1	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1391	Minimum Auxiliary Analog Input Value, User-Selected Input 2	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1392	Minimum Auxiliary Analog Input Value, User-Selected Input 3	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1393	Minimum Auxiliary Analog Input Value, User-Selected Input 4	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1394	Minimum Auxiliary Analog Input Value, User-Selected Input 5	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1395	Minimum Auxiliary Analog Input Value, User-Selected Input 6	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1396	Minimum Auxiliary Analog Input Value, User-Selected Input 7	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1397	Minimum Auxiliary Analog Input Value, User-Selected Input 8	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1398	Minimum Auxiliary Analog Input Value, User-Selected Input 9	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1399	Minimum Auxiliary Analog Input Value, User-Selected Input 10	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	

Minimum – THD

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1400	Minimum THD/thd Current, Phase A	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion, Phase A Current Expressed as % of fundamental
1401	Minimum THD/thd Current, Phase B	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion, Phase B Current Expressed as % of fundamental
1402	Minimum THD/thd Current, Phase C	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion, Phase C Current Expressed as % of fundamental

1403	Minimum THD/thd Current, Phase N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion, Phase N Current Expressed as % of fundamental 4-wire system only
1404	Minimum THD/thd Current, Ground	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion, Ground Current Expressed as % of fundamental
1407	Minimum THD/thd Voltage, Phase A-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1408	Minimum THD/thd Voltage, Phase B-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1409	Minimum THD/thd Voltage, Phase C-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1410	Minimum THD/thd Voltage, Phase N-G	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1411	Minimum THD/thd Voltage, Phase A-B	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion Expressed as % of fundamental
1412	Minimum THD/thd Voltage, Phase B-C	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion Expressed as % of fundamental
1413	Minimum THD/thd Voltage, Phase C-A	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion Expressed as % of fundamental
1415	Minimum THD/thd Voltage, 3-Phase Average L-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Minimum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1416	Minimum THD/thd Voltage, 3-Phase Average L-L	1	Integer	RO	Y	-	0.10%	0 – 32,767	Minimum Total Harmonic Distortion Expressed as % of fundamental

Minimum – Transformer Heating

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1418	Minimum Current K-Factor, Phase A	1	Integer	RO	Y	-	0.1	0 – 10,000	
1419	Minimum Current K-Factor, Phase B	1	Integer	RO	Y	-	0.1	0 – 10,000	
1420	Minimum Current K-Factor, Phase C	1	Integer	RO	Y	-	0.1	0 – 10,000	
1421	Minimum Crest Factor, Current Phase A	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor

1422	Minimum Crest Factor, Current Phase B	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor
1423	Minimum Crest Factor, Current Phase C	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor
1424	Minimum Crest Factor, Current Neutral	1	Integer	RO	Y	-	0.01	0 – 10,000 (-32,768 if N/A)	Minimum Transformer Crest Factor 4-wire system only
1425	Minimum Crest Factor, Voltage A-N/A-B	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1426	Minimum Crest Factor, Voltage B-N/B-C	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1427	Minimum Crest Factor, Voltage C-N/C-A	1	Integer	RO	Y	-	0.01	0 – 10,000	Minimum Transformer Crest Factor Voltage C-N (4-wire system) Voltage C-A (3-wire system)

Minimum – Fundamental Magnitudes & Angles – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1430	Minimum Current Fundamental RMS Magnitude, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1431	Minimum Current Fundamental Coincident Angle, Phase A	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to A-N/A-B Voltage Angle
1432	Minimum Current Fundamental RMS Magnitude, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1433	Minimum Current Fundamental Coincident Angle, Phase B	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to A-N/A-B Voltage Angle
1434	Minimum Current Fundamental RMS Magnitude, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1435	Minimum Current Fundamental Coincident Angle, Phase C	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to A-N/A-B Voltage Angle
1436	Minimum Current Fundamental RMS Magnitude, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1437	Minimum Current Fundamental Coincident Angle, Neutral	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude minimum Referenced to A-N (4-wire system only)
1438	Minimum Current Fundamental RMS Magnitude, Ground	1	Integer	RO	Y	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	
1439	Minimum Current Fundamental Coincident Angle, Ground	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude minimum Referenced to A-N

Minimum – Fundamental Magnitudes & Angles – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1444	Minimum Voltage Fundamental RMS Magnitude, A-N/A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1445	Minimum Voltage Fundamental Coincident Angle, A-N/A-B	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to itself
1446	Minimum Voltage Fundamental RMS Magnitude, B-N/B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1447	Minimum Voltage Fundamental Coincident Angle, B-N/B-C	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to A-N (4-wire) or A-B (3-wire)
1448	Minimum Voltage Fundamental RMS Magnitude, C-N/C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1449	Minimum Voltage Fundamental Coincident Angle, C-N/C-A	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude minimum Referenced to A-N (4-wire) or A-B (3-wire)
1450	Minimum Voltage Fundamental RMS Magnitude, N-G	1	Integer	RO	Y	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	
1451	Minimum Voltage Fundamental Coincident Angle, N-G	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude minimum Referenced to A-N

Minimum – Fundamental Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1455	Minimum Fundamental Real Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1456	Minimum Fundamental Real Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1457	Minimum Fundamental Real Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1458	Minimum Fundamental Real Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	
1459	Minimum Fundamental Reactive Power, Phase A	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1460	Minimum Fundamental Reactive Power, Phase B	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1461	Minimum Fundamental Reactive Power, Phase C	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

1462	Minimum Fundamental Reactive Power, Total	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	

Minimum – Distortion Power & Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1464	Minimum Distortion Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1465	Minimum Distortion Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1466	Minimum Distortion Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1467	Minimum Distortion Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	
1468	Minimum Distortion Power Factor, Phase A	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1469	Minimum Distortion Power Factor, Phase B	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1470	Minimum Distortion Power Factor, Phase C	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	4-wire system only
1471	Minimum Distortion Power Factor, Total	1	Integer	RO	Y	-	0.10%	0 – 1,000	

Minimum – Harmonic Current & Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1474	Minimum Harmonic Current, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1475	Minimum Harmonic Current, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1476	Minimum Harmonic Current, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1477	Minimum Harmonic Current, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1478	Minimum Harmonic Voltage, A-N/A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1479	Minimum Harmonic Voltage, B-N/B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)

1480	Minimum Harmonic Voltage, C-N/C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1481	Minimum Total Demand Distortion	1	Integer	RO	Y	-	0.01%	0 – 10,000	

Minimum – Sequence Components

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1484	Minimum Current, Positive Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1485	Minimum Current, Positive Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1486	Minimum Current, Negative Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1487	Minimum Current, Negative Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1488	Minimum Current, Zero Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1489	Minimum Current, Zero Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1490	Minimum Voltage, Positive Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1491	Minimum Voltage, Positive Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1492	Minimum Voltage, Negative Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1493	Minimum Voltage, Negative Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1494	Minimum Voltage, Zero Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1495	Minimum Voltage, Zero Sequence, Angle	1	Integer	RO	Y	-	0.1	0 – 3,599	
1496	Minimum Current, Sequence, Unbalance	1	Integer	RO	Y	-	0.10%	-1,000 – 1,000	
1497	Minimum Voltage, Sequence, Unbalance	1	Integer	RO	Y	-	0.10%	-1,000 – 1,000	
1498	Minimum Current, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 1,000	Negative Sequence / Positive Sequence
1499	Minimum Voltage, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 1,000	Negative Sequence / Positive Sequence

Maximum – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1500	Maximum Current, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1501	Maximum Current, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1502	Maximum Current, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	RMS
1503	Maximum Current, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	RMS 4-wire system only
1504	Maximum Current, Ground	1	Integer	RO	Y	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	Maximum calculated RMS ground current
1505	Maximum Current, 3 Phase Average	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	Maximum calculated mean of Phases A, B & C
1506	Maximum Current, Apparent RMS	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	Maximum peak instantaneous current of Phase A, B or C divided by √2
1507	Maximum Current Unbalance, Phase A	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1508	Maximum Current Unbalance, Phase B	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1509	Maximum Current Unbalance, Phase C	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1510	Maximum Current Unbalance, Max	1	Integer	RO	Y	-	0.10%	0 – 1,000	

Maximum – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1520	Maximum Voltage, A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Maximum fundamental RMS Voltage between A & B
1521	Maximum Voltage, B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Maximum fundamental RMS Voltage between B & C
1522	Maximum Voltage, C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Maximum fundamental RMS Voltage between C & A
1523	Maximum Voltage, L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Maximum fundamental RMS Average L-L Voltage

1524	Maximum Voltage, A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32767 (-32,768 if N/A)	Maximum fundamental RMS Voltage between A & N 4-wire system only
1525	Maximum Voltage, B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32767 (-32,768 if N/A)	Maximum fundamental RMS Voltage between B & N 4-wire system only
1526	Maximum Voltage, C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32767 (-32,768 if N/A)	Maximum fundamental RMS Voltage between C & N 4-wire system only
1527	Maximum Voltage, N-G	1	Integer	RO	Y	E	Volts/Scale	0 – 32767 (-32,768 if N/A)	Maximum fundamental RMS Voltage between N & G 4-wire system with 4-element metering only
1528	Maximum Voltage, L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32767 (-32,768 if N/A)	Maximum fundamental RMS L-N Voltage 4-wire system only
1529	Maximum Voltage Unbalance, A-B	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1530	Maximum Voltage Unbalance, B-C	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1531	Maximum Voltage Unbalance, C-A	1	Integer	RO	Y	-	0.10%	0 – 1,000	
1532	Maximum Voltage Unbalance, Max L-L	1	Integer	RO	Y	-	0.10%	0 – 1,000	Maximum percent Voltage Unbalance, Worst L-L Depends on absolute value
1533	Maximum Voltage Unbalance, A-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1534	Maximum Voltage Unbalance, B-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1535	Maximum Voltage Unbalance, C-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	
1536	Maximum Voltage Unbalance, Max L-N	1	Integer	RO	Y	-	0.10%	0 – 1,000 (-32,768 if N/A)	Maximum percent Voltage Unbalance, Worst L-N Depends on absolute value (4-wire system only)

Maximum – Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1540	Maximum Real Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Real Power (PA) 4-wire system only
1541	Maximum Real Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Real Power (PB) 4-wire system only
1542	Maximum Real Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Real Power (PC) 4-wire system only
1543	Maximum Real Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	4-wire system = PA+PB+PC 3 wire system = 3-Phase real power
1544	Maximum Reactive Power, Phase A	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Reactive Power (QA) 4-wire system only

1545	Maximum Reactive Power, Phase B	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Reactive Power (QB) 4-wire system only
1546	Maximum Reactive Power, Phase C	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Reactive Power (QC) 4-wire system only
1547	Maximum Reactive Power, Total	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	4-wire system = QA+QB+QC 3-wire system = 3-Phase reactive power
1548	Maximum Apparent Power, Phase A	1	Integer	RO	Y	F	kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Apparent Power (SA) 4-wire system only
1549	Maximum Apparent Power, Phase B	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Apparent Power (SB) 4-wire system only
1550	Maximum Apparent Power, Phase C	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767 (-32,768 if N/A)	Maximum Apparent Power (SC) 4-wire system only
1551	Maximum Apparent Power, Total	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767	4-wire system = SA+SB+SC 3-wire system = 3-Phase apparent power

Maximum – Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1560	Maximum True Power Factor, Phase A	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power 4-wire system only
1561	Maximum True Power Factor, Phase B	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power 4-wire system only
1562	Maximum True Power Factor, Phase C	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power 4-wire system only
1563	Maximum True Power Factor, Total	1	Integer	RO	Y	-	0.001	1,000 -2 to 2	Derived using the complete harmonic content of real and apparent power
1564	Maximum Alternate True Power Factor, Phase A	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1565	Maximum Alternate True Power Factor, Phase B	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

1566	Maximum Alternate True Power Factor, Phase C	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using the complete harmonic content of real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1567	Maximum Alternate True Power Factor, Total	1	Integer	RO	Y		0.001	0 – 2,000	Derived using the complete harmonic content of real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1568	Maximum Displacement Power Factor, Phase A	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1569	Maximum Displacement Power Factor, Phase B	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1570	Maximum Displacement Power Factor, Phase C	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power. 4-wire system only
1571	Maximum Displacement Power Factor, Total	1	Integer	RO	Y	-	0.001	1,000 -2 to 2	Derived using only fundamental frequency of the real and apparent power
1572	Maximum Alternate Displacement Power Factor, Phase A	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1573	Maximum Alternate Displacement Power Factor, Phase B	1	Integer	RO	Y	-	0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1574	Maximum Alternate Displacement Power Factor, Phase C	1	Integer	RO	Y		0.001	0 – 2,000 (-32,768 if N/A)	Derived using only fundamental frequency of the real and apparent power (4-wire system only). Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.
1575	Maximum Alternate Displacement Power Factor, Total	1	Integer	RO	Y	-	0.001	0 – 2,000	Derived using only fundamental frequency of the real and apparent power. Reported value is mapped from 0-2000, with 1000 representing unity, values below 1000 representing lagging, and values above 1000 representing leading.

Maximum – Frequency & Temperature

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1580	Maximum Frequency	1	Integer	RO	Y	-	0.01Hz0.10Hz	(50/60Hz) 4,500 – 6,700 (400Hz) 3,500 – 4,500 (-32,768 if N/A)	Frequency of circuits being monitored. If the frequency is out of range, the register will be –32,768.
1581	Maximum Temperature	1	Integer	RO	Y	-	0.1°C	-1,000 – 1,000	Internal unit temperature

Maximum – Analog Inputs

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1590	Maximum Auxiliary Analog Input Value, User-Selected Input 1	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1591	Maximum Auxiliary Analog Input Value, User-Selected Input 2	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1592	Maximum Auxiliary Analog Input Value, User-Selected Input 3	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1593	Maximum Auxiliary Analog Input Value, User-Selected Input 4	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1594	Maximum Auxiliary Analog Input Value, User-Selected Input 5	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1595	Maximum Auxiliary Analog Input Value, User-Selected Input 6	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1596	Maximum Auxiliary Analog Input Value, User-Selected Input 7	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1597	Maximum Auxiliary Analog Input Value, User-Selected Input 8	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1598	Maximum Auxiliary Analog Input Value, User-Selected Input 9	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	
1599	Maximum Auxiliary Analog Input Value, User-Selected Input 10	1	Integer	RO	Y	-	Analog Input Setup	-32,767 – 32,767 (-32,768 if N/A)	

Maximum – THD

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1600	Maximum THD/thd Current, Phase A	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion, Phase A Current Expressed as % of fundamental

1601	Maximum THD/thd Current, Phase B	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion, Phase B Current Expressed as % of fundamental
1602	Maximum THD/thd Current, Phase C	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion, Phase C Current Expressed as % of fundamental
1603	Maximum THD/thd Current, Phase N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion, Phase N Current Expressed as % of fundamental 4-wire system only
1604	Maximum THD/thd Current, Ground	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion, Ground Current Expressed as % of fundamental
1607	Maximum THD/thd Voltage, Phase A-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1608	Maximum THD/thd Voltage, Phase B-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1609	Maximum THD/thd Voltage, Phase C-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1610	Maximum THD/thd Voltage, Phase N-G	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1611	Maximum THD/thd Voltage, Phase A-B	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion Expressed as % of fundamental
1612	Maximum THD/thd Voltage, Phase B-C	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion Expressed as % of fundamental
1613	Maximum THD/thd Voltage, Phase C-A	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion Expressed as % of fundamental
1615	Maximum THD/thd Voltage, 3-Phase Average L-N	1	Integer	RO	Y	-	0.10%	0 – 32,767 (-32,768 if N/A)	Maximum Total Harmonic Distortion Expressed as % of fundamental 4-wire system only
1616	Maximum THD/thd Voltage, 3- Phase Average L-L	1	Integer	RO	Y	-	0.10%	0 – 32,767	Maximum Total Harmonic Distortion Expressed as % of fundamental

Maximum – Transformer Heating

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1618	Maximum Current K-Factor, Phase A	1	Integer	RO	Y	-	0.1	0 – 10,000	
1619	Maximum Current K-Factor, Phase B	1	Integer	RO	Y	-	0.1	0 – 10,000	

1620	Maximum Current K-Factor, Phase C	1	Integer	RO	Y	-	0.1	0 – 10,000	
1621	Maximum Crest Factor, Current Phase A	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor
1622	Maximum Crest Factor, Current Phase B	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor
1623	Maximum Crest Factor, Current Phase C	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor
1624	Maximum Crest Factor, Current Neutral	1	Integer	RO	Y	-	0.01	0 – 10,000 (-32,768 if N/A)	Maximum Transformer Crest Factor 4-wire system only
1625	Maximum Crest Factor, Voltage A-N/A-B	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1626	Maximum Crest Factor, Voltage B-N/B-C	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1627	Maximum Crest Factor, Voltage C-N/C-A	1	Integer	RO	Y	-	0.01	0 – 10,000	Maximum Transformer Crest Factor Voltage C-N (4-wire system) Voltage C-A (3-wire system)

Maximum – Fundamental Magnitudes & Angles – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1630	Maximum Current Fundamental RMS Magnitude, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1631	Maximum Current Fundamental Coincident Angle, Phase A	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to A-N/A-B Voltage Angle
1632	Maximum Current Fundamental RMS Magnitude, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1633	Maximum Current Fundamental Coincident Angle, Phase B	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to A-N/A-B Voltage Angle
1634	Maximum Current Fundamental RMS Magnitude, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1635	Maximum Current Fundamental Coincident Angle, Phase C	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to A-N/A-B Voltage Angle
1636	Maximum Current Fundamental RMS Magnitude, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1637	Maximum Current Fundamental Coincident Angle, Neutral	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude Maximum Referenced to A-N (4-wire system only)

1638	Maximum Current Fundamental RMS Magnitude, Ground	1	Integer	RO	Y	C	Amps/Scale	0 – 32,767 (-32,768 if N/A)	
1639	Maximum Current Fundamental Coincident Angle, Ground	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude Maximum Referenced to A-N

Maximum – Fundamental Magnitudes & Angles – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1644	Maximum Voltage Fundamental RMS Magnitude, A-N/A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1645	Maximum Voltage Fundamental Coincident Angle, A-N/A-B	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to itself
1646	Maximum Voltage Fundamental RMS Magnitude, B-N/B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1647	Maximum Voltage Fundamental Coincident Angle, B-N/B-C	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to A-N (4-wire) or A-B (3-wire)
1648	Maximum Voltage Fundamental RMS Magnitude, C-N/C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1649	Maximum Voltage Fundamental Coincident Angle, C-N/C-A	1	Integer	RO	Y	-	0.1°	0 – 3,599	Angle at the time of magnitude Maximum Referenced to A-N (4-wire) or A-B (3-wire)
1650	Maximum Voltage Fundamental RMS Magnitude, N-G	1	Integer	RO	Y	E	Volts/Scale	0 – 32,767 (-32,768 if N/A)	
1651	Maximum Voltage Fund. Coincident Angle, N-G	1	Integer	RO	Y	-	0.1°	0 – 3,599 (-32,768 if N/A)	Angle at the time of magnitude Maximum Referenced to A-N

Maximum – Fundamental Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1655	Maximum Fundamental Real Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1656	Maximum Fundamental Real Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1657	Maximum Fundamental Real Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1658	Maximum Fundamental Real Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	
1659	Maximum Fundamental Reactive Power, Phase A	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

1660	Maximum Fundamental Reactive Power, Phase B	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1661	Maximum Fundamental Reactive Power, Phase C	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1662	Maximum Fundamental Reactive Power, Total	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	

Maximum – Distortion Power & Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1664	Maximum Distortion Power, Phase A	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1665	Maximum Distortion Power, Phase B	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1666	Maximum Distortion Power, Phase C	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
1667	Maximum Distortion Power, Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	
1668	Maximum Distortion Factor, Phase A	1	Integer	RO	Y	F	0.1	0 – 1,000 (-32,768 if N/A)	4-wire system only
1669	Maximum Distortion Factor, Phase B	1	Integer	RO	Y	F	0.1	0 – 1,000 (-32,768 if N/A)	4-wire system only
1670	Maximum Distortion Factor, Phase C	1	Integer	RO	Y	F	0.1	0 – 1,000 (-32,768 if N/A)	4-wire system only
1671	Maximum Distortion Factor, Total	1	Integer	RO	Y	F	0.1	0 – 1,000	

Maximum – Harmonic Current & Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1674	Maximum Harmonic Current, Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1675	Maximum Harmonic Current, Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1676	Maximum Harmonic Current, Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1677	Maximum Harmonic Current, Neutral	1	Integer	RO	Y	B	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only

1678	Maximum Harmonic Voltage A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage A-N (4-wire system) Voltage A-B (3-wire system)
1679	Maximum Harmonic Voltage B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage B-N (4-wire system) Voltage B-C (3-wire system)
1680	Maximum Harmonic Voltage C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Voltage C-N (4-wire system) Voltage C-A (3-wire system)
1681	Maximum Total Demand Distortion	1	Integer	RO	Y	-	0.01%	0 – 10,000	

Maximum – Sequence Components

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1684	Maximum Current, Positive Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1685	Maximum Current, Positive Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1686	Maximum Current, Negative Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1687	Maximum Current, Negative Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1688	Maximum Current, Zero Sequence, Magnitude	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1689	Maximum Current, Zero Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1690	Maximum Voltage, Positive Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1691	Maximum Voltage, Positive Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1692	Maximum Voltage, Negative Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1693	Maximum Voltage, Negative Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1694	Maximum Voltage, Zero Sequence, Magnitude	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
1695	Maximum Voltage, Zero Sequence, Angle	1	Integer	RO	Y	-	0.1°	0 – 3,599	
1696	Maximum Current, Sequence, Unbalance	1	Integer	RO	Y	-	0.10%	-1,000 – 1,000	
1697	Maximum Voltage, Sequence, Unbalance	1	Integer	RO	Y	-	0.10%	-1,000 – 1,000	

1698	Maximum Current, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 1,000	Negative Sequence / Positive Sequence
1699	Maximum Voltage, Sequence Unbalance Factor	1	Integer	RO	N	-	0.10%	0 – 1,000	Negative Sequence / Positive Sequence

Energy

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1700	Energy, Real In	4	Mod10	RO	Y	-	WH	(1)	3-Phase total real energy into the load
1704	Energy, Reactive In	4	Mod10	RO	Y	-	VArH	(1)	3-Phase total reactive energy into the load
1708	Energy, Real Out	4	Mod10	RO	Y	-	WH	(1)	3-Phase total real energy out of the load
1712	Energy, Reactive Out	4	Mod10	RO	Y	-	VArH	(1)	3-Phase total reactive energy out of the load
1716	Energy, Real Total (signed/absolute)	4	Mod10	RO	Y	-	WH	(2)	Total Real Energy In, Out or In + Out
1720	Energy, Reactive Total (signed/absolute)	4	Mod10	RO	Y	-	VArH	(2)	Total Reactive Energy In, Out or In + Out
1724	Energy, Apparent	4	Mod10	RO	Y	-	VAH	(1)	3-Phase total apparent energy
1728	Energy, Conditional Real In	4	Mod10	RO	Y	-	WH	(1)	3-Phase total accumulated conditional real energy into the load
1732	Energy, Conditional Reactive In	4	Mod10	RO	Y	-	VArH	(1)	3-Phase total accumulated conditional reactive energy into the load
1736	Energy, Conditional Real Out	4	Mod10	RO	Y	-	WH	(1)	3-Phase total accumulated conditional real energy out of the load
1740	Energy, Conditional Reactive Out	4	Mod10	RO	Y	-	VArH	(1)	3-Phase total accumulated conditional reactive energy out of the load
1744	Energy, Conditional Apparent	4	Mod10	RO	Y	-	VAH	(1)	3-Phase total accumulated conditional apparent energy
1748	Energy, Incremental Real In, Last Complete Interval	3	Mod10	RO	Y	-	WH	(3)	3-Phase total accumulated incremental real energy into the load
1751	Energy. Incremental Reactive In, Last Complete Interval	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy into the load
1754	Energy, Incremental Real Out, Last Complete Interval	3	Mod10	RO	Y	-	WH	(3)	3-Phase total accumulated incremental real energy out of the load
1757	Energy, Incremental Reactive Out, Last Complete Interval	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy out of the load
1760	Energy, Incremental Apparent, Last Complete Interval	3	Mod10	RO	Y	-	VAH	(3)	3-Phase total accumulated incremental apparent energy
1763	DateTime Last Complete Incremental Energy Interval	4	DateTime	RO	Y	-	-	-	
1767	Energy, Incremental Real In, Present Interval	3	Mod10	RO	Y	-	WH	(3)	3-Phase total accumulated incremental real energy into the load

1770	Energy. Incremental Reactive In, Present Interval	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy into the load
1773	Energy, Incremental Real Out, Present Interval	3	Mod10	RO	Y	-	WH	(3)	3-Phase total accumulated incremental real energy out of the load
1776	Energy, Incremental Reactive Out, Present Interval	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy out of the load
1779	Energy, Incremental Apparent, Present Interval	3	Mod10	RO	Y	-	VAH	(3)	3-Phase total accumulated incremental apparent energy
1782	Energy, Reactive, Quadrant 1	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy – quadrant 1
1785	Energy, Reactive, Quadrant 2	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy – quadrant 2
1788	Energy, Reactive, Quadrant 3	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy – quadrant 3
1791	Energy, Reactive, Quadrant 4	3	Mod10	RO	Y	-	VArH	(3)	3-Phase total accumulated incremental reactive energy – quadrant 4
1794	Conditional Energy Control Status	1	Integer	RO	Y	-	-	0 – 1	0 = Off (default) 1 = On

(1) 0 – 9,999,999,999,999,999

(2) -9,999,999,999,999,999 – 9,999,999,999,999,999

(3) 0 – 999,999,999,999

Demand – Current Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1800	Demand Calculation Mode Current	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand (default) 1 = Timed Interval Sliding Block 2 = Timed Interval Block 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 512 = Slave to Power Demand Interval 1024 = Slave to Incremental Energy Interval
1801	Demand Interval Current	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1802	Demand Subinterval Current	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1803	Demand Sensitivity Current	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1805	Short Demand Interval Current	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1806	Time Elapsed in Interval Current	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1807	Time Elapsed in Subinterval Current	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1808	Interval Count Current	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.
1809	Subinterval Count Current	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1810	Min/Max Reset DateTime Current	4	DateTime	RO	Y	-	-	-	Date/Time of last reset of Current Demand Min/Max demands
1814	Min/Max Reset Count Current	1	Integer	RO	Y	-	1	0 – 32,767	Count of Min/Max demand resets. Rolls over at 32,767.

Demand – Voltage Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1820	Demand Calculation Mode Voltage	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand (default) 1 = Timed Interval Sliding Block 2 = Timed Interval Block 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 512 = Slave to Power Demand Interval 1024 = Slave to Incremental Energy Interval
1821	Demand Interval Voltage	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1822	Demand Subinterval Voltage	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1823	Demand Sensitivity Voltage	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1825	Short Demand Interval Voltage	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1826	Time Elapsed in Interval Voltage	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1827	Time Elapsed in Subinterval Voltage	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1828	Interval Count Voltage	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.
1829	Subinterval Count Voltage	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1830	Min/Max Reset DateTime Voltage	4	DateTime	RO	Y	-	-	-	
1834	Min/Max Reset Count Voltage	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.

Demand – Power Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1840	Demand Calculation Mode Power	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand (default) 1 = Timed Interval Sliding Block 2 = Timed Interval Block 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 1024 = Slave to Incremental Energy Interval
1841	Demand Interval Power	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1842	Demand Subinterval Power	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1843	Demand Sensitivity Power	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1844	Predicted Demand Sensitivity Power	1	Integer	R/CW	Y	-	1	1 – 10	Adjusts sensitivity of predicted demand calculation to recent changes in power consumption. Default = 5.
1845	Short Demand Interval Power	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1846	Time Elapsed in Interval Power	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1847	Time Elapsed in Subinterval Power	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1848	Interval Count Power	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.
1849	Subinterval Count Power	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1850	Min/Max Reset DateTime Power	4	DateTime	RO	Y	-	-	-	
1854	Min/Max Reset Count Power	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.

Demand – Input Metering Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1860	Demand Calculation Mode Input Pulse Metering	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand 1 = Timed Interval Sliding Block 2 = Timed Interval Block (default) 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 512 = Slave to Power Demand Interval 1024 = Slave to Incremental Energy Interval
1861	Demand Interval Input Pulse Metering	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1862	Demand Subinterval Input Pulse Metering	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1863	Demand Sensitivity Input Pulse Metering	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1865	Short Demand Interval Input Pulse Metering	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1866	Time Elapsed in Interval Input Pulse Metering	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1867	Time Elapsed in Subinterval Input Pulse Metering	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1868	Interval Count Input Pulse Metering	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32, 767.
1869	Subinterval Count Input Pulse Metering	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1870	Min/Max Reset DateTime Input Pulse Metering	4	DateTime	RO	Y	-	-	-	
1874	Min/Max Reset Count Input Pulse Metering	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.

Demand – Generic Group 1 Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1880	Demand Calculation Mode Generic Group 1	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand (default) 1 = Timed Interval Sliding Block 2 = Timed Interval Block 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 512 = Slave to Power Demand Interval 1024 = Slave to Incremental Energy Interval
1881	Demand Interval Generic Group 1	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1882	Demand Subinterval Generic Group 1	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1883	Demand Sensitivity Generic Group 1	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1885	Short Demand Interval Generic Group 1	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1886	Time Elapsed in Interval Generic Group 1	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1887	Time Elapsed in Subinterval Generic Group 1	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1888	Interval Count Generic Group 1	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32, 767.
1889	Subinterval Count Generic Group 1	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1890	Min/Max Reset DateTime Generic Group 1	4	DateTime	RO	Y	-	-	-	
1894	Min/Max Reset Count Generic Group 1	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.

Demand – Generic Group 2 Demand System Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

1900	Demand Calculation Mode Generic Group 2	1	Integer	R/CW	Y	-	-	0 – 1024	0 = Thermal Demand (default) 1 = Timed Interval Sliding Block 2 = Timed Interval Block 4 = Timed Interval Rolling Block 8 = Input Synchronized Block 16 = Input Synchronized Rolling Block 32 = Command Synchronized Block 64 = Command Synchronized Rolling Block 128 = Clock Synchronized Block 256 = Clock Synchronized Rolling Block 512 = Slave to Power Demand Interval 1024 = Slave to Incremental Energy Interval
1901	Demand Interval Generic Group 2	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 15
1902	Demand Subinterval Generic Group 2	1	Integer	R/CW	Y	-	Minutes	1 – 60	Default = 1
1903	Demand Sensitivity Generic Group 2	1	Integer	R/CW	Y	-	1%	1 – 99	Adjusts the sensitivity of the thermal demand calculation. Default = 90
1905	Short Demand Interval Generic Group 2	1	Integer	R/CW	Y	-	Seconds	0 – 60	Sets the interval for a running average demand calculation of short duration. Default = 15
1906	Time Elapsed in Interval Generic Group 2	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1907	Time Elapsed in Subinterval Generic Group 2	1	Integer	RO	Y	-	Seconds	0 – 3,600	
1908	Interval Count Generic Group 2	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.
1909	Subinterval Count Generic Group 2	1	Integer	RO	Y	-	1	0 – 60	Rolls over at interval.
1910	Min/Max Reset DateTime Generic Group 2	4	DateTime	RO	Y	-	-	-	
1914	Min/Max Reset Count Generic Group 2	1	Integer	RO	Y	-	1	0 – 32,767	Rolls over at 32,767.

Demand – Miscellaneous Configuration and Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1920	Demand Forgiveness Duration	1	Integer	R/CW	Y	-	Seconds	0 – 3,600	Duration of time after a power outage, during which power demand is not calculated
1921	Demand Forgiveness Outage Definition	1	Integer	R/CW	Y	-	Seconds	0 – 3,600	Duration of time that metered voltage must be lost to be considered a power outage for demand forgiveness

1923	Clock Sync Time of Day	1	Integer	R/CW	Y	-	Minutes	0 – 1,440	Time of day, in minutes from midnight, to which the demand interval is to be synchronized. Applies to demand intervals configured as Clock Synchronized.
1924	Power Factor Average Over Last Power Demand Interval	1	Integer	RO	Y	-	0.001	1,000 -2 – 2 (-32,768 if N/A)	
1925	Cumulative Demand Reset DateTime	4	DateTime	RO	Y	-	-	-	
1929	Cumulative Input Pulse Metering Reset DateTime	4	DateTime	RO	Y	-	-	-	
1940	Last Incremental Energy Interval,Real Demand Peak	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	Maximum real 3-phase power demand over the last incremental energy interval
1941	Last Incremental Energy Interval, Real Demand Peak DateTime	4	DateTime	RO	Y	-	-	-	Date/Time of the Real Power Demand peak during the last completed incremental energy interval
1945	Last Incremental Energy Interval, Reactive Demand Peak	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	Maximum reactive 3-phase power demand over the last incremental energy interval
1946	Last Incremental Energy Interval, Reactive Demand Peak DateTime	4	DateTime	RO	Y	-	-	-	Date/Time of the Reactive Power Demand peak during the last completed incremental energy interval
1950	Last Incremental Energy Interval, Apparent Demand Peak	1	Integer	RO	Y	F	kVA/Scale	0 – 32,767	Maximum apparent 3-phase power demand over the last incremental energy interval
1951	Last Incremental Energy Interval, Apparent Demand Peak DateTime	4	DateTime	RO	Y	-	-	-	Date/Time of the Apparent Power Demand peak during the last completed incremental energy interval

Demand – Current Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
1960	Last Demand Current Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Last complete interval
1961	Present Demand Current Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Present interval
1962	Running Average Demand Current Phase A	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Running average demand calculation of short duration Updated every second
1963	Peak Demand Current Phase A	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1964	Peak Demand DateTime Current Phase A	4	DateTime	RO	Y	-	-	-	
1970	Last Demand Current Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Last complete interval
1971	Present Demand Current Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Present interval

1972	Running Average Demand Current Phase B	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Running average demand calculation of short duration Updated every second
1973	Peak Demand Current Phase B	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1974	Peak Demand DateTime Current Phase B	4	DateTime	RO	Y	-	-	-	
1980	Last Demand Current Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Last complete interval
1981	Present Demand Current Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Present interval
1982	Running Average Demand Current Phase C	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Running average demand calculation of short duration Updated every second
1983	Peak Demand Current Phase C	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
1984	Peak Demand DateTime Current Phase C	4	DateTime	RO	Y	-	-	-	
1990	Last Demand Current Neutral	1	Integer	RO	N	A	Amps/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval4-wire system only
1991	Present Demand Current Neutral	1	Integer	RO	N	A	Amps/Scale	0 – 32,767 (-32,768 if N/A)	Present interval 4-wire system only
1992	Running Average Demand Current Neutral	1	Integer	RO	N	A	Amps/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration Updated every second 4-wire system only
1993	Peak Demand Current Neutral	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
1994	Peak Demand DateTime Current Neutral	4	DateTime	RO	Y	-	-	-	4-wire system only
2000	Last Demand Current 3-Phase Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Last complete interval
2001	Present Demand Current 3-Phase Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Present interval
2002	Running Average Demand Current 3-Phase Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Rnning average demand calculation of short duration Updated every second
2003	Peak Demand Current 3-Phase Average	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	
2004	Peak Demand DateTime Current 3-Phase Average	4	DateTime	RO	Y	-	-	-	
2008	Peak Demand Current 3-Phase Average Used to calculate TDD	1	Integer	RO	Y	A	Amps/Scale	0 – 32,767	

Demand – Voltage Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2010	Last Demand Voltage A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Last complete interval, updated every sub-interval
2011	Present Demand Voltage A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Prsent interval
2012	Running Average Demand Voltage A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Runing average demand calculation of short duration, updated every second
2013	Maximum Demand Voltage A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2014	Maximum Demand DateTime Voltage A-B	4	DateTime	RO	Y	-	-	-	
2018	Minimum Demand Voltage A-B	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2019	Minimum Demand DateTime Voltage A-B	4	DateTime	RO	Y	-	-	-	
2025	Last Demand Voltage B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Last complete interval, updated every sub-interval
2026	Present Demand Voltage B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Present interval
2027	Running Average Demand Voltage B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Running average demand calculation of short duration, updated every second
2028	Maximum Demand Voltage B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2029	Maximum Demand DateTime Voltage B-C	4	DateTime	RO	Y	-	-	-	
2033	Minimum Demand Voltage B-C	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2034	Minimum Demand DateTime Voltage B-C	4	DateTime	RO	Y	-	-	-	
2040	Last Demand Voltage C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Last complete interval, updated every sub-interval
2041	Present Demand Voltage C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Present interval
2042	Running Average Demand Voltage C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Running average demand calculation of short duration, updated every second
2043	Maximum Demand Voltage C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2044	Maximum Demand DateTime Voltage C-A	4	DateTime	RO	Y	-	-	-	

2048	Minimum Demand Voltage C-A	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2049	Minimum Demand DateTime Voltage C-A	4	DateTime	RO	Y	-	-	-	
2055	Last Demand Voltage L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Last complete interval, updated every sub-interval
2056	Present Demand Voltage L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Present interval
2057	Running Average Demand Voltage L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	Running average demand calculation of short duration, updated every second
2058	Maximum Demand Voltage L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2059	Maximum Demand DateTime Voltage L-L Average	4	DateTime	RO	Y	-	-	-	
2063	Minimum Demand Voltage L-L Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767	
2064	Minimum Demand DateTime Voltage L-L Average	4	DateTime	RO	Y	-	-	-	
2070	Last Demand Voltage A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval, updated every sub-interval 4-wire system only
2071	Present Demand Voltage A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Present interval 4-wire system only
2072	Running Average Demand Voltage A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration, updated every second 4-wire system only
2073	Maximum Demand Voltage A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2074	Maximum Demand DateTime Voltage A-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2078	Minimum Demand Voltage A-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2079	Minimum Demand DateTime Voltage A-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2085	Last Demand Voltage B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval, updated every sub-interval 4-wire system only
2086	Present Demand Voltage B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Present interval 4-wire system only
2087	Running Average Demand Voltage B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration, updated every second 4-wire system only
2088	Maximum Demand Voltage B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only

2089	Maximum Demand DateTime Voltage B-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2093	Minimum Demand Voltage B-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2094	Minimum Demand DateTime Voltage B-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2100	Last Demand Voltage C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval, updated every sub-interval 4-wire system only
2101	Present Demand Voltage C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Present interval 4-wire system only
2102	Running Average Demand Voltage C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration, updated every second 4-wire system only
2103	Maximum Demand Voltage C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2104	Maximum Demand DateTime Voltage C-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2108	Minimum Demand Voltage C-N	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2109	Minimum Demand DateTime Voltage C-N	4	DateTime	RO	Y	-	-	-	4-wire system only
2115	Last Demand Voltage N-G	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval, updated every sub-interval 4-wire system only
2116	Present Demand Voltage N-G	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Present interval 4-wire system only
2117	Running Average Demand Voltage N-G	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration, updated every second 4-wire system only
2118	Maximum Demand Voltage N-G	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2119	Maximum Demand DateTime Voltage N-G	4	DateTime	RO	Y	-	-	-	4-wire system only
2123	Minimum Demand Voltage N-G	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2124	Minimum Demand DateTime Voltage N-G	4	DateTime	RO	Y	-	-	-	4-wire system only
2130	Last Demand Voltage L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Last complete interval, updated every sub-interval 4-wire system only
2131	Present Demand Voltage L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Present interval4-wire system only

2132	Running Average Demand Voltage L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Running average demand calculation of short duration, updated every second 4-wire system only
2133	Maximum Demand Voltage L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2134	Maximum Demand DateTime Voltage L-N Average	4	DateTime	RO	Y	-	-	-	4-wire system only
2138	Minimum Demand Voltage L-N Average	1	Integer	RO	Y	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	4-wire system only
2139	Minimum Demand DateTime Voltage L-N Average	4	DateTime	RO	Y	-	-	-	4-wire system only

Demand – Power Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2150	Last Demand Real Power, 3-Phase Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	Last complete interval, updated every sub-interval
2151	Present Demand Real Power, 3-Phase Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	Present interval
2152	Running Average Demand Real Power, 3-Phase Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	Running average demand calculation of short duration, updated every second
2153	Predicted Demand Real Power, 3-Phase Total	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	Predicted demand at the end of the present interval
2154	Peak Demand Real Power, 3-Phase Total	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	
2155	Peak Demand DateTime Real Power, 3-Phase Total	4	DateTime	RO	Y	-	-	-	
2159	Cumulative Demand Real Power, 3-Phase Total	2	Long	RO	Y	F	kW/Scale	-2147483648 – 2147483647	
2161	Power Factor, Average @ Peak Demand, Real Power	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Average True Power Factor at the time of the Peak Real Demand
2162	Power Demand, Reactive @ Peak Demand, Real Power	1	Integer	RO	Y	F	kVAr/Scale	-32,767 – 32,767	Reactive Power Demand at the time of the Peak Real Demand
2163	Power Demand, Apparent @ Peak Demand, Real Power	1	Integer	RO	Y	F	kVA/Scale	0 – 32,767	Apparent Power Demand at the time of the Peak Real Demand
2165	Last Demand Reactive Power, 3-Phase Total	1	Integer	RO	N	F	kVAr /Scale	-32,767 – 32,767	Last complete interval, updated every sub-interval
2166	Present Demand Reactive Power, 3-Phase Total	1	Integer	RO	N	F	kVAr /Scale	-32,767 – 32,767	Present interval

2167	Running Average Demand Reactive Power, 3-Phase Total	1	Integer	RO	N	F	kVAr /Scale	-32,767 – 32,767	Running average demand calculation of short duration, updated every second
2168	Predicted Demand Reactive Power, 3-Phase Total	1	Integer	RO	N	F	kVAr /Scale	-32,767 – 32,767	Predicted demand at the end of the present interval
2169	Peak Demand Reactive Power, 3-Phase Total	1	Integer	RO	Y	F	kVAr /Scale	-32,767 – 32,767	
2170	Peak Demand DateTime Reactive Power, 3-Phase Total	4	DateTime	RO	Y	-	-	-	
2174	Cumulative Demand Reactive Power, 3-Phase Total	2	Long	RO	Y	F	kVAr /Scale	-2147483648 – 2147483647	
2176	Power Factor, Average @ Peak Demand, Reactive Power	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	Average True Power Factor at the time of the Peak Reactive Demand
2177	Power Demand, Real @Peak Demand, Reactive Power	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	Real Power Demand at the time of the Peak Reactive Demand
2178	Power Demand, Apparent @ Peak Demand, Reactive Power	1	Integer	RO	Y	F	kVA/Scale	0 – 32,767	Apparent Power Demand at the time of the Peak Reactive Demand
2180	Last Demand Apparent Power 3-Phase Total	1	Integer	RO	N	F	kVA /Scale	-32,767 – 32,767	Last complete interval, updated every sub-interval
2181	Present Demand Apparent Power, 3-Phase Total	1	Integer	RO	N	F	kVA /Scale	-32,767 – 32,767	Present interval
2182	Running Average Demand Apparent Power, 3-Phase Total	1	Integer	RO	N	F	kVA /Scale	-32,767 – 32,767	Running average demand calculation of short duration, updated every second
2183	Predicted Demand Apparent Power, 3-Phase Total	1	Integer	RO	N	F	kVA /Scale	-32,767 – 32,767	Predicted demand at the end of the present interval
2184	Peak Demand Apparent Power, 3-Phase Total	1	Integer	RO	Y	F	kVA /Scale	-32,767 – 32,767	
2185	Peak Demand DateTime Apparent Power, 3-Phase Total	4	DateTime	RO	Y	-	-	-	
2189	Cumulative Demand Apparent Power, 3-Phase Total	2	Long	RO	Y	F	kVA /Scale	-2,147,483,648 – 2,147,483,647	
2191	Power Factor, Average @ Peak Demand, Apparent Power	1	Integer	RO	Y	-	0.001	1,000 -100 to 100 (-32,768 if N/A)	Average True Power Factor at the time of the Peak Apparent Demand
2192	Power Demand, Real @ Peak Demand, Apparent Power	1	Integer	RO	Y	F	kW/Scale	-32,767 – 32,767	Real Power Demand at the time of the Peak Apparent Demand
2193	Power Demand, Reactive @ Peak Demand, Apparent Power	1	Integer	RO	Y	F	kVAr/Scale	0 – 32,767	Reactive Power Demand at the time of the Peak Apparent Demand

Demand – Input Metering Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2200	Consumption Units Code Input Channel #1	1	Integer	R/CW	Y	-	Unit Codes	0 – 100	Units in which consumption is to be accumulated Default = 0
2201	Demand Units Code Input Channel #1	1	Integer	R/CW	Y	-	Unit Codes	0 – 100	Units in which demand (rate) is to be expressed Default = 0
2202	Last Demand Input Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Last complete interval, updated every sub-interval
2203	Present Demand Input Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Present interval
2204	Running Average Demand Input Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Running average demand calculation of short duration, updated every second
2205	Peak Demand Input Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	
2206	Peak Demand Date/Time Input Channel #1	4	DateTime	RO	Y	-	-	-	
2210	Minimum Demand Input Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	
2211	Minimum Demand Date/Time Input Channel #1	4	DateTime	RO	Y	-	-	-	
2215	Cumulative Usage Input Channel #1	4	Mod10	RO	Y	-	(2)	(1)	The user must identify the units to be used in the accumulation.
2220	Input Channel #2	20							Same as registers 2200 – 2219 except for Channel #2
2240	Input Channel #3	20							Same as registers 2200 – 2219 except for Channel #3
2260	Input Channel #4	20							Same as registers 2200 – 2219 except for Channel #4
2280	Input Channel #5	20							Same as registers 2200 – 2219 except for Channel #5
2300	Input Channel #6	20							Same as registers 2200 – 2219 except for Channel #6
2320	Input Channel #7	20							Same as registers 2200 – 2219 except for Channel #7
2340	Input Channel #8	20							Same as registers 2200 – 2219 except for Channel #8
2360	Input Channel #9	20							Same as registers 2200 – 2219 except for Channel #9
2380	Input Channel #10	20							Same as registers 2200 – 2219 except for Channel #10

(1) 0 – 9,999,999,999,999,999

(2) As defined by the user in base register (register 2200 for Input Channel #1).

Demand – Generic Group 1 Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2400	Input Register Generic Channel #1	1	Integer	R/CW	Y	-	-	-	Register selected for generic demand calculation
2401	Unit Code Generic Channel #1	1	Integer	R/CW	Y	-	Unit Codes	0 – 100	Used by software
2402	Scale Code Generic Channel #1	1	Integer	R/CW	Y	-	-	-3 – 3	
2403	Last Demand Generic Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Last complete interval, updated every sub-interval
2404	Present Demand Generic Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Present interval
2405	Running Average Demand Generic Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	Running average demand calculation of short duration, updated every second
2406	Peak Demand Generic Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	
2407	Peak Demand Date/Time Generic Channel #1	4	DateTime	RO	Y	-	-	-	
2411	Minimum Demand Generic Channel #1	1	Integer	RO	Y	-	-	0 – 32,767	
2412	Minimum Demand Date/Time Generic Channel #1	4	DateTime	RO	Y	-	-	-	
2420	Generic Channel #2	20							Same as registers 2400 – 2419 except for Channel #2
2440	Generic Channel #3	20							Same as registers 2400 – 2419 except for Channel #3
2460	Generic Channel #4	20							Same as registers 2400 – 2419 except for Channel #4
2480	Generic Channel #5	20							Same as registers 2400 – 2419 except for Channel #5
2500	Generic Channel #6	20							Same as registers 2400 – 2419 except for Channel #6
2520	Generic Channel #7	20							Same as registers 2400 – 2419 except for Channel #7
2540	Generic Channel #8	20							Same as registers 2400 – 2419 except for Channel #8

2560	Generic Channel #9	20							Same as registers 2400 – 2419 except for Channel #9
2580	Generic Channel #10	20							Same as registers 2400 – 2419 except for Channel #10

Demand – Generic Group 2 Demand Channels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2600	Generic Channel #11	20							Same as registers 2400 – 2419 except for Channel #11
2620	Generic Channel #12	20							Same as registers 2400 – 2419 except for Channel #12
2640	Generic Channel #13	20							Same as registers 2400 – 2419 except for Channel #13
2660	Generic Channel #14	20							Same as registers 2400 – 2419 except for Channel #14
2680	Generic Channel #15	20							Same as registers 2400 – 2419 except for Channel #15
2700	Generic Channel #16	20							Same as registers 2400 – 2419 except for Channel #16
2720	Generic Channel #17	20							Same as registers 2400 – 2419 except for Channel #17
2740	Generic Channel #18	20							Same as registers 2400 – 2419 except for Channel #18
2760	Generic Channel #19	20							Same as registers 2400 – 2419 except for Channel #19
2780	Generic Channel #20	20							Same as registers 2400 – 2419 except for Channel #20

Phase Extremes

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2800	Current, Highest Phase Value	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Highest value of Phases A, B, C or N
2801	Current, Lowest Phase Value	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Lowest value of Phases A, B, C or N
2802	Voltage, L-L, Highest Value	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Highest value of Phases A-B, B-C or C-A
2803	Voltage, L-L, Lowest Value	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Lowest value of Phases A-B, B-C or C-A
2804	Voltage, L-N, Highest Value	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Highest value of Phases A-N, B-N or C-N 4-wire system only
2805	Voltage, L-N, Lowest Value	1	Integer	RO	N	D	Volts/Scale	0 – 32,767 (-32,768 if N/A)	Lowest value of Phases A-N, B-N or C-N 4-wire system only

Waveshape Alarm Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2810	Waveshape Difference, Waveshape Alarm #1	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected in last second. Value determined only if alarm is enabled.
2811	Waveshape Difference, Waveshape Alarm #2	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected in last second. Value determined only if alarm is enabled.
2812	Waveshape Difference, Waveshape Alarm #3	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected in last second. Value determined only if alarm is enabled.
2813	Waveshape Difference, Waveshape Alarm #4	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected in last second. Value determined only if alarm is enabled.
2820	Maximum Waveshape Difference, Waveshape Alarm #1	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected since last meter reset. Value determined only if alarm is enabled.
2821	Maximum Waveshape Difference, Waveshape Alarm #2	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected since last meter reset. Value determined only if alarm is enabled.
2822	Maximum Waveshape Difference, Waveshape Alarm #3	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected since last meter reset. Value determined only if alarm is enabled.
2823	Maximum Waveshape Difference, Waveshape Alarm #4	1	Integer	RO	N	-	1	0 – 100 (-32,768 if N/A)	Maximum waveshape difference detected since last meter reset. Value determined only if alarm is enabled.

Flicker Values (Scaled)

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2840	Instantaneous Flicker Va	1	Integer	RO	N	J	-	0 – 32,767	These values are provided to allow for logging of and alarming on Flicker Values. Refer to Flicker Data beginning at register 44000 for additional data.
2841	Instantaneous Flicker Vb	1	Integer	RO	N	J	-	0 – 32,767	
2842	Instantaneous Flicker Vc	1	Integer	RO	N	J	-	0 – 32,767	
2843	Short-Term Flicker (Pst) Va	1	Integer	RO	N	J	-	0 – 32,767	
2844	Short-Term Flicker (Pst) Vb	1	Integer	RO	N	J	-	0 – 32,767	
2845	Short-Term Flicker (Pst) Vc	1	Integer	RO	N	J	-	0 – 32,767	
2846	Long-Term Flicker (Plt) Va	1	Integer	RO	N	J	-	0 – 32,767	
2847	Long-Term Flicker (Plt) Vb	1	Integer	RO	N	J	-	0 – 32,767	
2848	Long-Term Flicker (Plt) Vc	1	Integer	RO	N	J	-	0 – 32,767	
2849	Pst Flicker Worst Phase Value	1	Integer	RO	N	J	-	0 – 32,767	

Uptime

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
2850	Uptime Percent – Last 12 Months	2	Long	RO	Y	-	0.0000001%	(1)	
2852	Uptime – Last 12 Months	2	Long	RO	Y	-	Seconds	(1)	
2854	Downtime – Last 12 Months	2	Long	RO	Y	-	Seconds	(1)	
2856	Uptime Percent – January This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2858	Uptime – January This Year	2	Long	RO	Y	-	Seconds	(1)	
2860	Downtime – January This Year	2	Long	RO	Y	-	Seconds	(1)	
2862	Uptime Percent – February This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2864	Uptime – February This Year	2	Long	RO	Y	-	Seconds	(1)	
2866	Downtime – February This Year	2	Long	RO	Y	-	Seconds	(1)	
2868	Uptime Percent – March This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2870	Uptime – March This Year	2	Long	RO	Y	-	Seconds	(1)	
2872	Downtime – March This Year	2	Long	RO	Y	-	Seconds	(1)	
2874	Uptime Percent – April This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2876	Uptime – April This Year	2	Long	RO	Y	-	Seconds	(1)	
2878	Downtime – April This Year	2	Long	RO	Y	-	Seconds	(1)	
2880	Uptime Percent – May This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2882	Uptime – May This Year	2	Long	RO	Y	-	Seconds	(1)	
2884	Downtime – May This Year	2	Long	RO	Y	-	Seconds	(1)	
2886	Uptime Percent – June This Year	2	Long	RO	Y	-	0.0000001%	(1)	

2888	Uptime – June This Year	2	Long	RO	Y	-	Seconds	(1)	
2890	Downtime – June This Year	2	Long	RO	Y	-	Seconds	(1)	
2892	Uptime Percent – July This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2894	Uptime – July This Year	2	Long	RO	Y	-	Seconds	(1)	
2896	Downtime – July This Year	2	Long	RO	Y	-	Seconds	(1)	
2898	Uptime Percent – August This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2900	Uptime – August This Year	2	Long	RO	Y	-	Seconds	(1)	
2902	Downtime – August This Year	2	Long	RO	Y	-	Seconds	(1)	
2904	Uptime Percent – September This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2906	Uptime – September This Year	2	Long	RO	Y	-	Seconds	(1)	
2908	Downtime – September This Year	2	Long	RO	Y	-	Seconds	(1)	
2910	Uptime Percent – October This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2912	Uptime – October This Year	2	Long	RO	Y	-	Seconds	(1)	
2914	Downtime – October This Year	2	Long	RO	Y	-	Seconds	(1)	
2916	Uptime Percent – November This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2918	Uptime – November This Year	2	Long	RO	Y	-	Seconds	(1)	
2920	Downtime – November This Year	2	Long	RO	Y	-	Seconds	(1)	
2922	Uptime Percent – December This Year	2	Long	RO	Y	-	0.0000001%	(1)	
2924	Uptime – December This Year	2	Long	RO	Y	-	Seconds	(1)	
2926	Downtime – December This Year	2	Long	RO	Y	-	Seconds	(1)	
2928	Uptime Percent – January Last Year	2	Long	RO	Y	-	0.0000001%	(1)	

2930	Uptime – January Last Year	2	Long	RO	Y	-	Seconds	(1)	
2932	Downtime – January Last Year	2	Long	RO	Y	-	Seconds	(1)	
2934	Uptime Percent – February Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2936	Uptime – February Last Year	2	Long	RO	Y	-	Seconds	(1)	
2938	Downtime – February Last Year	2	Long	RO	Y	-	Seconds	(1)	
2940	Uptime Percent – March Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2942	Uptime – March Last Year	2	Long	RO	Y	-	Seconds	(1)	
2944	Downtime – March Last Year	2	Long	RO	Y	-	Seconds	(1)	
2946	Uptime Percent – April Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2948	Uptime – April Last Year	2	Long	RO	Y	-	Seconds	(1)	
2950	Downtime – April Last Year	2	Long	RO	Y	-	Seconds	(1)	
2952	Uptime Percent – May Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2954	Uptime – May Last Year	2	Long	RO	Y	-	Seconds	(1)	
2956	Downtime – May Last Year	2	Long	RO	Y	-	Seconds	(1)	
2958	Uptime Percent – June Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2960	Uptime – June Last Year	2	Long	RO	Y	-	Seconds	(1)	
2962	Downtime – June Last Year	2	Long	RO	Y	-	Seconds	(1)	
2964	Uptime Percent – July Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2966	Uptime – July Last Year	2	Long	RO	Y	-	Seconds	(1)	
2968	Downtime – July Last Year	2	Long	RO	Y	-	Seconds	(1)	
2970	Uptime Percent – August Last Year	2	Long	RO	Y	-	0.0000001%	(1)	

2972	Uptime – August Last Year	2	Long	RO	Y	-	Seconds	(1)	
2974	Downtime – August Last Year	2	Long	RO	Y	-	Seconds	(1)	
2976	Uptime Percent – September Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2978	Uptime – September Last Year	2	Long	RO	Y	-	Seconds	(1)	
2980	Downtime – September Last Year	2	Long	RO	Y	-	Seconds	(1)	
2982	Uptime Percent – October Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2984	Uptime – October Last Year	2	Long	RO	Y	-	Seconds	(1)	
2986	Downtime – October Last Year	2	Long	RO	Y	-	Seconds	(1)	
2988	Uptime Percent – November Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2990	Uptime – November Last Year	2	Long	RO	Y	-	Seconds	(1)	
2992	Downtime – November Last Year	2	Long	RO	Y	-	Seconds	(1)	
2994	Uptime Percent – December Last Year	2	Long	RO	Y	-	0.0000001%	(1)	
2996	Uptime – December Last Year	2	Long	RO	Y	-	Seconds	(1)	
2998	Downtime – December Last Year	2	Long	RO	Y	-	Seconds	(1)	

(1) 0 – 2,147,483,647

System Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3000	Circuit Monitor Label	2	Char	R/CW	Y	-	-	ASCII Codes	
3002	Circuit Monitor Nameplate	8	Char	R/CW	Y	-	-	ASCII Codes	
3014	Circuit Monitor Present Operating System Firmware Revision Level	1	Integer	RO	N	-	-	0x0000 – 0xFFFF	
3034	Present Date/Time	4	DateTime	RO	Y	-	-	-	
3039	Last Unit Restart DateTime	4	DateTime	RO	Y	-	-	-	
3043	Number of Metering System Restarts	1	Integer	RO	Y	-	1	0 – 32,767	
3044	Number of Control Power Failures	1	Integer	RO	Y	-	1	0 – 32,767	
3045	Date/Time of Last Control Power Failure	4	DateTime	RO	Y	-	-	-	
3050	Self-Test Results	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Is set to "1" if any failure occurs Bit 01 = RTC failure Bit 02 = MCF UART #1 failure Bit 03 = MCF UART #2 failure Bit 04 = PLD UART failure Bit 05 = Metering Collection overrun failure Bit 06 = Metering Process 0.1 overrun failure Bit 07 = Metering Process 1.0 overrun failure Bit 08 = Disk-on-Chip failure Bit 09 = Display failure Bit 10 = CV Module failure Bit 11 = Aux Plug EEPROM failure Bit 12 = Flash Memory failure Bit 13 = Dram Memory failure Bit 14 = Simtek Memory failure Bit 15 = RTC Memory failure

3051	Self Test Results	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Aux IO failure Bit 01 = Option Slot A module failure Bit 02 = Option Slot B module failure Bit 03 = IOX module failure Bit 04 = Bit 05 = Bit 06 = Bit 07 = Bit 08 = OS Create failure Bit 09 = OS Queue overrun failure Bit 10 = Bit 11 = Bit 12 = Bit 13 = Systems shut down due to continuous reset Bit 14 = Unit in Download, Condition A Bit 15 = Unit in Download, Condition B
3052	Configuration Modified	1	Integer	RO	Y	-	-	0x0000 – 0xFFFF	Used by sub-systems to indicate that a value used within that system has been internally modified 0 = No modifications; 1 = Modifications Bit 00 = Summary bit Bit 01 = Metering System Bit 02 = Communications System Bit 03 = Alarm System Bit 04 = File System Bit 05 = Auxiliary IO System Bit 06 = Display System
3053	Installed Log Memory	1	Integer	RO	Y	-	Clusters	0 – 65,535	
3054	Free Log Memory	1	Integer	RO	Y	-	Clusters	0 – 65,535	
3055	Log Memory Cluster Size	1	Integer	RO	Y	-	Bytes	0 – 65,535	
3056	Programmed Disk On Chip Version Number	1	Integer	R/W	N	-	-	0x0000 – 0xFFFF	
3058	Real Time Clock Factory Calibration	1	Integer	RO	Y	-	ppm	-63 – 126	(-) = Slow down (+) = Speed up
3059	Real Time Clock Field Calibration	1	Integer	R/CW	Y	-	ppm	-63 – 126	(-) = Slow down (+) = Speed up
3061	Installed Log Memory	1	Integer	RO	Y	-	Mbytes	0 – 65,535	

3073	Installed Option – Slot A	1	Integer	RO	N	-	-	0 – 8	0 = Not Installed 1 = IOC-44 2 = IOC-08 3 = Reserved 4 = IOC-2222 5 = Reserved 6 = Ethernet Option Module 7 = Production Test Load Board 8 = Production Flash Loader
3074	Installed Option – Slot B	1	Integer	RO	N	-	-	0 – 8	0 = Not Installed 1 = IOC-44 2 = IOC-08 3 = Reserved 4 = IOC-2222 5 = Reserved 6 = Ethernet Option Module 7 = Production Test Load Board 8 = Production Flash Loader
3075	Installed Option – IO Extender	1	Integer	RO	N	-	-	0, 5	0 = Not Installed 5 = Installed
3093	Present Month	1	Integer	RO	N	-	Months	1 – 12	
3094	Present Day	1	Integer	RO	N	-	Days	1 – 31	
3095	Present Year	1	Integer	RO	N	-	Years	2,000 – 2,043	
3096	Present Hour	1	Integer	RO	N	-	Hours	0 – 23	
3097	Present Minute	1	Integer	RO	N	-	Minutes	0 – 59	
3098	Present Second	1	Integer	RO	N	-	Seconds	0 – 59	
3099	Day of Week	1	Integer	RO	N	-	1	1 – 7	Sunday = 1

Current/Voltage Module Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3100	Current-Voltage Module Product ID Number Used by SMS Software	1	Integer	RO	Y	-	-	0 – 9	0 = Not present 1 = Standard CVM 2 = Over range CVM 3 = CVMT
3137	Current-Voltage Module Operating System Firmware Revision	1	Integer	RO	Y	-	-	-	
3138	CT Ratio, Phase A Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3139	CT Ratio, Phase B Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3140	CT Ratio, Phase C Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3141	CT Ratio, Neutral Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3142	PT Ratio, Phase A Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3143	PT Ratio, Phase B Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3144	PT Ratio, Phase C Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3145	Neutral-Ground Correction Factor	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3150	Field Calibration Date/Time	4	DateTime	RO	Y	-	-	-	
3154	Phase A Current Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3155	Phase B Current Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3156	Phase C Current Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3157	Neutral Current Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3158	Phase A Voltage Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3159	Phase B Voltage Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3160	Phase C Voltage Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0

3161	Neutral-Ground Voltage Field Calibration Coefficient	1	Integer	R/CW	Y	-	0.00001	-20,000 – 20,000	Default = 0
3170	CT Phase Shift Correction @ 1 amp	1	Integer	R/CW	Y	-	-	-1,000 – 1,000	For user instrumentation, in the range of -10º to +10º. A negative shifts in the lag direction. Default = 0
3171	CT Phase Shift Correction @ 5 amps	1	Integer	R/CW	Y	-	-	-1,000 – 1,000	For user instrumentation, in the range of -10º to +10º. A negative shifts in the lag direction. Default = 0
3174	CVMT Operation Mode	1	Integer	RO	N	-	-	0 – 5	0 = Undefined 1 = Waiting for download 2 = Waiting for meter initialization 3 = Normal operation 4 = Calibration 5 = Firmware download
3175	CVMT Diagnostics	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	Bit 00 = Summary bit Bit 01 = Invalid Mode Bit 02 = Read error Bit 03 = Write error Bit 04 = Invalid CVMT firmware version
3176	Current-Voltage Module Reset Firmware Revision	1	Integer	RO	Y	-	-	-	

Metering Configuration & Status – Basic

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3200	Metering System Type	1	Integer	R/CW	Y	-	1	30, 31,40, 41, 42, 43	30 = 3PH3W2CT 31 = 3PH3W3CT 40 = 3PH4W3CT (default) 41 = 3PH4W4CT 42 = 3PH4W3CT2PT 43 = 3PH4W4CT2PT
3201	CT Ratio, 3-Phase Primary	1	Integer	R/CW	Y	-	1	1 – 32,767	Default = 5
3202	CT Ratio, 3-Phase Secondary	1	Integer	R/CW	Y	-	1	1, 5	Default = 5
3203	CT Ratio, Neutral Primary	1	Integer	R/CW	Y	-	1	1 – 32,767	Default = 5
3204	CT Ratio, Neutral Secondary	1	Integer	R/CW	Y	-	1	1, 5	Default = 5
3205	PT Ratio, 3-Phase Primary	1	Integer	R/CW	Y	-	1	1 – 32,767	Default = 120
3206	PT Ratio, 3-Phase Primary Scale Factor	1	Integer	R/CW	Y	-	1	-1 – 2	Default = 0 -1 = Direct Connect
3207	PT Ratio, 3-Phase Secondary	1	Integer	R/CW	Y	-	1	100, 110, 115, 120	Default = 120
3208	Nominal System Frequency	1	Integer	R/CW	Y	-	Hz	50, 60, 400	Default = 60
3209	Scale A – 3 Phase Amps	1	Integer	R/CW	Y	-	1	-2 – 1	Power of 10 Default = 0
3210	Scale B – Neutral Amps	1	Integer	R/CW	Y	-	1	-2 – 1	Power of 10 Default = 0
3211	Scale C – Ground Amps	1	Integer	R/CW	Y	-	1	-2 – 1	Power of 10 Default = 0
3212	Scale D – 3 Phase Volts	1	Integer	R/CW	Y	-	1	-1 – 2	Power of 10 Default = 0
3213	Scale E – Neutral Volts	1	Integer	R/CW	Y	-	1	-1 – 2	Power of 10 Default = -1
3214	Scale F – Power	1	Integer	R/CW	Y	-	1	-3 – 3	Power of 10 Default = 0
3216	Scale H – Transient Voltages	1	Integer	R/CW	Y	-	1	0 – 3	Power of 10 Default = 0
3217	Scale I – Harmonic Power Flows	1	Integer	R/CW	Y	-	1	0 – 3	Power of 10 Default = 0

3218	Scale J – Flicker	1	Integer	R/CW	Y	-	1	-6 – 3	Power of 10 Default = 0
3219	Software Wiring Correction Indication	1	Integer	RO	N	-	-	0 – 1	1 = Software Wiring Correction in Effect
3220	Logical Phase A Voltage	1	Integer	R/CW	Y	-	1	10 – 31	Indicates physical (external) channel connected to this logical channel. Default = 10 (add 1 if reversed)
3221	Logical Phase B Voltage	1	Integer	R/CW	Y	-	1	10 – 31	Indicates physical (external) channel connected to this logical channel. Default = 20 (add 1 if reversed)
3222	Logical Phase C Voltage	1	Integer	R/CW	Y	-	1	10 – 31	Indicates physical (external) channel connected to this logical channel. Default = 30 (add 1 if reversed)
3223	Logical Phase A Current	1	Integer	R/CW	Y	-	1	10 – 41	Indicates physical (external) channel connected to this logical channel. Default = 10 (add 1 if reversed)
3224	Logical Phase B Current	1	Integer	R/CW	Y	-	1	10 – 41	Indicates physical (external) channel connected to this logical channel. Default = 20 (add 1 if reversed)
3225	Logical Phase C Current	1	Integer	R/CW	Y	-	1	10 – 41	Indicates physical (external) channel connected to this logical channel. Default = 30 (add 1 if reversed)
3226	Logical Phase N Current	1	Integer	R/CW	Y	-	1	10 – 41	Indicates physical (external) channel connected to this logical channel. Default = 40 (add 1 if reversed)
3227	Operating Mode Parameters	1	Bitmap	R/CW	Y	-	Binary	0x0000 – 0x0FFF	Default = 0 Bit 00 = Reserved Bit 01 = Reactive Energy & Demand Accumulation 0 = Fund. Only ; 1 = Harmonics Included Bit 02 = VAR/PF Sign Convention 0 = Standard IEEE Convention 1 = CM1 Convention Bit 03 = Reserved Bit 04 = Reserved Bit 05 = Reserved Bit 06 = Conditional Energy Accumulation Control 0 = Inputs; 1 = Command Bit 07 = Reserved Bit 08 = Display Setup 0 = Enabled; 1 = Disabled Bit 09 = Normal Phase Rotation 0 = ABC; 1 = CBA Bit 10 = Large or Small THD 0 = THD; 1 = thd Bit 11 = Generate Phase Loss Voltage 0 = Disabled; 1 = Enabled
3228	Phase Rotation Direction	1	Integer	RO	N	-	1	0 – 1	0 = ABC; 1 = CBA

3229	Incremental Energy Interval	1	Integer	R/CW	Y	-	Minutes	0 – 1440	Default = 60 0 = Continuous Accumulation
3230	Incremental Energy Interval Start Time	1	Integer	R/CW	Y	-	Minutes	0 – 1440	Minutes from midnight Default = 0
3231	Incremental Energy Interval End Time	1	Integer	R/CW	Y	-	Minutes	0 – 1440	Minutes from midnight Default = 1440
3232	Energy Accumulation Mode	1	Integer	R/CW	Y	-	1	0 – 1	0 = Absolute (default) 1 = Signed
3233	Peak Current Demand Over Last Year	1	Integer	R/W	Y	-	Amps	0 – 32,767	Entered by the user for use in calculation of Total Demand Distortion. 0 = Calculation not performed (default)
3234	Nominal System Voltage, L-L	1	Integer	R/CW	Y	D	Volts/Scale	0 – 32767	Used for diagnostics and alarms
3235	Nominal Circuit Current	1	Integer	R/CW	Y	A	Amps/Scale	0 – 32767	Used for diagnostics and alarms
3239	100ms Metering Configuration	1	Bitmap	R/CW	N	-	Binary	0x0000 – 0x0007	Bit 00 = Enable 100ms Metering 0 = disabled; 1 = enabled (default) Bit 01 = Enable 100ms Frequency Measurement 0 = disabled (default); 1 = enabled Value posted in register 1080. Bit 02 = Enable 100ms DFT Calculation 0 = disabled (default); 1 = enabled Fundamental magnitudes and angles posted in registers 1230 – 1252.

Metering Configuration & Status – Harmonics

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3240	Harmonic Quantity Selection	1	Integer	R/W	Y	-	1	0 – 3	0 = Disabled 1 = Harmonic magnitudes only (default) 2 = Harmonic magnitudes and angles 3 = Harmonic magnitudes, angles, and power flows
3241	Harmonic Magnitude Format	1	Integer	R/CW	Y	-	1	0 – 4	0 = % of Fundamental (default) 1 = % of RMS 2 = RMS 3 = % of Nominal for voltages, % of Fundamental for currents 4 = % of Fundamental for voltages, RMS for currents
3242	Harmonic Refresh Interval	1	Integer	R/CW	Y	-	Seconds	10 – 60	Default = 30
3243	Time Remaining Until Harmonic Refresh	1	Integer	R/W	N	-	Seconds	10 – 60	The user may write to this register to stretch the hold time.

3244	Harmonic Channel Map	1	Bitmap	RO	N	-	Binary	0x0000 – 0x7FFF	Bitmap indicating active Harmonic Channels 0 = Inactive; 1 = Active Bit 00 = Vab Bit 01 = Vbc Bit 02 = Vca Bit 03 = Van Bit 04 = Vbn Bit 05 = Vcn Bit 06 = Vng Bit 07 = Ia Bit 08 = Ib Bit 09 = Ic Bit 10 = In Bit 11 = Ig Bit 12 = Alt V2 Bit 13 = Alt I2 Bit 14 = Alt I4 Bit 15 = Reserved
3245	Harmonic Report Status	1	Integer	RO	N	-	1	0 – 1	0 = Processing (default) 1 = Holding
3246	Trending & Forecasting Control	1	Integer	R/W	Y	-	1	0 – 1	0 = Processing (default) 1 = Holding
3247	Control Power Failure Considered as Downtime	1	Integer	R/CW	Y	-	-	0 – 1	0 = Control Power Failures Ignored (default) 1 = Control Power Failure Counted as Downtime

Metering Configuration & Status – Diagnostics

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3254	Metering System Diagnostic Summary	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Summary Bit (On if any other bit is on) Bit 01 = Configuration Error Bit 02 = Scaling Error Bit 03 = Phase Loss Bit 04 = Wiring Error Bit 05 = Incremental Energy may be incorrect due to meter reset Bit 06 = External Demand Sync Timeout

3255	Metering System Configuration Error Summary	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Summary Bit (On if any other bit is on) Bit 01 = Logical Channel Configuration Error Bit 02 = Demand System Configuration Error Bit 03 = Energy System Configuration Error Bit 04 = Average/Min/Max System Configuration Error Bit 05 = Metering Configuration Error Bit 06 = Flicker System Configuration Error (CM4 Only)
3257	Wiring Error Detection 1	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Summary Bit (On if any other bit is on) Bit 01 = Wiring Check Aborted Bit 02 = System type setup error Bit 03 = Frequency out of range Bit 04 = No voltage Bit 05 = Voltage imbalance Bit 06 = Not enough load to check connections Bit 07 = Check meter configured for direct connect Bit 08 = All CT reverse polarity Bit 09 = Reserved Bit 10 = Reserved Bit 11 = Reserved Bit 12 = Reserved Bit 13 = Reserved Bit 14 = Phase rotation not as expected Bit 15 = Negative kW is usually abnormal

3258	Wiring Error Detection 2	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Van magnitude error Bit 01 = Vbn magnitude error Bit 02 = Vcn magnitude error Bit 03 = Vab magnitude error Bit 04 = Vbc magnitude error Bit 05 = Vca magnitude error Bit 06 = Van angle not as expected Bit 07 = Vbn angle not as expected Bit 08 = Vcn angle not as expected Bit 09 = Vab angle not as expected Bit 10 = Vbc angle not as expected Bit 11 = Vca angle not as expected Bit 12 = Vbn is reversed polarity Bit 13 = Vcn is reversed polarity Bit 14 = Vbc is reversed polarity Bit 15 = Vca is reversed polarity
3259	Wiring Error Detection 3	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Move VTa to VTb Bit 01 = Move VTb to VTc Bit 02 = Move VTc to VTa Bit 03 = Move VTa to VTc Bit 04 = Move VTb to VTa Bit 05 = Move VTc to VTb Bit 06 = Reserved Bit 07 = Reserved Bit 08 = Reserved Bit 09 = Reserved Bit 10 = Ia is < 1% of CT Bit 11 = Ib is < 1% of CT Bit 12 = Ic is < 1% of CT Bit 13 = Ia angle not in expected range Bit 14 = Ib angle not in expected range Bit 15 = Ic angle not in expected range

3260	Wiring Error Detection 4	1	Bitmap	RO	N	-	Binary	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = CTa reversed polarity Bit 01 = CTb reversed polarity Bit 02 = CTc reversed polarity Bit 03 = Reserved Bit 04 = Move CTa to CTb Bit 05 = Move CTb to CTc Bit 06 = Move CTc to CTa Bit 07 = Move CTa to CTc Bit 08 = Move CTb to CTa Bit 09 = Move CTc to CTb Bit 10 = Move CTa to CTb & reverse polarity Bit 11 = Move CTb to CTc & reverse polarity Bit 12 = Move CTc to CTa & reverse polarity Bit 13 = Move CTa to CTc & reverse polarity Bit 14 = Move CTb to CTa & reverse polarity Bit 15 = Move CTc to CTb & reverse polarity
3261	Scaling Error	1	Bitmap	RO	N	-	Binary	0x0000 – 0x003F	Indicates potential over range due to scaling error 0 = Normal; 1 = Error Bit 00 = Summary Bit (On if any other bit is on) Bit 01 = Scale A – Phase Current Error Bit 02 = Scale B – Neutral Current Error Bit 03 = Scale C – Ground Current Error Bit 04 = Scale D – Phase Voltage Error Bit 05 = Scale E – Neutral Voltage Error Bit 06 = Scale F – Power Error
3262	Phase Loss Bitmap	1	Bitmap	RO	N	-	Binary	0x0000 – 0x007F(-32,768 if N/A)	0 = OK; 1 = Phase Loss Bit 00 = Summary Bit (On if any other bit is on) Bit 01 = Voltage Phase A Bit 02 = Voltage Phase B Bit 03 = Voltage Phase C Bit 04 = Current Phase A Bit 05 = Current Phase B Bit 06 = Current Phase C This register is controlled by the voltage and current phase loss alarms. These alarms must be configured and enabled for this register to be populated.

Metering Configuration & Status – Resets

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3270	Minimum/Maximum Reset Date/Time	4	DateTime	RO	Y	-	-	-	
3274	Accumulated Energy Reset Date/Time	4	DateTime	RO	Y	-	-	-	
3278	Conditional Energy Reset Date/Time	4	DateTime	RO	Y	-	-	-	
3282	Incremental Energy Reset Date/Time	4	DateTime	RO	Y	-	-	-	
3286	Input Metering Accumulation Reset Date/Time	4	DateTime	RO	Y	-	-	-	
3290	Accumulated Energy Preset Date/Time	4	DateTime	RO	Y	-	-	-	
3294	Shift Energy Accumulation Reset Date/Time	4	DateTime	RO	Y	-	-	-	

Metering Configuration & Status – Average/Min/Max Log

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3299	Average/Min/Max Log Number of Data Items	1	Integer	RO	Y	-	1	25	Number of Quantities for which Average/Min/Max calculations are made and logged.
3300	Average/Min/Max Log Interval	1	Integer	R/CW	Y	-	Minute	1 – 1440	Must be evenly divisible into 1440. Default = 60
3301	Average/Min/Max Log Channel #1 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1100 Current, Phase A 0 = No calculation for this channel
3302	Average/Min/Max Log Channel #2 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1101 Current, Phase B 0 = No calculation for this channel
3303	Average/Min/Max Log Channel #3 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1102 Current, Phase C 0 = No calculation for this channel
3304	Average/Min/Max Log Channel #4 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1103 Current, Neutral 0 = No calculation for this channel
3305	Average/Min/Max Log Channel #5 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1104 Current, Ground 0 = No calculation for this channel
3306	Average/Min/Max Log Channel #6 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1120 Voltage, A-B 0 = No calculation for this channel
3307	Average/Min/Max Log Channel #7 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1121 Voltage B-C 0 = No calculation for this channel

3308	Average/Min/Max Log Channel #8 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1122 Voltage C-A 0 = No calculation for this channel
3309	Average/Min/Max Log Channel #9 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1127 Voltage N-G 0 = No calculation for this channel
3310	Average/Min/Max Log Channel #10 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1143 Real Power, Total 0 = No calculation for this channel
3311	Average/Min/Max Log Channel #11 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1147 Reactive Power, Total 0 = No calculation for this channel
3312	Average/Min/Max Log Channel #12 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1151 Apparent Power, Total 0 = No calculation for this channel
3313	Average/Min/Max Log Channel #13 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1163 True Power Factor, Total 0 = No calculation for this channel
3314	Average/Min/Max Log Channel #14 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1171 Displacement Power Factor, Total 0 = No calculation for this channel
3315	Average/Min/Max Log Channel #15 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1207 THD/thd Voltage Phase A-N 0 = No calculation for this channel
3316	Average/Min/Max Log Channel #16 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1208 THD/thd Voltage Phase B-N 0 = No calculation for this channel
3317	Average/Min/Max Log Channel #17 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1209 THD/thd Voltage Phase C-N 0 = No calculation for this channel
3318	Average/Min/Max Log Channel #18 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1211 THD/thd Voltage Phase A-B 0 = No calculation for this channel
3319	Average/Min/Max Log Channel #19 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1212 THD/thd Voltage Phase B-C 0 = No calculation for this channel
3320	Average/Min/Max Log Channel #20 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 1213 THD/thd Voltage Phase C-A 0 = No calculation for this channel
3321	Average/Min/Max Log Channel #21 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 2150 Last Demand, Real Power, 3-Phase Total 0 = No calculation for this channel
3322	Average/Min/Max Log Channel #22 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 2165 Last Demand, Reactive Power, 3-Phase Total 0 = No calculation for this channel
3323	Average/Min/Max Log Channel #23 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 2180 Last Demand, Apparent Power, 3-Phase Total 0 = No calculation for this channel
3324	Average/Min/Max Log Channel #24 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 0 0 = No calculation for this channel
3325	Average/Min/Max Log Channel #25 Meter Register	1	Integer	R/CW	Y	-	-	0, 1100 – 2999	Default = 0 0 = No calculation for this channel

Metering Configuration & Status – Flicker

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

3330	Flicker Start Time	1	Integer	R/W	Y	-	Minutes	0 – 1439	Time at which to start flicker measurement in minutes from midnight.
3331	Short Term Flicker (Pst)Update Interval	1	Integer	R/CW	Y	-	-	0 – 3	0 = 1 minute 1 = 5 minutes 2 = 10 minutes (default) 3 = 15 minutes
3332	Number of Short Term Updates in a Long Term (Plt) Update	1	Integer	R/CW	Y	-	-	2 – 1010	Default = 12
3333	Flicker Enable/Disable	1	Integer	R/CW	Y	-	-	0 – 1	0 = Disable (default) 1 = Enable
3336	Flicker Diagnostics	1	Integer	RO	N	-	-	0x0000 – 0xFFFF	0 = Normal; 1 = Error Bit 00 = Summary Bit 01 = Invalid CVMT Firmware Version Bit 02 = Enable/Disable Error Bit 03 = Start Time Error Bit 04 = IFL Read Error Bit 05 = Pst Read Error Bit 06 = Plt Read Error Bit 07 = DOC Write Error
3337	Flicker Filter Timeout	1	Integer	RO	N	-	-	0 – 1	0 = Filter not ready 1 = Filter ready

Metering Configuration & Status – Input Assignment to Status Bitmap

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3350	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 00	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 3 (Dig In A-S1)
3351	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 01	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 4 (Dig In A-S2)
3352	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 02	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 5 (Dig In A-S3)
3353	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 03	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 6 (Dig In A-S4)
3354	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 04	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 19 (Dig In B-S1) (Applies to CM4 only)
3355	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 05	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 20 (Dig In B-S2) (Applies to CM4 only)
3356	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 06	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 21 (Dig In B-S3) (Applies to CM4 only)

3357	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 07	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 22 (Dig In B-S4) (Applies to CM4 only)
3358	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 08	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 35 (Dig In C1)
3359	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 09	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 36 (Dig In C5)
3360	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 10	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 37 (Dig In C3)
3361	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 11	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 38 (Dig In C4)
3362	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 12	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 39 (Dig In C5)
3363	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 13	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 40 (Dig In C6)
3364	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 14	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 41 (Dig In C7)
3365	Discrete Input Point Assignment to Discrete Input Status Bitmap Bit 15	1	Integer	R/CW	Y	-	-	0 – 66	0 = none Default = 42 (Dig In C8)

Metering Configuration & Status – Disturbance Direction Detection

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3390	Disturbance Direction Detection Enable/Disable	1	Integer	R/CW	Y	-	-	0 – 1	0 = Disable 1 = Enable (default)

Communications – RS485

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3400	RS-485 Comm Port (M/S) Protocol	1	Integer	R/CW	Y	-	-	0 – 3	0 = Modbus (default) 1 = Jbus 2 = Modbus ASCII 8-Bit 3 = Modbus ASCII 7-Bit
3401	RS-485 Comm Port (M/S) Address	1	Integer	R/CW	Y	-	-	0 – 255	Valid Addresses: (Default = 1) Modbus: 0 – 247 Jbus: 0 – 255
3402	RS-485 Comm Port (M/S) Baud Rate	1	Integer	R/CW	Y	-	-	0 – 5	0 = 1200 1 = 2400 2 = 4800 3 = 9600 (default) 4 = 19200 5 = 38400
3403	RS-485 Comm Port (M/S) Parity	1	Integer	R/CW	Y	-	-	0 – 2	0 = Even (default) 1 = Odd 2 = None
3404	RS-485 Comm Port (M/S) Master/Slave Mode Selection	1	Integer	R/CW	Y	-	-	0 – 1	0 = Slave (default) 1 = Master
3405	RS-485 Comm Port (M) Timeout Time	1	Integer	R/CW	Y	-	seconds	1 – 60	Timeout when communicating as a master
3406	RS_485 Comm Port Redirection Port Select	1	Integer	R/CW	Y	-	-	0 – 3	0 = No Redirection 2 = Redirect RS-485 Comms to ECC Sub-Net 3 = Redirect RS-485Comms to RS-232
3407	RS-485 Comm Port (M/S) Modbus ASCII Default Timeout	1	Integer	R/CW	Y	-	milliseconds	50 – 5000	Timeout for end of ASCII packet when no control delimitation is detected
3410	RS-485 Comm Port (M/S) Packets To This Unit	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to this unit
3411	RS-485 Comm Port (S) Packets To Other Units	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to other units
3412	RS-485 Comm Port (M/S) Packets With Invalid Address	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with invalid address
3413	RS-485 Comm Port (M/S) Packets With Bad CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with bad CRC
3414	RS-485 Comm Port (M/S) Packets With Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with errors
3415	RS-485 Comm Port (M/S) Packets With Illegal Opcode	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal opcode
3416	RS-485 Comm Port (M/S) Packets With Illegal Register	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal register

3417	RS-485 Comm Port (S) Invalid Write Responses	1	Integer	RO	Y	-	-	0 – 32,767	Number of invalid write responses
3418	RS-485 Comm Port (M/S) Packets With Illegal Counts	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal count
3419	RS-485 Comm Port (M/S) Packets With Frame Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a frame error
3420	RS-485 Comm Port (S) Broadcast Messages	1	Integer	RO	Y	-	-	0 – 32,767	Number of broadcast messages received
3421	RS-485 Comm Port (M/S) Number Of Exceptions	1	Integer	RO	Y	-	-	0 – 32,767	Number of exception replies
3422	RS-485 Comm Port (M/S) Messages With Good CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a good CRC
3423	RS-485 Comm Port (M/S) Modbus Event Counter	1	Integer	RO	Y	-	-	0 – 32,767	Modbus Event Counter
3424	RS-485 Comm Port (M) Time Out	1	Integer	RO	Y	-	-	0 – 32,767	Message failed due to excessive response time from the internal comm. server

Communications – RS232

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3430	RS-232 Comm Port (M/S) Protocol	1	Integer	R/CW	Y	-	-	0 – 2	0 = Modbus (default) 1 = Jbus 2 = Modbus ASCII 8-Bit
3431	RS-232 Comm Port (M/S) Address	1	Integer	R/CW	Y	-	-	0 – 255	Valid Addresses: (Default = 1) Modbus: 0 – 247 Jbus: 0 – 255
3432	RS-232 Comm Port (M/S) Baud Rate	1	Integer	R/CW	Y	-	-	0 – 5	0 = 1200 1 = 2400 2 = 4800 3 = 9600 (default) 4 = 19200 5 = 38400
3433	RS-232 Comm Port (M/S) Parity	1	Integer	R/CW	Y	-	-	0 – 2	0 = Even (default) 1 = Odd 2 = None
3434	RS-232 Comm Port (M/S) Master/Slave Mode Selection	1	Integer	R/CW	Y	-	-	0 – 1	0 = Slave 1 = Master
3435	RS-232 Comm Port (M) Timeout	1	Integer	R/CW	Y	-	seconds	1 – 60	Timeout when communicating as a master

3436	RS-232 Comm Port Redirection Port Select	1	Integer	R/CW	Y	-	-	0 – 2	0 = No Redirection 1 = Redirect RS-232 comms to RS-485 2 = Redirect RS-232 Comms to ECC Sub-Net
3437	RS-232 Comm Port (M/S) Modbus ASCII Default Timeout	1	Integer	R/CW	Y	-	milliseconds	50 – 5000	Timeout for end of ASCII packet when no control delimitation is detected
3440	RS-232 Comm Port (M/S) Packets To This Unit	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to this unit
3441	RS-232 Comm Port (S) Packets To Other Units	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to other units
3442	RS-232 Comm Port (M/S) Packets With Invalid Address	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with invalid address
3443	RS-232 Comm Port (M/S) Packets With Bad CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with bad CRC
3444	RS-232 Comm Port (M/S) Packets With Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with errors
3445	RS-232 Comm Port (M/S) Packets With Illegal Opcode	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal opcode
3446	RS-232 Comm Port (M/S) Packets With Illegal Register	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal register
3447	RS-232 Comm Port (S) Invalid Write Responses	1	Integer	RO	Y	-	-	0 – 32,767	Number of invalid write responses
3448	RS-232 Comm Port (M/S) Packets With Illegal Counts	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal count
3449	RS-232 Comm Port (M/S), Packets With Frame Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a frame error
3450	RS-232 Comm Port (S) Broadcast Messages	1	Integer	RO	Y	-	-	0 – 32,767	Number of broadcast messages received
3451	RS-232 Comm Port (M/S) Number Of Exceptions	1	Integer	RO	Y	-	-	0 – 32,767	Number of exception replies
3452	RS-232 Comm Port (M/S) Messages With Good CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a good CRC
3453	RS-232 Comm Port (M/S) Modbus Event Counter	1	Integer	RO	Y	-	-	0 – 32,767	Modbus Event Counter
3454	RS-232 Comm Port (M) Time Out	1	Integer	RO	Y	-	-	0 – 32,767	Message failed due to excessive response time from the internal comm. server

Communications – Infrared

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

3460	Infrared Comm Port Protocol	1	Integer	R/CW	Y	-	-	0 – 1	0 = Modbus (default) 1 = Jbus
3461	Infrared Comm Port Address	1	Integer	R/CW	Y	-	-	0 – 255	Valid Addresses: (Default = 1) Modbus: 0 – 247 Jbus: 0 – 255
3462	Infrared Comm Port Baud Rate	1	Integer	R/CW	Y	-	-	3 – 5	3 = 9600 4 = 19200 5 = 38400 (default)
3463	Infrared Comm Port Parity	1	Integer	R/CW	Y	-	-	0	0 = Even (The only supported parity mode)
3464	Infrared Comm Port(M/S) Master/Slave Mode Selection	1	Integer	RO	Y	-	-	0	0 = Slave (not adjustable)
3465	Reserved	1	Integer	RO	-	-	-	-	Reserved for future development
3466	Infrared Comm Port Re-direction Port Select	1	Integer	RO	Y	-	-	0 – 2	0 = No Redirection 1 = Re-direct IR comms to RS-485 2 = Re-Direct IR Comms to ECC Sub-Net
3470	Infrared Comm Port Packets To This Unit	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to this unit
3471	Infrared Comm Port Packets To Other Units	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to other units
3472	Infrared Comm Port Packets With Invalid Address	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with invalid address
3473	Infrared Comm Port Packets With Bad CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with bad CRC
3474	Infrared Comm Port Packets With Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with errors
3475	Infrared Comm Port Packets With Illegal Opcode	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal opcode
3476	Infrared Comm Port Packets With Illegal Register	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal register
3477	Infrared Comm Port Invalid Write Responses	1	Integer	RO	Y	-	-	0 – 32,767	Number of invalid write responses
3478	Infrared Comm Port Packets With Illegal Counts	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal count
3479	Infrared Comm Port Packets With Frame Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a frame error
3480	Infrared Comm Port Broadcast Messages	1	Integer	RO	Y	-	-	0 – 32,767	Number of broadcast messages received
3481	Infrared Comm Port Exception Replies	1	Integer	RO	Y	-	-	0 – 32,767	Number of exception replies

3482	Infrared Comm Port Messages With Good CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a good CRC
3483	Infrared Comm Port Modbus Event Counter	1	Integer	RO	Y	-	-	0 – 32,767	Modbus Event Counter

Communications – ECC Port

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3490	ECC Slave Port Packets To This Unit	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to this unit
3492	ECC Slave Port Packets With Invalid Address	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with invalid address
3493	ECC Slave Port Packets With Bad CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with bad CRC
3494	ECC Slave Port Packets With Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with errors
3495	ECC Slave Port Packets With Illegal Opcode	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal opcode
3496	ECC Slave Port Packets With Illegal Register	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal register
3497	ECC Slave Port Invalid Write Responses	1	Integer	RO	Y	-	-	0 – 32,767	Number of invalid write responses
3498	ECC Slave Port Packets With Illegal Counts	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal count
3499	ECC Slave Port Packets With Frame Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a frame error
3500	ECC Slave Port Broadcast Messages	1	Integer	RO	Y	-	-	0 – 32,767	Number of broadcast messages received
3501	ECC Slave Port Exceptions Received	1	Integer	RO	Y	-	-	0 – 32,767	Number of exception replies
3502	ECC Slave Port Messages With Good CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a good CRC
3503	ECC Slave Port Modbus Event Counter	1	Integer	RO	Y	-	-	0 – 32,767	Modbus Event Counter
3510	ECC Master Port Packets To This Unit	1	Integer	RO	Y	-	-	0 – 32,767	Number of valid messages addressed to this unit
3512	ECC Master Port Packets With Invalid Address	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with invalid address
3513	ECC Master Port Packets With Bad CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with bad CRC

3515	ECC Master Port Packets With Illegal Opcode	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal opcode
3516	ECC Master Port Packets With Illegal Register	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal register
3518	ECC Master Port Packets With Illegal Counts	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with an illegal count
3519	ECC Master Port Packets With Frame Error	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a frame error
3521	ECC Master Port Exceptions Received	1	Integer	RO	Y	-	-	0 – 32,767	Number of exception replies
3522	ECC Master Port Messages With Good CRC	1	Integer	RO	Y	-	-	0 – 32,767	Number of messages received with a good CRC
3523	ECC Master Port Modbus Event Counter	1	Integer	RO	Y	-	-	0 – 32,767	Modbus Event Counter
3524	ECC Master Port Time Out	1	Integer	RO	Y	-	-	0 – 32,767	Message failed due to excessive response time from the slave device

Communications – Server

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3530	Server Requests to ECC Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of server requests made through ECC Port
3531	ECC Port Replies to Server requests	1	Integer	RO	Y	-	-	0 – 32,767	Number of replies from ECC Port to server requests
3532	Aborted Server Requests for ECC Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to ECC port aborted due to errors
3533	Dropped Server Replies From ECC Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to ECC Port dropped due to replies that were irreconcilable
3534	ECC Protocol Errors	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to ECC port dropped due to protocol errors in Request or reply
3540	Server Requests to RS-232 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of server requests made through RS-232 Port
3541	232 Port Replies to Server requests	1	Integer	RO	Y	-	-	0 – 32,767	Number of replies from RS-232 Port to server requests
3542	Aborted Server Requests for RS-232 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-232 port aborted due to errors
3543	Dropped Server Replies From RS-232 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-232 Port dropped due to replies that were irreconcilable
3544	232 Protocol Errors	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-232 port dropped due to protocol errors in Request or reply

3550	Server Requests to RS-485 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of server requests made through RS-485 Port
3551	485 Port Replies to Server requests	1	Integer	RO	Y	-	-	0 – 32,767	Number of replies from RS-485 Port to server requests
3552	Aborted Server Requests for RS-485 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-485 port aborted due to errors
3553	Dropped Server Replies From RS-485 Port	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-485 Port dropped due to replies that were irreconcilable
3554	485 Protocol Errors	1	Integer	RO	Y	-	-	0 – 32,767	Number of Server requests to RS-485 port dropped due to protocol errors in Request or reply

Remote Display – Configuration & Status

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3600	Display Present	1	Integer	RO	N	-	-	0 – 1	0 = Not present 1 = LCD Display connected 2 = VFD Display connected
3601	Display Contrast Setting	1	Integer	R/CW	Y	-	-	0 – 7	0 = Brightest (default)…. 7 = Dimmest
3602	Display Language Set	1	Integer	R/CW	Y	-	-	0 – 2	0 = English (default) 1 = French 2 = Spanish 3 = Polish 4 = Italian 5 = German
3603	Display Screen Auto-rotation Time Delay	1	Integer	R/CW	Y	1	Seconds	0 – 60	When value is 1-60, all Summary Screens and Custom Screens are shown in rotation with this time setting being the time that each screen is displayed. A value of 0 (default) disables the feature.
3604	Display Date Format	1	Integer	R/CW	Y	-	-	0 – 2	0 = MM/DD/YYYY (default) 1 = YYYY/MM/DD2 = DD/MM/YYYY
3605	Display Time Format	1	Integer	R/CW	Y	-	-	0 – 1	0 = 2400hr (default) 1 = AM/PM
3606	Display Timeout	1	Integer	R/CW	Y	-	-	0 – 3	0 = 1 Minutes 1 = 5 Minutes (default) 2 = 10 Minutes 3 = 15 Minutes
3607	Display Motion Sensor Sensitivity	1	Integer	R/CW	Y	-	-	0 – 3	VFD Only 0 = Off 1 = Near Range – less than 3 ft (default) 2 = Medium Range 3 = Far Range – greater than 10 ft
3608	Display Alarm State	1	Integer	RO	Y	-	-	0 – 4	0 = Alarm LED Off 1 = P3 (Low) Alarm Active – LED on (blink at 1Hz) 2 = P2 (Med) Alarm Active – LED on 3 = P1 (High) Alarm Active – LED on 4 = Unacknowledged P1 Alarm – LED on
3610	Display Setup Configuration/Meter Initialization Password	1	Integer	R/CW	Y	-	-	0 – 9998	
3611	Display Diagnostics Password	1	Integer	R/CW	Y	-	-	0 – 9998	
3612	Display Energy/Demand Reset Password	1	Integer	R/CW	Y	-	-	0 – 9998	

3613	Display M/M Reset Password	1	Integer	R/CW	Y	-	-	0 – 9998	
3614	Display Restricted Access Disable Bit Mask	1	Integer	R/CW	Y	-	-	0 – 0x0F	0 = Enabled; 1 = Disabled Bit 00 = Disable Peak Demand Reset Capability Bit 01 = Disable Energy Reset Capability Bit 02 = Disable Min/Max Reset Capability Bit 03 = Disable Meter Initialization Capability

Remote Display – Custom Screens

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3655	Custom Screen #1 – Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 Characters
3665	Custom Screen #1 – Row #1 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3666	Custom Screen #1 – Row #2 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3667	Custom Screen #1 – Row #3 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3668	Custom Screen #2 – Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 Characters
3678	Custom Screen #2 – Row #1 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3679	Custom Screen #2 – Row #2 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3680	Custom Screen #2 – Row #3 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3681	Custom Screen #3 – Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 Characters
3691	Custom Screen #3 – Row #1 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3692	Custom Screen #3 – Row #2 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3693	Custom Screen #3 – Row #3 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3694	Custom Screen #4 – Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 Characters
3704	Custom Screen #4 – Row #1 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	

3705	Custom Screen #4 – Row #2 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3706	Custom Screen #4 – Row #3 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3707	Custom Screen #5 – Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 Characters
3717	Custom Screen #5 – Row #1 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3718	Custom Screen #5 – Row #2 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	
3719	Custom Screen #5 – Row #3 Quantity Index	1	Integer	R/CW	Y	-	-	0 – 100	

Remote Display – Custom Quantities

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3770	Custom Quantity #1 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3775	Custom Quantity #1– Register	1	Integer	R/CW	Y	See3776	Range/Scale	0 – 32,767	Register to be displayed
3776	Custom Quantity #1– Scale Factor	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3777	Custom Quantity #1– Format Code	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3778	Custom Quantity #2 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3783	Custom Quantity #2– Register	1	Integer	R/CW	Y	See3784	Range/Scale	0 – 32,767	Register to be displayed

3784	Custom Quantity #2– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3785	Custom Quantity #2– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3786	Custom Quantity #3 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3791	Custom Quantity #3– Register	1	Integer	R/CW	Y	See3792	Range/Scale	0 – 32,767	Register to be displayed
3792	Custom Quantity #3– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3793	Custom Quantity #3– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3794	Custom Quantity #4 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3799	Custom Quantity #4– Register	1	Integer	R/CW	Y	See 3800	Range/Scale	0 – 32,767	Register to be displayed
3800	Custom Quantity #4– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001

3801	Custom Quantity #4– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3802	Custom Quantity #5 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3807	Custom Quantity #5– Register	1	Integer	R/CW	Y	See3808	Range/Scale	0 – 32,767	Register to be displayed
3808	Custom Quantity #5– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3809	Custom Quantity #5– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3810	Custom Quantity #6 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3815	Custom Quantity #6– Register	1	Integer	R/CW	Y	See3816	Range/Scale	0 – 32,767	Register to be displayed
3816	Custom Quantity #6– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3817	Custom Quantity #6– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3818	Custom Quantity #7 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters

3823	Custom Quantity #7– Register	1	Integer	R/CW	Y	See3824	Range/Scale	0 – 32,767	Register to be displayed
3824	Custom Quantity #7– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3825	Custom Quantity #7– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3826	Custom Quantity #8 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3831	Custom Quantity #8– Register	1	Integer	R/CW	Y	See3831	Range/Scale	0 – 32,767	Register to be displayed
3832	Custom Quantity #8– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3833	Custom Quantity #8– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3834	Custom Quantity #9 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3839	Custom Quantity #9– Register	1	Integer	R/CW	Y	See 3839	Range/Scale	0 – 32,767	Register to be displayed

3840	Custom Quantity #9– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3841	Custom Quantity #9– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label
3842	Custom Quantity #10 – Label	5	Char	R/CW	Y	-	-	ASCII Codes	10 Characters
3847	Custom Quantity 10-Register	1	Integer	R/CW	Y	See 3848	Range/Scale	0 – 32,767	Register to be displayed
3848	Custom Quantity 10– Scale	1	Integer	R/CW	Y	-	-	0 – 6	0 = 1000 (default) 1 = 100 2 = 10 3 = 1 4 = 0.1 5 = 0.01 6 = 0.001
3849	Custom Quantity 10– Format	1	Integer	R/CW	Y	-	-	0 – 5	0 = Integer 1 = Date/Time 2 = Mod10L4 3 = Mod10L3 4 = Mod10L2 5 = Label

EN50160 Configuration & Status

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3900	EN50160 Enable/Disable	1	Integer	R/CW	Y	-	-	0 – 1	0 = disabled (default) 1 = enabled
3901	EN50160 Nominal Voltage	1	Integer	RO	Y	D	Volts/Scale	0 – 32767	Copied from register 3234 for use by EN50160 Evaluation
3902	EN50160 Voltage Selection for 4-Wire Systems	1	Integer	R/CW	Y	-	-	0 – 1	0 = Line-to-Neutral (default) 1 = Line-to-Line
3903	EN50160 Nominal Frequency	1	Integer	RO	Y	-	Hz	50, 60, 400	Copied from register 3208 for use by EN50160 Evaluation
3904	EN50160 Frequency Configuration	1	Integer	R/CW	Y	-	-	0 – 1	0 = system with synchronous connection to interconnected system (default) 1 = system without synchronous connection to interconnected system
3905	EN50160 & Trending Configuration First Day of Week	1	Integer	R/CW	Y	-	-	1 – 7	1 = Sunday 2 = Monday (default)
3906	EN50160 Definition of Interruption	1	Integer	R/CW	Y	1	%	0 – 10	% of Nominal Voltage considered to be an interruption Default = 1
3907	EN50160 Definition of Allowable Range of Slow Voltage Changes	1	Integer	R/CW	Y	1	%	1 – 20	Default = 10
3908	EN50160 Definition of Short Interruption	1	Integer	R/CW	Y	1	Seconds	2 – 600	Default =180
3910	EN50160 Active Evaluations	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	Bitmap of active evaluations Bit 00 – Summary bit – at least one EN50160 evaluation is active Bit 01 – Frequency Bit 02 – Supply voltage variations Bit 03 – Magnitude of rapid voltage changes Bit 04 – Flicker Bit 05 – Supply voltage dips Bit 06 – Short interruptions of the supply voltage Bit 07 – Long interruptions of the supply voltage Bit 08 – Temporary power frequency overvoltages Bit 09 – Transient overvoltages Bit 10 – Supply voltage unbalance Bit 11 – Harmonic voltage Bit 12 – THD Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used

3911	EN50160 Evaluation Status Summary	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	Bitmap of evaluation status summary Bit 00 – Summary bit – at least one EN50160 evaluation has failed Bit 01 – Frequency Bit 02 – Supply voltage variations Bit 03 – Magnitude of rapid voltage changes Bit 04 – Flicker Bit 05 – Supply voltage dips Bit 06 – Short interruptions of the supply voltage Bit 07 – Long interruptions of the supply voltage Bit 08 – Temporary power frequency overvoltages Bit 09 – Transient overvoltages Bit 10 – Supply voltage unbalance Bit 11 – Harmonic voltage Bit 12 – THD Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used
3912	EN50160 Count of 10-second Intervals For Present Year	2	Mod10	RO	Y	1	-	0 – 3,162,240	
3914	EN50160 Count of 10-second Intervals For Present Week	2	Mod10	RO	Y	1	-	0 – 60,480	
3916	EN50160 Count of 10-minute Intervals For Present Week	1	Integer	RO	Y	1	-	0 – 32,767	
3917	EN50160 Allowable Rapid Voltage Changes Per Week	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3918	EN50160 Allowable Short Interruptions Per Year	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3919	EN50160 Allowable Long Interruptions Per Year	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3920	EN50160 Allowable Voltage Dips Per Week With 10% <= Depth < 15% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3921	EN50160 Allowable Voltage Dips Per Week With 15% <= Depth < 30% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3922	EN50160 Allowable Voltage Dips Per Week With 30% <= Depth < 45% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3923	EN50160 Allowable Voltage Dips Per Week With 45% <= Depth < 60% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768

3924	EN50160 Allowable Voltage Dips Per Week With 60% <= Depth < 75% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3925	EN50160 Allowable Voltage Dips Per Week With 75% <= Depth < 90% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3926	EN50160 Allowable Voltage Dips Per Week With 90% <= Depth < 99% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3927	EN50160 Allowable Voltage Dips Per Week With 10% <= Depth < 99% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3928	Reserved	1	Integer	RO	-	-	-	-	Reserved for future development
3929	Reserved	1	Integer	RO	-	-	-	-	Reserved for future development
3930	EN50160 Allowable Over Voltages Per Week With 110% < Magnitude <= 115% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3931	EN50160 Allowable Over Voltages Per Week With 115% < Magnitude <= 130% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3932	EN50160 Allowable Over Voltages Per Week With 130% < Magnitude <= 145% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3933	EN50160 Allowable Over Voltages Per Week With 145% < Magnitude <= 160% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3934	EN50160 Allowable Over Voltages Per Week With 160% < Magnitude <= 175% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3935	EN50160 Allowable Over Voltages Per Week With 175% < Magnitude <= 200% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768

3936	EN50160 Allowable Over Voltages Per Week With 200% < Magnitude	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3937	EN50160 Allowable Over Voltages Per Week With 110% < Magnitude	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3938	Reserved	1	Integer	RO	-	-	-	-	Reserved for future development
3939	Reserved	1	Integer	RO	-	-	-	-	Reserved for future development
3940	EN50160 Allowable Transient Over Voltages Per Week With 200% < Magnitude <= 300% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3941	EN50160 Allowable Transient Over Voltages Per Week With 300% < Magnitude <= 400% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3942	EN50160 Allowable Transient Over Voltages Per Week With 400% < Magnitude <= 500% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3943	EN50160 Allowable Transient Over Voltages Per Week With 500% < Magnitude <= 600% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3944	EN50160 Allowable Transient Over Voltages Per Week With 600% < Magnitude <= 700% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3945	EN50160 Allowable Transient Over Voltages Per Week With 700% < Magnitude <= 800% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3946	EN50160 Allowable Transient Over Voltages Per Week With 800% < Magnitude <= 900% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3947	EN50160 Allowable Transient Over Voltages Per Week With 900% < Magnitude <= 1000% Nominal	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768

3948	EN50160 Allowable Transient Over Voltages Per Week With 1000% < Magnitude	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768
3949	EN50160 Allowable Transient Over Voltages Per Week With 200% < Magnitude	1	Integer	R/CW	Y	1	-	0 – 32,767 (-32,768 if N/A)	Default = -32,768

Power Quality Summary Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
3950	Power Quality Summary Enable/Disable	1	Integer	R/CW	Y	-	-	0 – 1	0 = Disable (default) 1 = Enable
3951	Power Quality Summary Building Type	1	Integer	R/CW	Y	-	-	0 – 100	Power Quality Summary Building Types
3952	Power Quality Summary Circuit Monitor Location	1	Integer	R/CW	Y	-	-	0 – 3	0 = Main (default) 1 = Feeder 2 = Branch 3 = Tie
3953	Power Quality Summary Load Types	6	Bitmap	R/CW	Y	-	-	0x0000 – 0xFFFF	Indicates the types of loads present on the monitored circuit(s).
3959	Power Quality Summary Load Importance	1	Integer	R/CW	Y	-	-	0 – 2	0 = Normal (default) 1 = Critical 2 = Life Safety
3960	Power Quality Summary Load Peak	1	Integer	R/CW	Y	-	-	0 – 2	0 = Constant (default) 1 = Summer Peak 2 = Winter Peak
3961	Power Quality Summary PQI Calculation Method	1	Integer	R/CW	Y	-	-	0 – 1	0 = Worst Case (default) 1 = Weighted Average

Power Quality Summary Building Types

0 DEFAULT
1 Aircraft Hangar
2 Control Tower
3 Terminal
4 Emergency Response
5 Baggage Handling
6 Amusement Ride
7 Office Building
8 Restaurant
9 Retail
10 Classroom
11 Dormitory
12 Library

13 Data Processing
14 Barracks
15 Hospital
16 Semiconductor Fab Bldg
17 Waste Water Treatment Plant
18 Automotive Manufacturing
19 Food/Beverage Processing
20 Plastic Extrusion
21 Cement/Glass/Stone
22 Smelting
23 Paper/Wood/Pulp
24 Petrochemical Processing
25 Pharmaceutical Manufacturing
26 Printing and Publishing
27 Arena
28 Casino
29 Rubber/Plastics Processing
30 Metal Mining
31 Textile Manufacturing
32 Oil Drilling
33 Gymnasium
34 Utilities/Central Plant
35 Shipping
36 Warehouse
37 Furniture Manufacturing
38 Water Treatment
39 Parking Garage
40 Dairy
41 Gin
42 Bulk Mail Processing
43 Electronic Manufacturing
44 Railroad Systems
45 Water/Sewage Pumping Station
46 Oil Well
47 Agricultural Processing
48 Metal Foundry
49 Coal Mine

50	Slaughterhouse
51	Veterinary Medicine
52	Water Drilling
53	Bakery
54	Machine Shop
55	Communications
56	Aerospace Manufacturing
57	Public Transportation
58	Dock Shipping Shore Power
59	Banking Services
60	Hotel
61	Theatre
62	Nursing Home
63	Laboratory
64	Zoo
65	Church
66	Courthouse
67	Correctional Institution
68	Aerospace Control

Auxiliary Inputs & Outputs – General

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
4001	Discrete Input Status Option Slot A	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 3 (A01) Bit 01 = On/Off Status of IO Point 4 (A02) Bit 02 = On/Off Status of IO Point 5 (A03) Bit 03 = On/Off Status of IO Point 6 (A04) Bit 04 = On/Off Status of IO Point 7 (A05) Bit 05 = On/Off Status of IO Point 8 (A06) Bit 06 = On/Off Status of IO Point 9 (A07) Bit 07 = On/Off Status of IO Point 10 (A08) Bit 08 = On/Off Status of IO Point 11 (A09) Bit 09 = On/Off Status of IO Point 12 (A10) Bit 10 = On/Off Status of IO Point 13 (A11) Bit 11 = On/Off Status of IO Point 14 (A12) Bit 12 = On/Off Status of IO Point 15 (A13) Bit 13 = On/Off Status of IO Point 16 (A14) Bit 14 = On/Off Status of IO Point 17 (A15) Bit 15 = On/Off Status of IO Point 18 (A16)
4002	Discrete Input Status Option Slot B	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 19 (B01) Bit 01 = On/Off Status of IO Point 20 (B02) Bit 02 = On/Off Status of IO Point 21 (B03) Bit 03 = On/Off Status of IO Point 22 (B04) Bit 04 = On/Off Status of IO Point 23 (B05) Bit 05 = On/Off Status of IO Point 24 (B06) Bit 06 = On/Off Status of IO Point 25 (B07) Bit 07 = On/Off Status of IO Point 26 (B08) Bit 08 = On/Off Status of IO Point 27 (B09) Bit 09 = On/Off Status of IO Point 28 (B10) Bit 10 = On/Off Status of IO Point 29 (B11) Bit 11 = On/Off Status of IO Point 30 (B12) Bit 12 = On/Off Status of IO Point 31 (B13) Bit 13 = On/Off Status of IO Point 32 (B14) Bit 14 = On/Off Status of IO Point 33 (B15) Bit 15 = On/Off Status of IO Point 34 (B16)

4003	Discrete Input Status Pluggable IO	1	Bitmap	RO	N	-	-	0x0000 – 0x00FF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 35 (C01) Bit 01 = On/Off Status of IO Point 36 (C02) Bit 02 = On/Off Status of IO Point 37 (C03) Bit 03 = On/Off Status of IO Point 38 (C04) Bit 04 = On/Off Status of IO Point 39 (C05) Bit 05 = On/Off Status of IO Point 40 (C06) Bit 06 = On/Off Status of IO Point 41 (C07) Bit 07 = On/Off Status of IO Point 42 (C08) Bit 08 = On/Off Status of IO Point 43 (C09) future Bit 09 = On/Off Status of IO Point 44 (C10) future Bit 10 = On/Off Status of IO Point 45 (C11) future Bit 11 = On/Off Status of IO Point 46 (C12) future Bit 12 = On/Off Status of IO Point 47 (C13) future Bit 13 = On/Off Status of IO Point 48 (C14) future Bit 14 = On/Off Status of IO Point 49 (C15) future Bit 15 = On/Off Status of IO Point 50 (C16) future
4005	Discrete Output Status Standard Discrete Output	1	Bitmap	RO	N	-	-	0x0000 – 0x0001	0 = Off, 1 = On Bit 00 = Standard discrete output (S01)
4006	Discrete Output Status Option Slot A	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 3 (A01) Bit 01 = On/Off Status of IO Point 4 (A02) Bit 02 = On/Off Status of IO Point 5 (A03) Bit 03 = On/Off Status of IO Point 6 (A04) Bit 04 = On/Off Status of IO Point 7 (A05) Bit 05 = On/Off Status of IO Point 8 (A06) Bit 06 = On/Off Status of IO Point 9 (A07) Bit 07 = On/Off Status of IO Point 10 (A08) Bit 08 = On/Off Status of IO Point 11 (A09) Bit 09 = On/Off Status of IO Point 12 (A10) Bit 10 = On/Off Status of IO Point 13 (A11) Bit 11 = On/Off Status of IO Point 14 (A12) Bit 12 = On/Off Status of IO Point 15 (A13) Bit 13 = On/Off Status of IO Point 16 (A14) Bit 14 = On/Off Status of IO Point 17 (A15) Bit 15 = On/Off Status of IO Point 18 (A16)

4007	Discrete Output Status Option Slot B	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 19 (B01) Bit 01 = On/Off Status of IO Point 20 (B02) Bit 02 = On/Off Status of IO Point 21 (B03) Bit 03 = On/Off Status of IO Point 22 (B04) Bit 04 = On/Off Status of IO Point 23 (B05) Bit 05 = On/Off Status of IO Point 24 (B06) Bit 06 = On/Off Status of IO Point 25 (B07) Bit 07 = On/Off Status of IO Point 26 (B08) Bit 08 = On/Off Status of IO Point 27 (B09) Bit 09 = On/Off Status of IO Point 28 (B10) Bit 10 = On/Off Status of IO Point 29 (B11) Bit 11 = On/Off Status of IO Point 30 (B12) Bit 12 = On/Off Status of IO Point 31 (B13) Bit 13 = On/Off Status of IO Point 32 (B14) Bit 14 = On/Off Status of IO Point 33 (B15) Bit 15 = On/Off Status of IO Point 34 (B16)
4008	Discrete Output Status Pluggable IO	1	Bitmap	RO	N	-	-	0x0000 – 0x00FF	0 = Off, 1 = On Bit 00 = On/Off Status of IO Point 35 (C01) Bit 01 = On/Off Status of IO Point 36 (C02) Bit 02 = On/Off Status of IO Point 37 (C03) Bit 03 = On/Off Status of IO Point 38 (C04) Bit 04 = On/Off Status of IO Point 39 (C05) Bit 05 = On/Off Status of IO Point 40 (C06) Bit 06 = On/Off Status of IO Point 41 (C07) Bit 07 = On/Off Status of IO Point 42 (C08) Bit 08 = On/Off Status of IO Point 43 (C09) future Bit 09 = On/Off Status of IO Point 44 (C10) future Bit 10 = On/Off Status of IO Point 45 (C11) future Bit 11 = On/Off Status of IO Point 46 (C12) future Bit 12 = On/Off Status of IO Point 47 (C13) future Bit 13 = On/Off Status of IO Point 48 (C14) future Bit 14 = On/Off Status of IO Point 49 (C15) future Bit 15 = On/Off Status of IO Point 50 (C16) future

4010	IO System Diagnostic Summary	1	Bitmap	RO	N	-	-	0x0000 – 0x007F	0 = OK, 1 = Error Bit 00 = Summary bit Bit 01 = IO Error – Standard Bit 02 = IO Error – Option Slot A Bit 03 = IO Error – Option Slot B Bit 04 = IO Error – Pluggable IO Bit 05 = IO Error – Remote IO Bit 06 = Time Sync Signal Error
4011	IO Module Health Status Standard IO	1	Bitmap	RO	N	-	-	0x0000 – 0x000F	0 = OK, 1 = Error Bit 00 = Module error summary Bit 01 = Point error summary Bit Bit 02 = Module removed while meter running Bit 03 = Module change failed validation
4012	IO Module Health Status Option Slot A	1	Bitmap	RO	N	-	-	0x0000 – 0x000F	0 = OK, 1 = Error Bit 00 = Module error summary Bit 01 = Point error summary Bit Bit 02 = Module removed while meter running Bit 03 = Module change failed validation
4013	IO Module Health Status Option Slot B	1	Bitmap	RO	N	-	-	0x0000 – 0x000F	0 = OK, 1 = Error Bit 00 = Module error summary Bit 01 = Point error summary Bit Bit 02 = Module removed while meter running Bit 03 = Module change failed validation
4014	IO Module Health Status Pluggable IO	1	Bitmap	RO	N	-	-	0x0000 – 0x000F	0 = OK, 1 = Error Bit 00 = Module error summary Bit 01 = Point error summary Bit Bit 02 = Module removed while meter running Bit 03 = Module change failed validation

4016	Time Sync Signal Health Status	1	Bitmap	RO	N	-	-	0x0000 – 0xFFFF	0 = OK, 1 = Error Bit 00 = Summary Bit, time sync signal fatal error Bit 01 = Lost time sync signal Bit 02 = Summary Bit, invalid data Bit 03 = Data value out of range Bit 04 = Parity error for minute Bit 05 = Parity error for hour Bit 06 = Parity error for month/day/year Bit 07 = Bit 20 not = 1 Bit 08 = Framing error occurred in last minute Bit 09 = Reserved Bit 10 = Reserved Bit 11 = Reserved Bit 12 = Good time sync signal received Bit 13 = Reserve antenna in use Bit 14 = DST warning Bit 15 = DST in effect
4017	GPS Time Sync Accuracy	1	Integer	RO	N	-	millisecond	0 – 1,000	GPS Time Sync Accuracy
4021	Present Module Type Option Slot A	1	Integer	RO	N	-	-	0 – 7	0 = Not Installed 1 = IOC44 2 = IOC08 3 = Reserved 4 = IOC2222 5 = Reserved 6 = Ethernet Option Module 7 = Production Test Load Board 8 = Production Flash Loader
4022	Present Module Type Option Slot B	1	Integer	RO	N	-	-	0 – 7	0 = Not Installed 1 = IOC44 2 = IOC08 3 = Reserved 4 = IOC2222 5 = Reserved 6 = Ethernet Option Module 7 = Production Test Load Board 8 = Production Flash Loader
4023	Present Module Type Pluggable IO	1	Integer	RO	N	-	-	0, 5	0 = No module present 5 = Pluggable IO rack present

4200	Discrete Output/Alarm Table	100	Integer	R/CW	Y	-	-	0 – 17081	Table of discrete output/alarm associations. Upper byte is IO Point Number (1 – 66). Lower byte is Alarm Index Number (1 – 185).

Auxiliary Inputs & Outputs – Standard & Slot A

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
4300	IO Point Number 1 Standard Discrete Output (S01)	30							Refer to Discrete Output template below.
4360	IO Point Number 3 (A01)	30							Register contents depends on IO Point Type. Refer to templates below.
4390	IO Point Number 4 (A02)	30							Register contents depends on IO Point Type. Refer to templates below.
4420	IO Point Number 5 (A03)	30							Register contents depends on IO Point Type. Refer to templates below.
4450	IO Point Number 6 (A04)	30							Register contents depends on IO Point Type. Refer to templates below.
4480	IO Point Number 7 (A05)	30							Register contents depends on IO Point Type. Refer to templates below.
4510	IO Point Number 8 (A06)	30							Register contents depends on IO Point Type. Refer to templates below.
4540	IO Point Number 9 (A07)	30							Register contents depends on IO Point Type. Refer to templates below.
4570	IO Point Number 10 (A08)	30							Register contents depends on IO Point Type. Refer to templates below.
4600	IO Point Number 11 (A09)	30							Register contents depends on IO Point Type. Refer to templates below.
4630	IO Point Number 12 (A10)	30							Register contents depends on IO Point Type. Refer to templates below.
4660	IO Point Number 13 (A11)	30							Register contents depends on IO Point Type. Refer to templates below.
4690	IO Point Number 14 (A12)	30							Register contents depends on IO Point Type. Refer to templates below.
4720	IO Point Number 15 (A13)	30							Register contents depends on IO Point Type. Refer to templates below.
4750	IO Point Number 16 (A14)	30							Register contents depends on IO Point Type. Refer to templates below.
4780	IO Point Number 17 (A15)	30							Register contents depends on IO Point Type. Refer to templates below.

4810	IO Point Number 18 (A16)	30							Register contents depends on IO Point Type. Refer to templates below.

Auxiliary Inputs & Outputs – Slot B

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
4840	IO Point Number 19 (B01)	30							Register contents depends on IO Point Type. Refer to templates below.
4870	IO Point Number 20 (B02)	30							Register contents depends on IO Point Type. Refer to templates below.
4900	IO Point Number 21 (B03)	30							Register contents depends on IO Point Type. Refer to templates below.
4930	IO Point Number 22 (B04)	30							Register contents depends on IO Point Type. Refer to templates below.
4960	IO Point Number 23 (B05)	30							Register contents depends on IO Point Type. Refer to templates below.
4990	IO Point Number 24 (B06)	30							Register contents depends on IO Point Type. Refer to templates below.
5020	IO Point Number 25 (B07)	30							Register contents depends on IO Point Type. Refer to templates below.
5050	IO Point Number 26 (B08)	30							Register contents depends on IO Point Type. Refer to templates below.
5080	IO Point Number 27 (B09)	30							Register contents depends on IO Point Type. Refer to templates below.
5110	IO Point Number 28 (B10)	30							Register contents depends on IO Point Type. Refer to templates below.
5140	IO Point Number 29 (B11)	30							Register contents depends on IO Point Type. Refer to templates below.
5170	IO Point Number 30 (B12)	30							Register contents depends on IO Point Type. Refer to templates below.
5200	IO Point Number 31 (B13)	30							Register contents depends on IO Point Type. Refer to templates below.
5230	IO Point Number 32 (B14)	30							Register contents depends on IO Point Type. Refer to templates below.
5260	IO Point Number 33 (B15)	30							Register contents depends on IO Point Type. Refer to templates below.
5290	IO Point Number 34 (B16)	30							Register contents depends on IO Point Type. Refer to templates below.

Auxiliary Inputs & Outputs – Slot C (IOX)

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
5320	IO Point Number 35 (C01)	30							Register contents depends on IO Point Type. Refer to templates below.
5350	IO Point Number 36 (C02)	30							Register contents depends on IO Point Type. Refer to templates below.
5380	IO Point Number 37 (C03)	30							Register contents depends on IO Point Type. Refer to templates below.
5410	IO Point Number 38 (C04)	30							Register contents depends on IO Point Type. Refer to templates below.
5440	IO Point Number 39 (C05)	30							Register contents depends on IO Point Type. Refer to templates below.
5470	IO Point Number 40 (C06)	30							Register contents depends on IO Point Type. Refer to templates below.
5500	IO Point Number 41 (C07)	30							Register contents depends on IO Point Type. Refer to templates below.
5530	IO Point Number 42 (C08)	30							Register contents depends on IO Point Type. Refer to templates below.
5560	IO Point Number 43 (C09) future	30							Register contents depends on IO Point Type. Refer to templates below.
5590	IO Point Number 44 (C10) future	30							Register contents depends on IO Point Type. Refer to templates below.
5620	IO Point Number 45 (C11) future	30							Register contents depends on IO Point Type. Refer to templates below.
5650	IO Point Number 46 (C12) future	30							Register contents depends on IO Point Type. Refer to templates below.
5680	IO Point Number 47 (C13) future	30							Register contents depends on IO Point Type. Refer to templates below.
5710	IO Point Number 48 (C14) future	30							Register contents depends on IO Point Type. Refer to templates below.
5740	IO Point Number 49 (C15) future	30							Register contents depends on IO Point Type. Refer to templates below.
5770	IO Point Number 50 (C16) future	30							Register contents depends on IO Point Type. Refer to templates below.

Auxiliary Inputs & Outputs – Discrete Input Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	IO Point Type	1	Integer	R/CW	Y	-	-	100 – 199	First digit (1) indicates point is discrete input Second digit indicates module type 0 = Generic discrete input 1 = DI120AC Pluggable Module 2 = DI240AC Pluggable Module 3 = DI32DC Pluggable Module Third digit indicates input type 1 = AC 2 = DC
Base +1	IO Point Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters
Base +9	Discrete Input Operating Mode	1	Integer	R/CW	Y	-	-	0 – 5	0 = Normal (default) 1 = Demand Interval Sync Pulse 2 = Time Sync 3 = Conditional Energy Control 4 = Input Metering (counting) IOC-08 and IOC-2222 only 5 = SER (Sequence of Events Recording) Only one Time Sync input and one Conditional Energy Control are allowed. If the user attempts to configure more than one of each of these modes, the lowest IO Point Number will take precedence. The modes of the other points will be set to default. Time sync input signal must be pulse duration method (PDM) as from the Modicon GPS Receiver (470 GPS 001 00).
Base +10	Demand Interval Sync System Assignments	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x003F	Bitmap indicting Demand System(s) to which input is assigned. (Default = 0x003F) Bit 00 = Power Demand Bit 01 = Current Demand Bit 02 = Voltage Demand Bit 03 = Input Metering Demand Bit 04 = Generic Demand 1 Bit 05 = Generic Demand 2 Only one Demand Sync Pulse per Demand System is allowed. If the user attempts to configure more than one input for each system, the lowest IO Point Number will take precedence. The corresponding bits of the other points will be set to 0.
Base +11	Discrete Input Debounce Time	1	Integer	R/CW	Y	-	millisecond	5 - 200	Default = 5msec Enter value in 5msec increments - only accurate to 5msec

Base +12	Reserved	1	Integer	R/CW	Y	-	-	-	Reserved for future development
Base +13	Reserved	1	Integer	R/CW	Y	-	-	-	Reserved for future development
Base +14	Metering Pulse Channel Assignments	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x03FF	Default = 0 Bit 00 = Channel 1 Bit 01 = Channel 2 Bit 02 = Channel 3 Bit 03 = Channel 4 Bit 04 = Channel 5 Bit 05 = Channel 6 Bit 06 = Channel 7 Bit 07 = Channel 8 Bit 08 = Channel 9 Bit 09 = Channel 10
Base +15	Metering Pulse Weight Demand	1	Integer	R/CW	Y	-	1	1– 32,767	Pulse weight associated with the change of state of the input. Used for demand metering. (Default = 0)
Base +16	Metering Pulse Scale Factor Demand	1	Integer	R/CW	Y	-	1	-3 – 0	Pulse weight scale factor (power of 10) to apply to metering pulse weight. Used for demand metering. (Default = 0)
Base +17	Metering Pulse Weight Consumption	1	Integer	R/CW	Y	-	1	1– 32,767	Pulse weight associated with the change of state of the input. Used for consumption metering. (Default = 1)
Base +18	Metering Pulse Scale Factor Consumption	1	Integer	R/CW	Y	-	1	-3 – 0	Pulse weight scale factor (power of 10) to apply to metering pulse weight. Used for consumption metering. (Default = 0)
Base +19	Consumption Units Code	1	Integer	R/CW	Y	-	Unit Codes	0 – 100	Defines the units associated with the Consumption Pulse Weight/Scale (Default = 0)
Base +22	IO Point Diagnostic Bitmap	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	0 = OK, 1 = Error Bit 00 = IO Point diagnostic summary Bit 01 = Configuration invalid – default value used
Base +25	Discrete Input On/Off Status	1	Integer	RO	Y	-	-	0 – 1	0 = Off 1 = On
Base +26	Count	2	Mod10	RO	Y	-	-	0 – 99,999,999	Number of times input has transitioned from Off to On
Base +28	On Time	2	Mod10	RO	Y	-	Seconds	0 – 99,999,999	Duration that discrete input has been On

Auxiliary Inputs & Outputs – Discrete Output Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	IO Point Type	1	Integer	R/CW	Y	-	-	200 – 299	First digit (2) indicates point is discrete output Second digit indicates module type 0 = Generic discrete output 1 = DO120AC Pluggable Module 2 = DO200DC Pluggable Module 3 = DO240AC Pluggable Module 4 = DO60DC Pluggable Module Third digit indicates output type 1 = solid state relay 2 = electromechanical relay
Base +1	IO Point Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters
Base +9	Discrete Output Operating Mode	1	Integer	R/CW	Y	-	-	0 – 11	0 = Normal (default) 1 = Latched 2 = Timed 3 = Absolute kWh pulse 4 = Absolute kVARh pulse 5 = kVAh pulse 6 = kWh In pulse 7 = kVArh In pulse 8 = kWh out pulse 9 = kVARh out pulse 10 = Register-based pulse (future) 11 = End of power demand interval
Base +10	On Time For Timed Mode	1	Integer	R/CW	Y	-	Seconds	1 – 32,767	The time for the output to remain energized when the output is in timed mode or end of power demand interval. (Default = 1)
Base +11	Pulse Weight	1	Integer	R/CW	Y	-	kWh/Pulse kVArH/Pulse kVAH/Pulse in 100ths	1 – 32,767	Specifies the kWh, kVARh and kVAh per pulse for output when in these modes. (Default = 1)
Base +12	Internal/External Control	1	Integer	R/W	Y	-	-	0 – 1	0 = Internal Control 1 = External Control (default)
Base +13	Normal/Override Control	1	Integer	R/W	Y	-	-	0 – 1	0 = Normal Control (default) 1 = Override Control
Base +21	State of Discrete Output at Reset	1	Integer	RO	Y	-	-	0 – 1	Indicates On/Off state of the discrete output when meter reset/shutdown occurs

Base +22	IO Point Diagnostic Bitmap	1	Bitmap	RO	Y	-	-	0x0000 – 0x000F	0 = OK, 1 = Error Bit 00 = IO Point diagnostic summary Bit 01 = Configuration invalid – default value used Bit 02 = Discrete output energy pulse – time between transitions exceeds 30 seconds Bit 03 = Discrete output energy pulse – time between transitions limited to 20 milliseconds
Base +25	Discrete Output On/Off Status	1	Integer	RO	Y	-	-	0 – 1	0 = Off 1 = On
Base +26	Count	2	Mod10	RO	Y	-	-	0 – 99,999,999	Number of times output has transitioned from OFF to ON
Base +28	On Time	2	Mod10	RO	Y	-	Seconds	0 – 99,999,999	Duration that discrete output has been ON

Auxiliary Inputs & Outputs – Analog Input Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	IO Point Type	1	Integer	R/CW	Y	-	-	300 – 399	First digit (3) indicates point is analog input Second digit indicates the range of analog I/O values (used without units) 0 = 0 – 1 1 = 0 – 5 2 = 0 – 10 3 = 0 – 20 4 = 1 – 5 5 = 4 – 20 6 = -5 – 5 7 = -10 – 10 8 = -100 – 100 9 = User defined (values default to 0) Third digit indicates the digital resolution of the I/O hardware. The user must select from one of these standard ranges. 0 = 8-Bit, unipolar 1 = 10-Bit, unipolar 2 = 12-Bit, unipolar 3 = 14-Bit, unipolar 4 = 16-Bit, unipolar 5 = 16-Bit, bipolar with sign 6 = reserved 7 = reserved 8 = reserved 9 = reserved
Base +1	IO Point Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters
Base +9	Units Code	1	Integer	R/CW	Y	-	-	0 – 99	Placeholder for a code used by software to identify the SI units of the analog input being metered, i.e. kW, V, etc.
Base +10	Scale Code	1	Integer	R/CW	Y	-	-	-3 – 3	Placeholder for the scale code (power of 10) used by software to place the decimal point. (Default = -2)
Base +11	Range Select	1	Integer	R/CW	Y	-	-	0 – 1	Analog input range select for IOC-2222. 0 = Voltage Range (0-5V) 1 = Current Range (4-20mA) (default) Not used for other analog inputs.
Base +12	Analog Input Minimum	1	Integer	R/CW	Y	-	-	0 – ±32,767	Minimum value of the scaled register value for the analog input. (Only if Metering Register Number is not 0.)
Base +13	Analog Input Maximum	1	Integer	R/CW	Y	-	-	0 – ±32,767	Maximum value of the scaled register value for the analog input. (Only if Metering Register Number is not 0.)
Base +14	Lower Limit Analog Value	1	Integer	R/CW	Y	-	-	0 – ±327	Lower limit of the analog input value. Default value based on IO Point Type.

Base +15	Upper Limit Analog Value	1	Integer	R/CW	Y	-	-	0 – ±327	Upper limit of the analog input value. Default value based on IO Point Type.
Base +16	Lower Limit Register Value	1	Integer	R/CW	Y	-	-	0 – ±32,767	Lower limit of the register value associated with the lower limit of the analog input value.
Base +17	Upper Limit Register Value	1	Integer	R/CW	Y	-	-	0 – ±32,767	Upper limit of the register value associated with the upper limit of the analog input value.
Base +18	Metering Register Number	1	Integer	R/CW	Y	-	-	0, 1190 – 1199	Register where Present Scaled Value is copied. This register is included in the Min/Max determination for metered values.
Base +19	User Gain Adjustment	1	Integer	R/CW	Y	-	0.0001	8,000 – 12,000	Analog input user gain adjustment in 100ths of a percent. Default = 10,000.
Base +20	User Offset Adjustment	1	Integer	R/CW	Y	-	-	0 – ±30,000	Analog input user offset adjustment in Bits of digital resolution. Default = 0.
Base +22	IO Point Diagnostic Bitmap	1	Bitmap	RO	Y	-	-	0x0000 – 0x0007	0 = OK, 1 = Error Bit 00 = IO Point diagnostic summary Bit 01 = Configuration invalid – default value used Bit 02 = M-Bus communications error
Base +23	Lower Limit Digital Value	1	Integer	RO	Y	-	-	0 – ±32,767	Lower limit of the digital value associated with the lower limit of the analog input value. Value based on IO Point Type.
Base +24	Upper Limit Digital Value	1	Integer	RO	Y	-	-	0 – ±32,767	Upper limit of the digital value associated with the upper limit of the analog input value. Value based on IO Point Type.
Base +25	Present Raw Value	1	Integer	RO	Y	-	-	0 – ±32,767	Raw digital value read from analog input.
Base +26	Present Scaled Value	1	Integer	RO	Y	-	-	0 – ±32,767	Raw value corrected by calibration gain and offset adjustments and scaled based on range of register values.
Base +27	Calibration Offset	1	Integer	RO	Y	-	-	0 – ±32,767	Analog input offset adjustment
Base +28	Calibration Gain (Voltage)	1	Integer	RO	Y	-	0.0001	8,000 – 12,000	Analog input gain adjustment
Base +29	Calibration Gain (Current)	1	Integer	RO	Y	-	0.0001	8,000 – 12,000	Analog input gain adjustment

Auxiliary Inputs & Outputs – Analog Output Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	IO Point Type	1	Integer	R/CW	Y	-	-	400 – 499	First digit (4) indicates point is analog output Second digit indicates the range of analog I/O values (used without units) 0 = 0 – 1 1 = 0 – 5 2 = 0 – 10 3 = 0 – 20 4 = 1 – 5 5 = 4 – 20 6 = -5 – 5 7 = -10 – 10 8 = -100 – 100 9 = User defined (values default to 0) Third digit indicates the digital resolution of the I/O hardware. The user must select from one of these standard ranges. 0 = 8-Bit, unipolar 1 = 10-Bit, unipolar 2 = 12-Bit, unipolar 3 = 14-Bit, unipolar 4 = 16-Bit, unipolar 5 = 16-Bit, bipolar with sign 6 = reserved 7 = reserved 8 = reserved 9 = reserved
Base +1	IO Point Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters
Base +11	Range Select	1	Integer	R/CW	Y	-	-	0 – 1	Analog output range select for IOC-2222: 0 = Voltage (0-5V) 1 = Current (4-20mA) (default) Not used for other analog outputs.
Base +12	Output Enable	1	Integer	R/W	Y	-	-	0 – 1	0 = Enable (default) 1 = Disable
Base +14	Lower Limit Analog Value	1	Integer	R/CW	Y	-	-	0 – ±327	Lower limit of the analog output value. Default value based on IO Point Type.
Base +15	Upper Limit Analog Value	1	Integer	R/CW	Y	-	-	0 – ±327	Upper limit of the analog output value. Default value based on IO Point Type.
Base +16	Lower Limit Register Value	1	Integer	R/CW	Y	-	-	0 – ±32,767	Lower limit of the register value associated with the lower limit of the analog output value.
Base +17	Upper Limit Register Value	1	Integer	R/CW	Y	-	-	0 – ±32,767	Upper limit of the register value associated with the upper limit of the analog output value.

Base +18	Reference Register Number	1	Integer	R/CW	Y	-	-	1000 – 32000	Register location of value upon which to base the analog output.
Base +19	User Gain Adjustment	1	Integer	R/CW	Y	-	0.0001	8000 – 12,000	Analog output user gain adjustment in 100ths of a percent. Default = 10,000.
Base +20	User Offset Adjustment	1	Integer	R/CW	Y	-	-	0 – ±30000	Analog output user offset adjustment in Bit s of digital resolution. Default = 0.
Base +22	IO Point Diagnostic Bitmap	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	0 = OK, 1 = Error Bit 00 = IO Point diagnostic summary Bit 01 = Configuration invalid – default value used Bit 02 = M-Bus communications error
Base +23	Lower Limit Digital Value	1	Integer	RO	Y	-	-	0 – ±32,767	Lower limit of the digital value associated with the lower limit of the analog output value. Value based on IO Point Type.
Base +24	Upper Limit Digital Value	1	Integer	RO	Y	-	-	0 – ±32,767	Upper limit of the digital value associated with the upper limit of the analog output value. Value based on IO Point Type.
Base +25	Present Analog Value	1	Integer	RO	Y	-	0.01	0 – ±32,767	Analog value expected to be present at the output terminals of the analog output module.
Base +26	Present Raw (Register) Value	1	Integer	RO	Y	-	-	0 – ±32,767	Value in Reference Register.
Base +27	Calibration Offset	1	Integer	RO	Y	-	-	0 – ±32,767	Analog output offset adjustment in Bits of digital resolution.
Base +28	Calibration Gain (Voltage)	1	Integer	RO	Y	-	0.0001	8000 – 12,000	Analog output gain adjustment in 100ths of a percent.
Base +29	Present Digital Value	1	Integer	RO	Y	-	-	0 – ±32,767	Digital value written to analog output.

Auxiliary Inputs & Outputs – Input Metering Channel Labels

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
6280	Input Metering Channel 1 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 1
6288	Input Metering Channel 2 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 2
6296	Input Metering Channel 3 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 3
6304	Input Metering Channel 4 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 4

6312	Input Metering Channel 5 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 5
6320	Input Metering Channel 6 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 6
6328	Input Metering Channel 7 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 7
6336	Input Metering Channel 8 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 8
6344	Input Metering Channel 9 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 9
6352	Input Metering Channel 10 Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = Channel 10

Energy Summary

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
6400	Energy Summary Meter Reading Months	12	Integer	R/CW	Y	-	-	1 – 12	
6412	Energy Summary Meter Reading Days	12	Integer	R/CW	Y	-	-	1 – 31	
6424	Energy Summary Metering Reading Time of Day	1	Integer	R/CW	Y	-	-	0 – 23	Hour of day. Default = 0 (midnight)
6425	Energy Summary Channels Included in User Specified Meter Readings	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0003	Bitmap of channels to include in report. Default = 0. (Others reported on calendar months.) Bit 00 = Power Bit 01 = Input Metering Channels
6426	Energy Summary Demands to Reset	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0003	Bitmap of Peak Demands to Reset. Default = 3 Bit 00 = Power Bit 01 = Input Metering Channels
6427	Shift Start Time – First Shift	1	Integer	R/CW	Y	-	Minutes	0 – 1439	Minutes from midnight. Default = 420 (7AM). *Note: For 2 shifts set First Shift Start Time equal to Second Shift Start Time (6427 = 6428)
6428	Shift Start Time – Second Shift	1	Integer	R/CW	Y	-	Minutes	0 – 1439	Minutes from midnight. Default = 900 (3PM). *Note: For 2 shifts set First Shift Start Time equal to Second Shift Start Time (6427 = 6428)
6429	Shift Start Time – Third Shift	1	Integer	R/CW	Y	-	Minutes	0 – 1439	Minutes from midnight. Default = 1380 (11PM).
6430	Cost Per kWh – First Shift	1	Integer	R/CW	Y	See Reg 6433	See Register 6434	0 – 32,767	Default = 0
6431	Cost Per kWh – Second Shift	1	Integer	R/CW	Y	See Reg 6433	See Register 6434	0 – 32,767	Default = 0
6432	Cost Per kWh – Third Shift	1	Integer	R/CW	Y	See Reg 6433	See Register 6434	0 – 32,767	Default = 0
6433	Monetary Scale Factor	1	Integer	R/CW	Y	-	-	-6 – 6	Default = 0
6436	Location of Production Data	1	Integer	R/CW	Y	-	-	0 – 65,535	0 = None (default). Values 1 – 66 indicate I/O point number. Larger values indicate a register number where data will be posted by another process. Data must be posted in long integer format.
6437	Shift Active	1	Integer	RO	Y	-	-	1 – 3	

6466	Energy Cost – Total Today	2	Long	RO	Y	-	See Register 6434		
6468	Energy Cost – Total Yesterday	2	Long	RO	Y	-	See Register 6434		
6470	Energy Cost – Total This Week	2	Long	RO	Y	-	See Register 6434		
6472	Energy Cost – Total Last Week	2	Long	RO	Y	-	See Register 6434		
6474	Energy Cost – Total This Month	2	Long	RO	Y	-	See Register 6434		
6476	Energy Cost – Total Last Month	2	Long	RO	Y	-	See Register 6434		
6478	Energy, Real 3-Phase Total Usage This Hour	3	Mod10	RO	Y	-	WH	(1)	
6481	Energy, Real 3-Phase Total Usage Last Hour	3	Mod10	RO	Y	-	WH	(1)	
6484	Energy, Real 3-Phase Total Usage Today	3	Mod10	RO	Y	-	WH	(1)	
6487	Energy, Real 3-Phase Total Usage Yesterday	3	Mod10	RO	Y	-	WH	(1)	
6490	Energy, Real 3-Phase Total Usage This Week	3	Mod10	RO	Y	-	WH	(1)	
6493	Energy, Real 3-Phase Total Usage Last Week	3	Mod10	RO	Y	-	WH	(1)	
6496	Energy, Real 3-Phase Total Usage This Month	3	Mod10	RO	Y	-	WH	(1)	
6499	Energy, Real 3-Phase Total Usage Last Month	3	Mod10	RO	Y	-	WH	(1)	
6502	Energy, Real 3-Phase Total 30 Day Trend	1	Integer	RO	Y	0.01	%	-10,000 – 10,000	
6503	Energy, Real 3-Phase Total 52 Week Trend	1	Integer	RO	Y	0.01	%	-10,000 – 10,000	
6504	Peak Demand Real Power, 3-Phase Total This Month	1	Integer	RO	Y	F	kW/Scale	0 – 32,767	

6505	Peak Demand Real Power, 3-Phase Total Last Month	1	Integer	RO	Y	F	kW/Scale	0 – 32,767	
6506	Peak Demand DateTime Real Power In, 3-Phase Total Last Month	4	DateTime	RO	Y	-	-	-	
6510	Peak Demand Reset DateTime Real Power Total Last Month	4	DateTime	RO	Y	-	-	-	
6514	Power Factor, Average @ Peak Demand, Real Power Total Last Month	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	
6515	Energy, Apparent 3-Phase Total Usage This Hour	3	Mod10	RO	Y	-	VAH	(1)	
6518	Energy, Apparent 3-Phase Total Usage Last Hour	3	Mod10	RO	Y	-	VAH	(1)	
6521	Energy, Apparent 3-Phase Total Usage Today	3	Mod10	RO	Y	-	VAH	(1)	
6524	Energy, Apparent 3-Phase Total Usage Yesterday	3	Mod10	RO	Y	-	VAH	(1)	
6527	Energy, Apparent 3-Phase Total Usage This Week	3	Mod10	RO	Y	-	VAH	(1)	
6530	Energy, Apparent 3-Phase Total Usage Last Week	3	Mod10	RO	Y	-	VAH	(1)	
6533	Energy, Apparent 3-Phase Total Usage This Month	3	Mod10	RO	Y	-	VAH	(1)	
6536	Energy, Apparent 3-Phase Total Usage Last Month	3	Mod10	RO	Y	-	VAH	(1)	
6539	Energy, Apparent 3-Phase Total 30 Day Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6540	Energy, Apparent 3-Phase Total 52 Week Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6541	Peak Demand Apparent Power, 3-Phase Total This Month	1	Integer	RO	Y	F	kVA/Scale	0 – 32,767	
6542	Peak Demand Apparent Power, 3-Phase Total Last Month	1	Integer	RO	Y	F	kVA/Scale	0 – 32,767	
6543	Peak Demand DateTime Apparent Power, 3-Phase Total Last Month	4	DateTime	RO	Y	-	-	-	

6547	Peak Demand Reset DateTime Apparent Power Last Month	4	DateTime	RO	Y	-	-	-	
6551	Power Factor, Average @ Peak Demand, Apparent Power Last Month	1	Integer	RO	Y	-	0.001	1,000 -2 to 2 (-32,768 if N/A)	
6552	Input Metering Channel 1 Usage This Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6555	Input Metering Channel 1 Usage Last Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6558	Input Metering Channel 1 Usage Today	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6561	Input Metering Channel 1 Usage Yesterday	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6564	Input Metering Channel 1 Usage This Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6567	Input Metering Channel 1 Usage Last Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6570	Input Metering Channel 1 Usage This Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6573	Input Metering Channel 1 Usage Last Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6576	Input Metering Channel 1 30 Day Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6577	Input Metering Channel 1 52 Week Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6578	Input Metering Channel 1 Peak Demand This Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6579	Input Metering Channel 1 Peak Demand Last Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6580	Peak Demand DateTime Input Metering Channel 1 Last Month	4	DateTime	RO	Y	-	-	-	
6584	Peak Demand Reset DateTime Input Metering Channel 1 Last Month	4	DateTime	RO	Y	-	-	-	
6589	Input Metering Channel 2 Usage This Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6592	Input Metering Channel 2 Usage Last Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6595	Input Metering Channel 2 Usage Today	3	Mod10	RO	Y	-	Consumption Units Code	(1)	

6598	Input Metering Channel 2 Usage Yesterday	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6601	Input Metering Channel 2 Usage This Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6604	Input Metering Channel 2 Usage Last Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6607	Input Metering Channel 2 Usage This Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6610	Input Metering Channel 2 Usage Last Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6613	Input Metering Channel 2 30 Day Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6614	Input Metering Channel 2 52 Week Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6615	Input Metering Channel 2 Peak Demand This Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6616	Input Metering Channel 2 Peak Demand Last Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6617	Peak Demand DateTime Input Metering Channel 2 Last Month	4	DateTime	RO	Y	-	-	-	
6621	Peak Demand Reset DateTime Input Metering Channel 2 Last Month	4	DateTime	RO	Y	-	-	-	
6626	Input Metering Channel 3 Usage This Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6629	Input Metering Channel 3 Usage Last Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6632	Input Metering Channel 3 Usage Today	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6635	Input Metering Channel 3 Usage Yesterday	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6638	Input Metering Channel 3 Usage This Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6641	Input Metering Channel 3 Usage Last Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6644	Input Metering Channel 3 Usage This Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6647	Input Metering Channel 3 Usage Last Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6650	Input Metering Channel 3 30 Day Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	

6651	Input Metering Channel 3 52 Week Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6652	Input Metering Channel 3 Peak Demand This Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6653	Input Metering Channel 3 Peak Demand Last Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6654	Peak Demand DateTime Input Metering Channel 3 Last Month	4	DateTime	RO	Y	-	-	-	
6658	Peak Demand Reset DateTime Input Metering Channel 3 Last Month	4	DateTime	RO	Y	-	-	-	
6663	Input Metering Channel 4 Usage This Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6666	Input Metering Channel 4 Usage Last Hour	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6669	Input Metering Channel 4 Usage Today	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6672	Input Metering Channel 4 Usage Yesterday	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6675	Input Metering Channel 4 Usage This Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6678	Input Metering Channel 4 Usage Last Week	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6681	Input Metering Channel 4 Usage This Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6684	Input Metering Channel 4 Usage Last Month	3	Mod10	RO	Y	-	Consumption Units Code	(1)	
6687	Input Metering Channel 4 30 Day Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6688	Input Metering Channel 4 52 Week Trend	1	Integer	RO	Y	0.01	%	-10000 – 10000	
6689	Input Metering Channel 4 Peak Demand This Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6690	Input Metering Channel 4 Peak Demand Last Month	1	Integer	RO	Y	-	Demand Units Code	0 – 32,767	
6691	Peak Demand DateTime Input Metering Channel 4 Last Month	4	DateTime	RO	Y	-	-	-	
6695	Peak Demand Reset DateTime Input Metering Channel 4 Last Month	4	DateTime	RO	Y	-	-	-	

(1) 0 – 999,999,999,999

Command Interface

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
8000	Requested Command	1	Integer	R/W	N	-	-	-	See Commands
8001	Command Parameters	15	Integer	R/W	N	-	-	-	
8016	Comms Channel	1	Integer	RO	N	-	-	-	Comms Channel over which the command request was made
8017	Status Pointer	1	Integer	R/W	N	-	-	-	Register number where status will be placed 0 = no status returned
8018	Result Pointer	1	Integer	R/W	N	-	-	-	Register number where result will be placed 0 = no result returned Result Codes: 81 Invalid Command Function 82 Invalid Parameters 91 Setup Mode Session Open 92 Setup Mode Session Not Open Command Failed Security Check 201 Operation Not Performed/Timeout 230 Alarm Does Not Exist 301 File System Error
8019	Data Pointer	1	Integer	R/W	N	-	-	-	Register number where data will be placed 0 = no data returned
8020	Data Buffer Area	130	Integer	R/W	N	-	-	-	Requested Command data buffer area

CMPL Control

CMPL Control – User Program

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
8175	USER CMPL Program Name	8	Char	RO	Y	-	-	ASCII Codes	16 Characters
8183	USER CMPL Program Version Number	1	Integer	RO	Y	-	-	0 – 32767	Program Version 00.000 to 37.767
8184	USER CMPL Compile Date/Time	4	DateTime	RO	Y	-	-	-	
8188	USER CMPL Security User/Number	1	Integer	RO	Y	-	-	0 – 32767	
8189	USER CMPL Initial Processor Mode After Reset	1	Integer	R/W	Y	-	-	0 – 5	0 = Program not present 1 = Halt 2 = Debug Pause 3 = Debug Step 4 = Debug Run to Break 5 = Run
8190	USER CMPL Present CMPL Processor Mode	1	Integer	RO	Y	-	-	0 – 5	0 = Program not present 1 = Halt 2 = Debug Pause 3 = Debug Step 4 = Debug Run to Break 5 = Run
8191	USER CMPL Error Number at Last Halt/Pause	1	Integer	RO	Y	-	-	0 – 32,767	Error number at last Halt.
8192	USER CMPL Execution Line Number	1	Integer	RO	Y	-	-	0 – 32,767	Presently executing line number in run mode or next line number in pause mode.
8193	USER CMPL SMS Program ID	1	Integer	RO	Y	-	-	0	Unique number assigned to the CMPL program signifying an Official PMO program to SMS.
8196	USER CMPL Breakpoint Table	4	Integer	RO	Y	-	-	0 – 32,767	Table of breakpoints presently active.

Production Calibration Correction Tables

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Disturbance Direction Detection of Last Event

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
8775	Date/Time of Pickup	4	DateTime	RO	Y	-	-	-	
8779	Alarm Unique Identifier	2	Long	RO	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register Alarm Type: 80 = Voltage Swell 90 = Voltage Sag 130 = Waveshape Test Register for Disturbance: 1 = Vab 2 = Vbc 3 = Vca 4 = Van 5 = Vbn 6 = Vcn 7 = Vng Test Register for Waveshape: 1 = Phase Voltage 2 = N-G Voltage
8781	Worst Value During Pickup	1	Integer	RO	Y		Volts/ Scale	0 – 32,767	
8782	Alarm Label	8	Char	RO	Y	-	-	ASCII Codes	
8790	Confidence	1	Integer	RO	Y	-	-	0 – 100	
8791	Direction Bitmap	1	Bitmap	RO	Y	-	-	0x0000 – 0x0007	Bit 00 = Direction (0 = Downstream, 1 = Upstream) Bit 01 = Recent (0 = Event is Old, 1 = Event is Recent) Bit 02 = Show (0 = Direction Unknown, 1 = Direction Known)
8792	Definition of Recent Event	1	Integer	R/CW	Y	-	Seconds	0 – 32,767	Default = 600 (10 Minutes).
8793	Event Age Timer	1	Integer	RO	Y	-	Seconds	0 – 32,767	Seconds since this event was posted.
8794	Correlation Sequence Number of Event	1	Integer	RO	Y	-	-	-	

8795	Count of Upstream Events	1	Integer	RO	Y	-	-	-	
8796	Count of Downstream Events	1	Integer	RO	Y	-	-	-	

Register-Based Transient Event Log – Events

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9000	Transient Event #1	10	-	RO	Y	-	-	-	See Event Template
9010	Transient Event #2	10	-	RO	Y	-	-	-	See Event Template
9020	Transient Event #3	10	-	RO	Y	-	-	-	See Event Template
9030	Transient Event #4	10	-	RO	Y	-	-	-	See Event Template
9040	Transient Event #5	10	-	RO	Y	-	-	-	See Event Template
9050	Transient Event #6	10	-	RO	Y	-	-	-	See Event Template
9060	Transient Event #7	10	-	RO	Y	-	-	-	See Event Template
9070	Transient Event #8	10	-	RO	Y	-	-	-	See Event Template
9080	Transient Event #9	10	-	RO	Y	-	-	-	See Event Template
9090	Transient Event #10	10	-	RO	Y	-	-	-	See Event Template
9100	Transient Event #11	10	-	RO	Y	-	-	-	See Event Template
9110	Transient Event #12	10	-	RO	Y	-	-	-	See Event Template
9120	Transient Event #13	10	-	RO	Y	-	-	-	See Event Template
9130	Transient Event #14	10	-	RO	Y	-	-	-	See Event Template
9140	Transient Event #15	10	-	RO	Y	-	-	-	See Event Template
9150	Transient Event #16	10	-	RO	Y	-	-	-	See Event Template
9160	Transient Event #17	10	-	RO	Y	-	-	-	See Event Template
9170	Transient Event #18	10	-	RO	Y	-	-	-	See Event Template
9180	Transient Event #19	10	-	RO	Y	-	-	-	See Event Template

9190	Transient Event #20	10	-	RO	Y	-	-	-	See Event Template

Register-Based Transient Event Log – Configuration & Status

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9200	Sorted Transient Counter 1	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 1 Magnitude Level 1 Duration
9201	Sorted Transient Counter 2	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 1 Magnitude Level 2 Duration
9202	Sorted Transient Counter 3	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 1 Magnitude Level 3 Duration
9203	Sorted Transient Counter 4	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 2 Magnitude Level 1 Duration
9204	Sorted Transient Counter 5	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 2 Magnitude Level 2 Duration
9205	Sorted Transient Counter 6	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 2 Magnitude Level 3 Duration
9206	Sorted Transient Counter 7	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 3 Magnitude Level 1 Duration
9207	Sorted Transient Counter 8	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 3 Magnitude Level 2 Duration
9208	Sorted Transient Counter 9	1	Integer	RO	Y	-	-	1 – 32,767	Counter for transients sorted as having: Level 3 Magnitude Level 3 Duration
9209	Phase A Transient Counter	1	Integer	RO	Y	-	-	1 – 32,767	Numbers of transients reported for phase A
9210	Phase B Transient Counter	1	Integer	RO	Y	-	-	1 – 32,767	Numbers of transients reported for phase B
9211	Phase C Transient Counter	1	Integer	RO	Y	-	-	1 – 32,767	Numbers of transients reported for phase C

9212	Total Transient Counter	1	Integer	RO	Y	-	-	1 – 32,767	Numbers of transients reported for phases A, B, and C
9214	Phase A Transient V-S Accumulator	2	Float	RO	Y	H	Volts Seconds	1 – 32,767	Accumulation of all V-S from transients on phase A
9216	Phase B Transient V-S Accumulator	2	Float	RO	Y	H	Volts Seconds	1 – 32,767	Accumulation of all V-S from transients on phase B
9218	Phase C Transient V-S Accumulator	2	Float	RO	Y	H	Volts Seconds	1 – 32,767	Accumulation of all V-S from transients on phase C
9226	Sorting Magnitude Level 1	1	Integer	R/CW	Y	H	Volts Peak/Scale	1 – 32,767	All transients of magnitude less than this level are considered Level 1
9227	Sorting Magnitude Level 3	1	Integer	R/CW	Y	H	Volts Peak/Scale	1 – 32,767	All transients of magnitude greater than or equal to this level are considered Level 3
9228	Sorting Duration Level 1	1	Integer	R/CW	Y	-	0.1 (us)	1 – 32,767	All transients of duration less than this level are considered Level 1
9229	Sorting Duration Level 3	1	Integer	R/CW	Y	-	0.1 (us)	1 – 32,767	All transients of duration greater than or equal to this level are considered Level 3
9230	Count of Records in Log	1	Integer	RO	Y	-	-	0 – 20	Number of records present in the transient log
9231	Date/Time of Last Transient Event Log Reset	4	DateTime	RO	Y	-	-	-	

Register-Based Transient Event Log – Event Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
0	Date/Time of Log Entry	4	DateTime	RO	Y	-	-	-	

4	Unique ID	2	Long	RO	Y	-	-	0x0000-0xFFFF	Unique number to identify the transient event Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register For Transient alarms Test Register is: Bit 00 = Va Bit 01 = Vb Bit 02 = Vc Bit 03 – 15 Unused Alarm Type: 0x6F = Transient Level: Always 0x00
6	Peak Magnitude	1	Integer	RO	Y	H	Volts Peak/Scale	0 – 32,767	Peak Magnitude Recorded During Event
7	Duration of Transient	1	Integer	RO	Y	-	0.1 (us)	0 – 20,000	<= 2mS
8	Rise Time	1	Integer	RO	Y	-	0.1 (us)	0 – 20,000	Rise Time From Threshold to Peak Magnitude of Transient
9	Average Value (v)	1	Integer	RO	Y	H	Volts Peak/Scale	0 – 32,767	Average Value of Transient During Event

Register-Based Event Log – Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9235	Event Log Configuration	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0001	Bit 00 – 0 = FIFO (default) 1 = Fill and Hold
9236	Alarm Types to Log	2	Bitmap	R/CW	Y	-	-	0x00000000 – 0xFFFFFFFF	0 = Do not log, 1 = Include in log The default setting (0xFFFFFFFF) is to log all alarm types. Bit 00 – Over Value Bit 01 – Over Power Bit 02 – Over Reverse Power Bit 03 – Under Value Bit 04 – Under Power Bit 05 – Reserved Bit 06 – Reserved Bit 07 – Phase Reversal Bit 08 – Phase Loss – Voltage Bit 09 – Phase Loss – Current Bit 10 – Power Factor – Leading Bit 11 – Power Factor – Lagging Bit 12 – Discrete Input – Off to On Bit 13 – Discrete Input – On to Off Bit 14 – Unary Event Bit 15 – Reserved Bit 16 – Reserved Bit 17 – Boolean – AND Bit 18 – Boolean – NAND Bit 19 – Boolean – OR Bit 20 – Boolean – NOR Bit 21 – Boolean – NOT Bit 22 – Reserved Bit 23 – Reserved Bit 24 – Reserved Bit 25 – Reserved Bit 26 – Reserved Bit 27 – Reserved Bit 28 – Reserved Bit 29 – Reserved Bit 30 – Reserved Bit 31 – Reserved

9238	Alarm Priorities to Log	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x000F	0 = Do not log, 1 = Include in log The default setting (0x0002) is to log only High Priority alarms. Bit 00 – No Priority Bit 01 – High Priority Bit 02 – Medium Priority Bit 03 – Low Priority
9239	Minimum Magnitude to Log	1	Integer	R/CW	Y	A-F	Units/Scale	-32,768 – 32,767	Default = -32,768
9240	Maximum Magnitude to Log	1	Integer	R/CW	Y	A-F	Units/Scale	1 – 32,767	Default = 32,767
9241	Minimum Duration to Log	1	Integer	R/CW	Y	1	Second	1 – 32,767	Default = 1
9242	Maximum Duration to Log	1	Integer	R/CW	Y	1	Second	1 – 32,767	Default = 32,767
9245	Count of Events	1	Integer	RO	Y	-	1	1 – 32,767	Number of events logged since last reset of event log
9246	DateTime of Last Reset	4	DateTime	RO	Y	-	-	-	DateTime of the last reset of the register-based event log

Register-Based Event Log – Events

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9250	Event #1	10	-	RO	Y	-	-	-	See Event Template
9260	Event #2	10	-	RO	Y	-	-	-	See Event Template
9270	Event #3	10	-	RO	Y	-	-	-	See Event Template
9280	Event #4	10	-	RO	Y	-	-	-	See Event Template
9290	Event #5	10	-	RO	Y	-	-	-	See Event Template
9300	Event #6	10	-	RO	Y	-	-	-	See Event Template
9310	Event #7	10	-	RO	Y	-	-	-	See Event Template
9320	Event #8	10	-	RO	Y	-	-	-	See Event Template
9330	Event #9	10	-	RO	Y	-	-	-	See Event Template

9340	Event #10	10	-	RO	Y	-	-	-	See Event Template
9350	Event #11	10	-	RO	-	-	-	-	See Event Template
9360	Event #12	10	-	RO	Y	-	-	-	See Event Template
9370	Event #13	10	-	RO	Y	-	-	-	See Event Template
9380	Event #14	10	-	RO	Y	-	-	-	See Event Template
9390	Event #15	10	-	RO	Y	-	-	-	See Event Template
9400	Event #16	10	-	RO	Y	-	-	-	See Event Template
9410	Event #17	10	-	RO	Y	-	-	-	See Event Template
9420	Event #18	10	-	RO	Y	-	-	-	See Event Template
9430	Event #19	10	-	RO	Y	-	-	-	See Event Template
9440	Event #20	10	-	RO	Y	-	-	-	See Event Template
9450	Event #21	10	-	RO	-	-	-	-	See Event Template
9460	Event #22	10	-	RO	Y	-	-	-	See Event Template
9470	Event #23	10	-	RO	Y	-	-	-	See Event Template
9480	Event #24	10	-	RO	Y	-	-	-	See Event Template
9490	Event #25	10	-	RO	-	-	-	-	See Event Template
9500	Event #26	10	-	RO	Y	-	-	-	See Event Template
9510	Event #27	10	-	RO	-	-	-	-	See Event Template
9520	Event #28	10	-	RO	Y	-	-	-	See Event Template
9530	Event #29	10	-	RO	Y	-	-	-	See Event Template
9540	Event #30	10	-	RO	-	-	-	-	See Event Template

Register-Based Event Log – Event Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Date/Time of Pickup	4	DateTime	RO	Y	-	-	-	
Base +4	Alarm Unique Identifier	2	Long	RO	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register
Base +6	Worst Value During Pickup	1	Integer	RO	Y	A-E	Units/Scale	0 – 32,767	
Base +7	Worst Value During Dropout	1	Integer	RO	Y	A-E	Units/Scale	0 – 32,767	
Base +8	Worst Value	1	Integer	RO	Y	A-E	Units/Scale	0 – 32,767	
Base +9	Duration	1	Integer	RO	Y	1	Second	0 – 32,767	

Register-Based Disturbance Event Log – Voltage Event Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9550	Voltage Event Log Configuration Bitmap	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0001	Bit 00 – 0 = FIFO (default) 1 = Fill and Hold
9551	Disturbance Alarms to Log	2	Bitmap	R/CW	Y	-	-	0x00000000 – 0x000FFFFF	0 = Do not log, 1 = Include in log (default) Bit 00 – Disturbance Alarm #1 Bit 01 – Disturbance Alarm #2 … Bit 19 – Disturbance Alarm #20
9553	Nominal Voltage	1	Integer	R/CW	Y	-	1	1 – 32,767	Default = PT primary
9554	Minimum Magnitude to Log	1	Integer	R/CW	Y	D/E	Volts/Scale	1 – 32,767	Default = 0
9555	Maximum Magnitude to Log	1	Integer	R/CW	Y	D/E	Volts/Scale	1 – 32,767	Default = 32,767
9556	Minimum Duration to Log	1	Integer	R/CW	Y	-	Millisecond	1 – 32,767	Default = 1
9557	Maximum Duration to Log	1	Integer	R/CW	Y	-	Millisecond	1 – 32,767	Default = 10,000
9562	SEMI F47	2	Bitmap	RO					Reserved for future development
9564	PT Primary	1	Integer	RO	Y	-	1	1 – 32,767	Shadow copy of PT primary
9565	Count of Voltage Events	1	Integer	RO	Y	-	1	1 – 32,767	Number of voltage events logged since last reset of voltage event log
9566	DateTime of Last Reset	4	DateTime	RO	Y	-	-	-	DateTime of the last reset of the register-based voltage event log

Register-Based Disturbance Event Log – Current Event Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9570	Current Event Log Configuration Bitmap	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0001	Bit 00 – 0 = FIFO (default) 1 = Fill and Hold
9571	Disturbance Alarms to Log	2	Bitmap	R/CW	Y	-	-	0x00000000 – 0x000FFFFF	0 = Do not log, 1 = Include in log (default) Bit 00 – Disturbance Alarm #1 Bit 01 – Disturbance Alarm #2 … Bit 19 – Disturbance Alarm #20
9573	Nominal Current	1	Integer	R/CW	Y	-	1	1 – 32,767	Default = CT primary

9574	Minimum Magnitude to Log	1	Integer	R/CW	Y	A	Amps/Scale	1 – 32,767	Default = 0
9575	Maximum Magnitude to Log	1	Integer	R/CW	Y	A	Amps/Scale	1 – 32,767	Default = 32,767
9576	Minimum Duration to Log	1	Integer	R/CW	Y	-	Millisecond	1 – 32,767	Default = 1
9577	Maximum Duration to Log	1	Integer	R/CW	Y	-	Millisecond	1 – 32,767	Default = 10,000
9584	CT Primary	1	Integer	RO	Y	-	1	1 – 32,767	Shadow copy of CT primary
9585	Count of Current Events	1	Integer	RO	Y	-	1	1 – 32,767	Number of current events logged since last reset of voltage event log
9586	Date/Time of Last Reset	4	DateTime	RO	Y	-	-	-	Date/Time of the last reset of the register-based current event log

Register-Based Disturbance Event Log – Voltage Events

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9600	Voltage Event #1	10	-	RO	Y	-	-	-	See Event Template
9610	Voltage Event #2	10	-	RO	Y	-	-	-	See Event Template
9620	Voltage Event #3	10	-	RO	Y	-	-	-	See Event Template
9630	Voltage Event #4	10	-	RO	Y	-	-	-	See Event Template
9640	Voltage Event #5	10	-	RO	Y	-	-	-	See Event Template
9650	Voltage Event #6	10	-	RO	Y	-	-	-	See Event Template
9660	Voltage Event #7	10	-	RO	Y	-	-	-	See Event Template
9670	Voltage Event #8	10	-	RO	Y	-	-	-	See Event Template
9680	Voltage Event #9	10	-	RO	Y	-	-	-	See Event Template
9690	Voltage Event #10	10	-	RO	Y	-	-	-	See Event Template
9700	Voltage Event #11	10	-	RO	Y	-	-	-	See Event Template

9710	Voltage Event #12	10	-	RO	Y	-	-	-	See Event Template
9720	Voltage Event #13	10	-	RO	Y	-	-	-	See Event Template
9730	Voltage Event #14	10	-	RO	Y	-	-	-	See Event Template
9740	Voltage Event #15	10	-	RO	Y	-	-	-	See Event Template
9750	Voltage Event #16	10	-	RO	Y	-	-	-	See Event Template
9760	Voltage Event #17	10	-	RO	Y	-	-	-	See Event Template
9770	Voltage Event #18	10	-	RO	Y	-	-	-	See Event Template
9780	Voltage Event #19	10	-	RO	Y	-	-	-	See Event Template
9790	Voltage Event #20	10	-	RO	Y	-	-	-	See Event Template

Register-Based Disturbance Event Log – Current Events

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
9800	Current Event #1	10	-	RO	Y	-	-	-	See Event Template
9810	Current Event #2	10	-	RO	Y	-	-	-	See Event Template
9820	Current Event #3	10	-	RO	Y	-	-	-	See Event Template
9830	Current Event #4	10	-	RO	Y	-	-	-	See Event Template
9840	Current Event #5	10	-	RO	Y	-	-	-	See Event Template
9850	Current Event #6	10	-	RO	Y	-	-	-	See Event Template
9860	Current Event #7	10	-	RO	Y	-	-	-	See Event Template
9870	Current Event #8	10	-	RO	Y	-	-	-	See Event Template
9880	Current Event #9	10	-	RO	Y	-	-	-	See Event Template

9890	Current Event #10	10	-	RO	Y	-	-	-	See Event Template
9900	Current Event #11	10	-	RO	Y	-	-	-	See Event Template
9910	Current Event #12	10	-	RO	Y	-	-	-	See Event Template
9920	Current Event #13	10	-	RO	Y	-	-	-	See Event Template
9930	Current Event #14	10	-	RO	Y	-	-	-	See Event Template
9940	Current Event #15	10	-	RO	Y	-	-	-	See Event Template
9950	Current Event #16	10	-	RO	Y	-	-	-	See Event Template
9960	Current Event #17	10	-	RO	Y	-	-	-	See Event Template
9970	Current Event #18	10	-	RO	Y	-	-	-	See Event Template
9980	Current Event #19	10	-	RO	Y	-	-	-	See Event Template
9990	Current Event #20	10	-	RO	Y	-	-	-	See Event Template

Register-Based Disturbance Event Log – Event Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Date/Time of Pickup	4	DateTime	RO	Y	-	-	-	

Base +4	Alarm Unique Identifier	2	Long	RO	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register For Disturbance alarms Test Register is: 1 = Vab 2 = Vbc 3 = Vca 4 = Van 5 = Vbn 6 = Vcn 7 = Vng 8 = Ia 9 = Ib 10 = Ic 11 = In 12 = Ig 13 = Alt V2 14 = Alt I2 15 = Alt I4
Base +6	Worst Value During Pickup	1	Integer	RO	Y	A-E	Volts or Amps/ Scale	0 – 32,767	
Base +7	Worst Value During Dropout	1	Integer	RO	Y	A-E	Volts or Amps/ Scale	0 – 32,767	
Base +8	Worst Value	1	Integer	RO	Y	A-E	Volts or Amps/ Scale	0 – 32,767	
Base +9	Duration	1	Integer	RO	Y	-	Millisecond	0 – 32,767	

Alarms – System Status

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
10000	P1 Alarm Queue	10	Integer	RO	Y	-	-	1 – 185	Queue of last ten active priority 1 alarms
10010	P1 Acknowledge Status	1	Bitmap	RO	Y	-	Binary	0x0000 – 0x03FF	Acknowledge status for each of the P1 alarms in the queue
10011	Active Alarm Map	12	Bitmap	RO	Y	-	Binary	0x0000 – 0xFFFF	0 = Inactive, 1 = Active Bit00 = Alarm #01 Bit01 = Alarm #02 etc.
10023	Active Alarm Status	1	Bitmap	RO	Y	-	Binary	0x0000 – 0x001F	Bit00 = 1 if any priority 1-3 alarm is active Bit01 = 1 if a “High” (1) priority alarm is active Bit02 = 1 if a “Medium” (2) priority alarm is active Bit03 = 1 if a “Low” (3) priority alarm is active Bit04 = 1 if a "None" (0) priority alarm is active
10024	Latched Active Alarm Status	1	Bitmap	R/W	N	-	Binary	0x0000 – 0x001F	Latched Active Alarms:(from the last time the register was cleared) Bit00 = 1 if any priority 1-3 alarm is active Bit01 = 1 if a “High” (1) priority alarm is active Bit02 = 1 if a “Medium” (2) priority alarm is active Bit03 = 1 if a “Low” (3) priority alarm is active Bit04 = 1 if a "None" (0) priority alarm is active
10025	Total Counter	1	Integer	R/W	Y	-	1	0 – 32,767	Total alarm counter, including all priorities 1, 2 and 3
10026	P3 Counter	1	Integer	R/W	Y	-	1	0 – 32,767	Low priority alarm counter, all priority 3s
10027	P2 Counter	1	Integer	R/W	Y	-	1	0 – 32,767	Medium priority alarm counter, all priority 2s
10028	P1 Counter	1	Integer	R/W	Y	-	1	0 – 32,767	High priority alarm counter, all priority 1s
10029	Pickup Mode Selection	12	Bitmap	R/W	Y	-	Binary	0x0 – 0xFFFF	Selection of absolute or relative pickup test for each of the alarm positions (if applicable, based on type) Alarm #01 is least significant bit in register 10040 0 = Absolute (default) 1 = Relative Bit00 = Alarm #01 Bit01 = Alarm #02, etc.
10041	Number Of Samples In Relative Threshold Average	1	Integer	R/CW	Y	-	1	5 – 30	Number of 1-second update intervals used to compute the RMS average value used in relative pickup alarms (Default = 30)

Alarms – Setpoint Learning

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
10060	Alarm Setpoint Learning Start/Stop	1	Integer	R/W	Y	-	-	0 – 1	Alarm Setpoint Learning Control Switch 0 = Stop (default) 1 = Start (continue) Starting learning does not clear previously learned profiles. This must be done via command 11000.
10061	Alarm Setpoint Learning Duration Over/Under Alarms	1	Integer	R/W	Y	1	Days	0 – 365	The number of days to learn alarm setpoints for Over/Under Alarms. 0 = continuous 30 = default
10062	Alarm Setpoint Learning Definition of “Done” Over/Under Alarms	1	Integer	R/W	Y	1	Days	1 – 30	The number of days of learning without a setpoint change to be considered done with learning for Over/Under Alarms. Default = 7 days.
10063	Alarm Setpoint Learning Duration Waveshape Alarms	1	Integer	R/W	Y	1	Minutes	0 – 59	The number of minutes to learn alarm setpoints for Waveshape Alarms. 0 = continuous 30 = default
10064	Alarm Setpoint Learning Definition of “Done” Waveshape Alarms	1	Integer	R/W	Y	1	Minutes	1 – 30	The number of minutes of learning without a setpoint change to be considered done with learning for Waveshape Alarms. Default = 10 minutes.
10065	Alarm Setpoint Learning Action at End of Learning	1	Integer	R/W	Y	-	-	0 – 1	Specifies the action to take at the end of the Learning Duration or when “Done”. 0 = Hold the learned setpoints for review 1 = Install the learned setpoints as permanent (default)
10066	Alarm Setpoint Learning Dead band	1	Integer	R/W	Y	1	%	1 – 99	The dead band to apply to the metered values while learning. Default = 5%.
10067	Alarm Setpoint Learning Dynamic Setpoint Update Interval	1	Integer	R/W	Y	-	Minutes	1 – 1440	The time interval for updating dynamic setpoints. Default = 60 minutes.
10070	Alarm Setpoint Learning Status	1	Integer	RO	Y	-	-	0 – 2	0 = Inactive 1 = Active 2 = Done
10071	Alarm Setpoint Learning Status For Waveshape Alarms	1	Integer	RO	Y	-	-	0 – 2	0 = Inactive 1 = Active 2 = Done
10072	Alarm Setpoint Learning Elapsed Time – Days	1	Integer	RO	Y	-	Days	0 – 32767	Alarm setpoint learning elapsed time – days
10073	Alarm Setpoint Learning Elapsed Time – Hours	1	Integer	RO	Y	-	Hours	0 – 23	Alarm setpoint learning elapsed time – hours
10074	Alarm Setpoint Learning Elapsed Time – Minutes	1	Integer	RO	Y	-	Minutes	0 – 59	Alarm setpoint learning elapsed time – minutes

10075	Alarm Setpoint Learning Elapsed Time Without Setpoint Change – Days	1	Integer	RO	Y	-	Days	0 – 32767	Alarm setpoint learning elapsed time without setpoint change – days
10076	Alarm Setpoint Learning Elapsed Time Without Setpoint Change – Hours	1	Integer	RO	Y	-	Hours	0 – 23	Alarm setpoint learning elapsed time without setpoint change – hours
10077	Alarm Setpoint Learning Elapsed Time Without Setpoint Change – Minutes	1	Integer	RO	Y	-	Minutes	0 – 59	Alarm setpoint learning elapsed time without setpoint change – minutes
10078	Alarm Setpoint Learning Date/Time of Last Completed Learning Period	4	DateTime	RO	Y	-	-	-	
10082	Alarm Setpoint Learning Alarm to Display	1	Integer	R/W	Y	-	-	1 – 131	User-specified alarm number for which to post Alarm Setpoint Learning Data in the following registers. Note that for alarm numbers 181 – 185, enter 126 – 131, respectively. Default = 1.
10083	Alarm Setpoint Learning Test Register	1	Integer	RO	N	-	-	1000 – 65536	Displays the test register number for which the alarm is configured.
10084	Alarm Setpoint Learning Present Value of Metered Value	1	Integer	RO	N	-	-		Displays the present value of the metered value for the test register in register 10080.
10085	Alarm Setpoint Learning Present Learned Setpoint Pickup Value	1	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the present value of the learned setpoint for the alarm specified in register 10079.
10086	Alarm Setpoint Learning Present Learned Setpoint Pickup Delay	1	Integer	RO	N	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Displays the present value of the learned setpoint for the alarm specified in register 10079.
10087	Alarm Setpoint Learning Present Learned Setpoint Dropout Value	1	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the present value of the learned setpoint for the alarm specified in register 10079.
10088	Alarm Setpoint Learning Present Learned Setpoint Dropout Delay	1	Integer	RO	N	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Displays the present value of the learned setpoint for the alarm specified in register 10079.
10089	Alarm Setpoint Learning Setpoint in Service Pickup Value	1	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the setpoint presently in service for the alarm specified in register 10079.
10090	Alarm Setpoint Learning Setpoint in Service Pickup Delay	1	Integer	RO	N	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Displays the setpoint presently in service for the alarm specified in register 10079.
10091	Alarm Setpoint Learning Setpoint in Service Dropout Value	1	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the setpoint presently in service for the alarm specified in register 10079.

10092	Alarm Setpoint Learning Setpoint in Service Dropout Delay	1	Integer	RO	N	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Displays the setpoint presently in service for the alarm specified in register 10079.
10095	Alarm Setpoint Learning Histogram of Upper Limit	10	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the largest value of the metered value that occurred for the following numbers of consecutive samples: 1 sample 2 samples 4 samples 8 samples 16 samples 32 samples 64 samples 128 samples 256 samples >256 samples
10105	Alarm Setpoint Learning Histogram of Lower Limit	10	Integer	RO	N	A-F	Units/Scale	0 – 32,767	Displays the smallest value of the metered value that occurred for the following numbers of consecutive samples: 1 sample 2 samples 4 samples 8 samples 16 samples 32 samples 64 samples 128 samples 256 samples >256 samples

Alarms – Counters

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
10115	Alarm Position #001 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #001
10116	Alarm Position #002 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #002
10117	Alarm Position #003 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #003
10118	Alarm Position #004 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #004

10119	Alarm Position #005 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #005
10120	Alarm Position #006 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #006
10121	Alarm Position #007 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #007
10122	Alarm Position #008 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #008
10123	Alarm Position #009 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #009
10124	Alarm Position #010 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #010
10125	Alarm Position #011 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #011
10126	Alarm Position #012 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #012
10127	Alarm Position #013Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #013
10128	Alarm Position #014 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #014
10129	Alarm Position #015 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #015
10130	Alarm Position #016 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #016
10131	Alarm Position #017 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #017
10132	Alarm Position #018 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #018
10133	Alarm Position #019 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #019
10134	Alarm Position #020 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #020
10135	Alarm Position #021 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #021
10136	Alarm Position #022 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #022
10137	Alarm Position #023 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #023
10138	Alarm Position #024 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #024
10139	Alarm Position #025 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #025

10140	Alarm Position #026 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #026
10141	Alarm Position #027 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #027
10142	Alarm Position #028 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #028
10143	Alarm Position #029 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #029
10144	Alarm Position #030 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #030
10145	Alarm Position #031 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #031
10146	Alarm Position #032 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #032
10147	Alarm Position #033 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #033
10148	Alarm Position #034 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #034
10149	Alarm Position #035 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #035
10150	Alarm Position #036 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #036
10151	Alarm Position #037 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #037
10152	Alarm Position #038 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #038
10153	Alarm Position #039 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #039
10154	Alarm Position #040 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #040
10155	Alarm Position #041 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #041
10156	Alarm Position #042 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #042
10157	Alarm Position #043Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #043
10158	Alarm Position #044 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #044
10159	Alarm Position #045 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #045
10160	Alarm Position #046 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #046

10161	Alarm Position #047 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #047
10162	Alarm Position #048 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #048
10163	Alarm Position #049 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #049
10164	Alarm Position #050 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #050
10165	Alarm Position #051 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #051
10166	Alarm Position #052 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #052
10167	Alarm Position #053Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #053
10168	Alarm Position #054 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #054
10169	Alarm Position #055 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #055
10170	Alarm Position #056 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #056
10171	Alarm Position #057 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #057
10172	Alarm Position #058 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #058
10173	Alarm Position #059 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #059
10174	Alarm Position #060 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #060
10175	Alarm Position #061 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #061
10176	Alarm Position #062 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #062
10177	Alarm Position #063Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #063
10178	Alarm Position #064Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #064
10179	Alarm Position #065 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #065
10180	Alarm Position #066 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #066
10181	Alarm Position #067 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #067

10182	Alarm Position #068 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #068
10183	Alarm Position #069 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #069
10184	Alarm Position #070 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #070
10185	Alarm Position #071 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #071
10186	Alarm Position #072 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #072
10187	Alarm Position #073Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #073
10188	Alarm Position #074 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #074
10189	Alarm Position #075 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #075
10190	Alarm Position #076 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #076
10191	Alarm Position #077 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #077
10192	Alarm Position #078 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #078
10193	Alarm Position #079 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #079
10194	Alarm Position #080 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Standard Speed Alarm Position #080
10195	Alarm Position #081 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #001
10196	Alarm Position #082 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #002
10197	Alarm Position #083Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #003
10198	Alarm Position #084 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #004
10199	Alarm Position #085 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #005
10200	Alarm Position #086 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #006
10201	Alarm Position #087 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #007
10202	Alarm Position #088 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #008

10203	Alarm Position #089 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #009
10204	Alarm Position #090 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #010
10205	Alarm Position #091 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #011
10206	Alarm Position #092 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #012
10207	Alarm Position #093Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #013
10208	Alarm Position #094 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #014
10209	Alarm Position #095 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #015
10210	Alarm Position #096 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #016
10211	Alarm Position #097 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #017
10212	Alarm Position #098 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #018
10213	Alarm Position #099 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #019
10214	Alarm Position #100 Counter	1	Integer	RO	Y	-	1	0 – 32,767	High Speed Alarm Position #020
10215	Alarm Position #101 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #001
10216	Alarm Position #102 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #002
10217	Alarm Position #103 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #003
10218	Alarm Position #104 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #004
10219	Alarm Position #105 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #005
10220	Alarm Position #106 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #006
10221	Alarm Position #107 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #007
10222	Alarm Position #108 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #008
10223	Alarm Position #109 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #009

10224	Alarm Position #110 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #010
10225	Alarm Position #111 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #011
10226	Alarm Position #112 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #012
10227	Alarm Position #113 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #013
10228	Alarm Position #114 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #014
10229	Alarm Position #115 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #015
10230	Alarm Position #116 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #016
10231	Alarm Position #117 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #017
10232	Alarm Position #118 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #018
10233	Alarm Position #119 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #019
10234	Alarm Position #120 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Disturbance Alarm Position #020
10235	Alarm Position #121 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #001
10236	Alarm Position #122 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #002
10237	Alarm Position #123 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #003
10238	Alarm Position #124 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #004
10239	Alarm Position #125 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #005
10240	Alarm Position #126 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #006
10241	Alarm Position #127 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #007
10242	Alarm Position #128 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #008
10243	Alarm Position #129 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #009
10244	Alarm Position #130 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #010

10245	Alarm Position #131 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #011
10246	Alarm Position #132 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #012
10247	Alarm Position #133 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #013
10248	Alarm Position #134 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #014
10249	Alarm Position #135 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #015
10250	Alarm Position #136 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #016
10251	Alarm Position #137 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #017
10252	Alarm Position #138 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #018
10253	Alarm Position #139 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #019
10254	Alarm Position #140 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #020
10255	Alarm Position #141 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #021
10256	Alarm Position #142 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #022
10257	Alarm Position #143 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #023
10258	Alarm Position #144 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #024
10259	Alarm Position #145 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #025
10260	Alarm Position #146 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #026
10261	Alarm Position #147 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #027
10262	Alarm Position #148 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #028
10263	Alarm Position #149 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #029
10264	Alarm Position #150 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #030
10265	Alarm Position #151 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #031

10266	Alarm Position #152 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #032
10267	Alarm Position #153 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #033
10268	Alarm Position #154 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #034
10269	Alarm Position #155 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #035
10270	Alarm Position #156 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #036
10271	Alarm Position #157 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #037
10272	Alarm Position #158 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #038
10273	Alarm Position #159 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #039
10274	Alarm Position #160 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Digital Alarm Position #040
10275	Alarm Position #161 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #001
10276	Alarm Position #162 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #002
10277	Alarm Position #163 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #003
10278	Alarm Position #164 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #004
10279	Alarm Position #165 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #005
10280	Alarm Position #166 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #006
10281	Alarm Position #167 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #007
10282	Alarm Position #168 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #008
10283	Alarm Position #169 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #009
10284	Alarm Position #170 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #010
10285	Alarm Position #171 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #011
10286	Alarm Position #172 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #012

10287	Alarm Position #173 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #013
10288	Alarm Position #174 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #014
10289	Alarm Position #175 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Boolean Alarm Position #015
10290	Alarm Position #176 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #176
10291	Alarm Position #177 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #177
10292	Alarm Position #178 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #178
10293	Alarm Position #179 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #179
10294	Alarm Position #180 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #180
10295	Alarm Position #181 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #181
10296	Alarm Position #182 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #182
10297	Alarm Position #183 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #183
10298	Alarm Position #184 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #184
10299	Alarm Position #185 Counter	1	Integer	RO	Y	-	1	0 – 32,767	Alarm Position #185

Alarms – Standard Speed

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
10300	Alarm Position #001	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10320	Alarm Position #002	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10340	Alarm Position #003	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10360	Alarm Position #004	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10380	Alarm Position #005	20	-	R/CW	Y	-	-	-	See Alarm Template 1

10400	Alarm Position #006	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10420	Alarm Position #007	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10440	Alarm Position #008	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10460	Alarm Position #009	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10480	Alarm Position #010	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10500	Alarm Position #011	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10520	Alarm Position #012	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10540	Alarm Position #013	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10560	Alarm Position #014	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10580	Alarm Position #015	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10600	Alarm Position #016	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10620	Alarm Position #017	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10640	Alarm Position #018	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10660	Alarm Position #019	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10680	Alarm Position #020	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10700	Alarm Position #021	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10720	Alarm Position #022	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10740	Alarm Position #023	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10760	Alarm Position #024	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10780	Alarm Position #025	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10800	Alarm Position #026	20	-	R/CW	Y	-	-	-	See Alarm Template 1

10820	Alarm Position #027	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10840	Alarm Position #028	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10860	Alarm Position #029	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10880	Alarm Position #030	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10900	Alarm Position #031	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10920	Alarm Position #032	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10940	Alarm Position #033	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10960	Alarm Position #034	20	-	R/CW	Y	-	-	-	See Alarm Template 1
10980	Alarm Position #035	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11000	Alarm Position #036	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11020	Alarm Position #037	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11040	Alarm Position #038	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11060	Alarm Position #039	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11080	Alarm Position #040	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11100	Alarm Position #041	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11120	Alarm Position #042	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11140	Alarm Position #043	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11160	Alarm Position #044	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11180	Alarm Position #045	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11200	Alarm Position #046	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11220	Alarm Position #047	20	-	R/CW	Y	-	-	-	See Alarm Template 1

11240	Alarm Position #048	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11260	Alarm Position #049	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11280	Alarm Position #050	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11300	Alarm Position #051	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11320	Alarm Position #052	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11340	Alarm Position #053	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11360	Alarm Position #054	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11380	Alarm Position #055	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11400	Alarm Position #056	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11420	Alarm Position #057	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11440	Alarm Position #058	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11460	Alarm Position #059	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11480	Alarm Position #060	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11500	Alarm Position #061	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11520	Alarm Position #062	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11540	Alarm Position #063	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11560	Alarm Position #064	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11580	Alarm Position #065	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11600	Alarm Position #066	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11620	Alarm Position #067	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11640	Alarm Position #068	20	-	R/CW	Y	-	-	-	See Alarm Template 1

11660	Alarm Position #069	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11680	Alarm Position #070	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11700	Alarm Position #071	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11720	Alarm Position #072	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11740	Alarm Position #073	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11760	Alarm Position #074	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11780	Alarm Position #075	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11800	Alarm Position #076	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11820	Alarm Position #077	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11840	Alarm Position #078	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11860	Alarm Position #079	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11880	Alarm Position #080	20	-	R/CW	Y	-	-	-	See Alarm Template 1

Alarms – High Speed

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
11900	Alarm Position #081	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11920	Alarm Position #082	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11940	Alarm Position #083	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11960	Alarm Position #084	20	-	R/CW	Y	-	-	-	See Alarm Template 1
11980	Alarm Position #085	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12000	Alarm Position #086	20	-	R/CW	Y	-	-	-	See Alarm Template 1

12020	Alarm Position #087	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12040	Alarm Position #088	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12060	Alarm Position #089	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12080	Alarm Position #090	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12100	Alarm Position #091	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12120	Alarm Position #092	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12140	Alarm Position #093	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12160	Alarm Position #094	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12180	Alarm Position #095	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12200	Alarm Position #096	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12220	Alarm Position #097	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12240	Alarm Position #098	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12260	Alarm Position #099	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12280	Alarm Position #100	20	-	R/CW	Y	-	-	-	See Alarm Template 1

Alarms – Disturbance

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
12300	Alarm Position #101	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12320	Alarm Position #102	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12340	Alarm Position #103	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12360	Alarm Position #104	20	-	R/CW	Y	-	-	-	See Alarm Template 1

12380	Alarm Position #105	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12400	Alarm Position #106	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12420	Alarm Position #107	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12440	Alarm Position #108	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12460	Alarm Position #109	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12480	Alarm Position #110	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12500	Alarm Position #111	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12520	Alarm Position #112	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12540	Alarm Position #113	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12560	Alarm Position #114	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12580	Alarm Position #115	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12600	Alarm Position #116	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12620	Alarm Position #117	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12640	Alarm Position #118	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12660	Alarm Position #119	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12680	Alarm Position #120	20	-	R/CW	Y	-	-	-	See Alarm Template 1

Alarms – Digital

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
12700	Alarm Position #121	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12720	Alarm Position #122	20	-	R/CW	Y	-	-	-	See Alarm Template 1

12740	Alarm Position #123	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12760	Alarm Position #124	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12780	Alarm Position #125	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12800	Alarm Position #126	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12820	Alarm Position #127	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12840	Alarm Position #128	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12860	Alarm Position #129	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12880	Alarm Position #130	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12900	Alarm Position #131	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12920	Alarm Position #132	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12940	Alarm Position #133	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12960	Alarm Position #134	20	-	R/CW	Y	-	-	-	See Alarm Template 1
12980	Alarm Position #135	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13000	Alarm Position #136	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13020	Alarm Position #137	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13040	Alarm Position #138	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13060	Alarm Position #139	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13080	Alarm Position #140	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13100	Alarm Position #141	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13120	Alarm Position #142	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13140	Alarm Position #143	20	-	R/CW	Y	-	-	-	See Alarm Template 1

13160	Alarm Position #144	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13180	Alarm Position #145	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13200	Alarm Position #146	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13220	Alarm Position #147	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13240	Alarm Position #148	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13260	Alarm Position #149	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13280	Alarm Position #150	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13300	Alarm Position #151	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13320	Alarm Position #152	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13340	Alarm Position #153	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13360	Alarm Position #154	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13380	Alarm Position #155	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13400	Alarm Position #156	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13420	Alarm Position #157	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13440	Alarm Position #158	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13460	Alarm Position #159	20	-	R/CW	Y	-	-	-	See Alarm Template 1
13480	Alarm Position #160	20	-	R/CW	Y	-	-	-	See Alarm Template 1

Alarms – Boolean

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
13500	Alarm Position #161	20	-	R/CW	Y	-	-	-	See Alarm Template 2

13520	Alarm Position #162	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13540	Alarm Position #163	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13560	Alarm Position #164	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13580	Alarm Position #165	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13600	Alarm Position #166	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13620	Alarm Position #167	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13640	Alarm Position #168	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13660	Alarm Position #169	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13680	Alarm Position #170	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13700	Alarm Position #171	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13720	Alarm Position #172	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13740	Alarm Position #173	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13760	Alarm Position #174	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13780	Alarm Position #175	20	-	R/CW	Y	-	-	-	See Alarm Template 2
13800	Alarm Position #176	20	-	R/CW	Y	-	-	-	Reserved for future development
13820	Alarm Position #177	20	-	R/CW	Y	-	-	-	Reserved for future development
13840	Alarm Position #178	20	-	R/CW	Y	-	-	-	Reserved for future development
13860	Alarm Position #179	20	-	R/CW	Y	-	-	-	Reserved for future development
13880	Alarm Position #180	20	-	R/CW	Y	-	-	-	Reserved for future development

Alarms – Transient

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
13900	Alarm Position #181 Waveshape Alarm	20	-	R/CW	Y	-	-	-	See Alarm Template 3
13920	Alarm Position #182 Waveshape Alarm	20	-	R/CW	Y	-	-	-	See Alarm Template 3
13940	Alarm Position #183 Waveshape Alarm	20	-	R/CW	Y	-	-	-	See Alarm Template 3
13960	Alarm Position #184 Waveshape Alarm	20	-	R/CW	Y	-	-	-	See Alarm Template 3
13980	Alarm Position #185 Impulsive Transient Alarm	20	-	R/CW	Y	-	-	-	See Alarm Template 3

Alarms – Template 1

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	Unique Identifier	2	Long	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register For Disturbance alarms Test Register is: 1 = Vab 2 = Vbc 3 = Vca 4 = Van 5 = Vbn 6 = Vcn 7 = Vng 8 = Ia 9 = Ib 10 = Ic 11 = In 12 = Ig 13 = Alt V2 14 = Alt I2 15 = Alt I4 For Unary Alarms, Test Register is: 1 = End of Incremental Energy Interval 2 = End of Power Demand Interval 3 = End of 1s Meter Update Cycle 4 = End of 100ms Meter Update Cycle 5 = Power up/ Reset For Binary Alarm, Test Register is 120 For Time Of Day Alarm, Test Register is 160
Base +2	Enable/Disable, Priority	1	Integer	R/W	Y	-	-	MSB: 0 – FF LSB: 0 – 3	MSB: 0x00 = Disabled, not learning (default) 0xAA = Disabled, learning 0xCC = Enabled with fixed histogram setpoints, not learning 0xDD = Enabled with dynamic (learned) setpoints, learning 0xEE = Enabled with fixed setpoints, learning 0xFF = Enabled with fixed setpoints, not learning LSB: Specifies the priority level 0 – 3
Base +3	Label	8	Char	R/W	Y	-	-	ASCII Codes	16 Characters

Base +11	Pickup Value	1	Integer	R/CW	Y	A-F	Units/Scale	0 – 32,767	Does not apply to digital or unary alarms
	*Pickup Mask- Binary Alarm		Bitmap	R/CW	Y	-	-	0 – 0x7FFF	*For a Binary Alarm, this mask indicates the level of each bit selected in the Pickup Mask Bit Select needed to activate the alarm
	**Pickup Date- Time of Day Alarm		Integer	R/CW	Y	-	-	0x0111 –0x208D	**For Time Of Day Alarm, this register holds the Pickup Date: Bits 8 – 15 = Day (1-32); 32 = Any Day Bits 4 – 7 = Day Of Week (1 – 8); 8 = Any DOW Bits 0 – 3 = Month (1 – 13); 13 = Any Month
Base +12	Pickup Delay	1	Integer	R/CW	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms Does not apply to digital or unary alarms.
	*Pickup Mask Bit Select for Binary Alarm		Bitmap	R/CW	Y	-	-	0 – 0x7FFF	*For a Binary Alarm, this register identifies the bits selected for binary pickup evaluation. A '1' indicates the bit is selected, a '0' indicates a Don't Care bit.
	**Pickup Time – Time of Day Alarm		Integer	R/CW	Y	-	-	0x0000 –0x172B	**For Time of Day Alarm, this register holds the Pickup Time: Bits 8 – 15 = Hour (0 – 24); 24 = Any Hour Bits 0 – 7 = Minute (0 – 59);
Base +13	Dropout Value	1	Integer	R/CW	Y	A-F	Units/Scale	0 – 32,767	Does not apply to digital or unary alarms.
	*Dropout Mask- Binary Alarm		Bitmap	R/CW	Y	-	-	0 – 0x7FFF	*For a Binary Alarm, this mask indicates the level of each bit selected in the Dropout Mask Bit Select needed to de-activate the alarm.
	**Dropout Date- Time of Day alarm		Integer	R/CW	Y	-	-	0x0111 –0x208D	**For a Time Of Day Alarm, this register holds the Dropout Date: Bits 8 – 15 = Day (1-32); 32 = Any Day Bits 4 – 7 = Day Of Week (1 – 8); 8 = Any DOW Bits 0 – 3 = Month (1 – 13); 13 = Any Month

Base +14	Dropout Delay	1	Integer	R/CW	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms Does not apply to digital or unary alarms.
	*Dropout Mask Bit Select for Binary Alarm		Bitmap	R/CW	Y	-	-	0 – 0x7FFF	*For Binary Alarm, this register identifies the bits selected for binary dropout evaluation. A '1' indicates the bit is selected, a '0' indicates a Don't Care bit.
	** Dropout Time – Time of Day Alarm		Integer	R/CW	Y	-	-	0x0000 –0x172B	**For Time of Day Alarm, this register holds the Dropout Time: Bits 8 – 15 = Hour (0 – 24); 24 = Any Hour Bits 0 – 7 = Minute (0 – 59);
Base +16	Datalog Specifier	2	Bitmap	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bit 00 = Datalog #1 Bit 01 = Datalog #2… Bit 13 = Datalog #14 Bit 14 = Reserved… Bit 21 = Reserved Bit 28 = 100ms Event Log Bit 29 = Cycle-by-Cycle Event Log (CM4 only) Bit 30 = Email Required
Base +18	WFC Mode	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Bits 00 – 03 = Channel Format (0 – 10) Bits 04 – 07 = Decimation (0 – 6) Bits 08 – 11 = History Cycles (0 – 10) Bit 12 – Steady State Waveform Capture Bit 13 – Fixed Waveform Capture Bit 14 – Variable Waveform Capture (CM4 only) Bit 15 – Variable Waveform Capture w/early termination (CM4 only)
Base +19	WFC Cycles	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Number of Cycles

Alarms – Template 2

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Unique Identifier	2	Long	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 19) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register
Base +2	Enable/Disable, Priority	1	Integer	R/W	Y	-	-	MSB: 0 – FF LSB: 0 – 3	MSB: 0x00 = Disable; 0xFF = Enable LSB: Specifies the priority level 0 – 3

Base +3	Label	8	Char	R/W	Y	-	-	ASCII Codes	16 Characters
Base +11	Alarm test list	4	Integer	R/CW	Y	-	-	0 – 185	Alarm test list (position # in the normal alarm list)
Base +16	Datalog Specifier	2	Bitmap	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bit 00 = Datalog #1 Bit 01 = Datalog #2… Bit 13 = Datalog #14 Bit 14 = Reserved… Bit 21 = Reserved Bit 28 = 100ms Event Log Bit 29 = Cycle-by-Cycle Event Log (CM4 only)
Base +18	WFC Mode	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Bits 00 – 03 = Channel Format (0 – 10) Bits 04 – 07 = Decimation (0 – 6) Bits 08 – 11 = History Cycles (0 – 10) Bit 12 – Steady State Waveform Capture Bit 13 – Fixed Waveform Capture Bit 14 – Variable Waveform Capture (CM4 only) Bit 15 – Variable Waveform Capture w/early termination (CM4 only)
Base +19	WFC Cycles	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Number of Cycles

Alarms – Template 3

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	Unique Identifier	2	Long	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register Level = 0 (Additional levels are not allowed) Alarm Type: 130 = Waveshape 111 = Impulse Transient Test Register for Waveshape: 1 = Phase Voltage 2 = N-G Voltage 3 = Phase Current 4 = Neutral Current Test Register for Impulse is a bitmap of channels: Bit 00 = Phase A Bit 01 = Phase B Bit 02 = Phase C
Base +2	Enable/Disable, Priority	1	Integer	R/W	Y	-	-	MSB: 0 – FF LSB: 0 – 3	MSB: 0x00 = Disabled, not learning (default) 0xAA = Disabled, learning 0xCC = Enabled with fixed histogram setpoints, not learning 0xDD = Enabled with dynamic (learned) setpoints, learning 0xEE = Enabled with fixed setpoints, learning 0xFF = Enabled with fixed setpoints, not learning LSB: Specifies the priority level 0 – 3
Base +3	Label	8	Char	R/W	Y	-	-	ASCII Codes	16 Characters
Base +11	Threshold Magnitude	1	Integer	R/CW	Y	A-F	Units/Scale	0 – 32,767 1 – 100	Transient Threshold Magnitude (RMS) Waveshape Alarm Threshold (Default = 100)
Base +12	Minimum Pulse Duration Waveshape Alarm Detection Sensitivity	1	Integer	R/CW	Y	-	1us -	0 – 40 1 – 5	Impulsive Detection = 200ns (Number of points that exceed pickup magnitude) Waveshape Alarm Detection Sensitivity (Evaluation Window Size) 1 = Low Sensitivity (default) 2 = Medium 3 = High 4 = Very High 5 = Extreme Sensitivity

Base +13	Waveshape Alarm Detection Resolution	1	Integer	R/CW	Y	-	-	1 – 5	1 = 32 points/cycle (only selection for currents) 2 = 64 points/cycle 3 = 128 points/cycle (default for voltages) 4 = 256 points/cycle 5 = 512 points/cycle
Base +14	Waveshape Alarm Detection Upper Limit	1	Integer	R/CW	Y	-	-	1 – 100	Waveshape Alarm value above which alarm is not reported
Base +15	Waveshape Alarm Detection Operation Mode	1	Integer	R/CW	Y	-	-	0 – 1	Waveshape Alarm Detection Operation Mode: 0 = SAD = Sum of the Absolute Difference (default) 1 = ASD = Absolute Sum of Difference
Base +16	Datalog Specifier	2	Bitmap	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bit 00 = Datalog #1 Bit 01 = Datalog #2… Bit 13 = Datalog #14 Bit 14 = Reserved… Bit 21 = Reserved Bit 28 = 100ms Event Log Bit 29 = Cycle-by-Cycle Event Log (CM4 only)
Base +18	WFC Mode	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Bits 00 – 03 = Channel Format (0 – 10) Bits 04 – 07 = Decimation (0 – 6) Bits 08 – 11 = History Cycles (0 – 10) Bits 12 – 15 = Mode Select Bit 12 – Steady State (does not apply for Impulse) Bit 13 – Fixed Bit 14 – Variable (does not apply for Impulse) Bit 15 – Variable w/early termination (does not apply for Impulse)
Base +19	WFC Cycles	1	Integer	R/CW	Y	-	-	0 – 0xFFFF	Number of Cycles

CMPL Data Areas

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
14000	CMPL USER Non-Volatile Register Space	500	Integer	R/W	Y	-	-	-	Non-volatile register space accessible to CMPL programs.

Trending & Forecasting Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
15500	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 5 (Iavg)
15501	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 10 (Vll avg)
15502	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 16 (kW)
15503	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 17 (kVAr)
15504	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 18 (kVA)
15505	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 19 (PF total true alt)
15506	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 21 (Frequency)
15507	User-Defined ItemTo Post In Registers	1	Integer	R/W	Y	-	-	0 – 30	See List of Standard Quantities – Default = 25 (THD Vab)
15510	Trend Quantity 21 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1180
15511	Trend Quantity 21 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = 0
15512	Trend Quantity 21 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “Frequency”
15520	Trend Quantity 22 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1200
15521	Trend Quantity 22 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1
15522	Trend Quantity 22 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Ia”
15530	Trend Quantity 23 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1201
15531	Trend Quantity 23 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1
15532	Trend Quantity 23 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Ib”
15540	Trend Quantity 24 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1202
15541	Trend Quantity 24 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1

15542	Trend Quantity 24 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Ic
15550	Trend Quantity 25 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1211
15551	Trend Quantity 25 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1
15552	Trend Quantity 25 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Vab”
15560	Trend Quantity 26 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1212
15561	Trend Quantity 26 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1
15562	Trend Quantity 26 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Vbc”
15570	Trend Quantity 27 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 1213
15571	Trend Quantity 27 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = -1
15572	Trend Quantity 27 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “THD Vca”
15580	Trend Quantity 28 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 0
15581	Trend Quantity 28 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = 0
15582	Trend Quantity 28 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “ “
15590	Trend Quantity 29 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 0
15591	Trend Quantity 29 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = 0
15592	Trend Quantity 29 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “ “
15600	Trend Quantity 30 – Register Number	1	Integer	R/CW	Y	-	-	01000 – 65535	Default = 0
15601	Trend Quantity 30 – Scale Factor	1	Integer	R/CW	Y	-	-	-3 – 3	Power of 10 Default = 0
15602	Trend Quantity 30 – Label	8	Char	R/CW	Y	-	-	ASCII Codes	16 Characters Default = “ “

Trending & Forecasting Standard Quantities

	Quantity (Label)	Register
0	No Trending Data	NA
1	Ia	1100
2	Ib	1101
3	Ic	1102
4	In	1103
5	Iavg	1105
6	I unbalance worst	1110
7	Vab	1120
8	Vbc	1121
9	Vca	1122
10	Vll avg	1123
11	Van	1124
12	Vbn	1125
13	Vcn	1126
14	Vll unbalance worst	1132
15	Vln unbalance worst	1136
16	kW	1143
17	KVAr	1147
18	KVA	1151
19	PF total true alt	1167
20	PF total disp alt	1175
21.	User Defined: (default: Frequency)	1180
22.	User Defined: (default: THD Ia)	1200
23.	User Defined: (default: THD Ib)	1201
24.	User Defined: (default: THD Ic)	1202
25.	User Defined: (default: THD Vab)	1211
26.	User Defined: (default: THD Vbc)	1212
27.	User Defined: (default: THD Vca)	1213
28.	User Defined: (default: not used)	
29.	User Defined: (default: not used)	
30.	User Defined: (default: not used)	

Energy Summary by Shift

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
15635	Energy, Real 3-Phase Total Usage – First Shift – Today	3	Mod10	RO	Y	-	WH	(1)	
15638	Energy, Real 3-Phase Total Usage – Second Shift – Today	3	Mod10	RO	Y	-	WH	(1)	
15641	Energy, Real 3-Phase Total Usage – Third Shift – Today	3	Mod10	RO	Y	-	WH	(1)	
15644	Energy, Real 3-Phase Total Usage – First Shift – Yesterday	3	Mod10	RO	Y	-	WH	(1)	
15647	Energy, Real 3-Phase Total Usage – Second Shift – Yesterday	3	Mod10	RO	Y	-	WH	(1)	
15650	Energy, Real 3-Phase Total Usage – Third Shift – Yesterday	3	Mod10	RO	Y	-	WH	(1)	
15653	Energy, Real 3-Phase Total Usage – First Shift – This Week	3	Mod10	RO	Y	-	WH	(1)	
15656	Energy, Real 3-Phase Total Usage – Second Shift – This Week	3	Mod10	RO	Y	-	WH	(1)	
15659	Energy, Real 3-Phase Total Usage – Third Shift – This Week	3	Mod10	RO	Y	-	WH	(1)	
15662	Energy, Real 3-Phase Total Usage – First Shift – Last Week	3	Mod10	RO	Y	-	WH	(1)	
15665	Energy, Real 3-Phase Total Usage – Second Shift – Last Week	3	Mod10	RO	Y	-	WH	(1)	
15668	Energy, Real 3-Phase Total Usage – Third Shift – Last Week	3	Mod10	RO	Y	-	WH	(1)	
15671	Energy, Real 3-Phase Total Usage – First Shift – This Month	3	Mod10	RO	Y	-	WH	(1)	
15674	Energy, Real 3-Phase Total Usage – Second Shift – This Month	3	Mod10	RO	Y	-	WH	(1)	
15677	Energy, Real 3-Phase Total Usage – Third Shift – This Month	3	Mod10	RO	Y	-	WH	(1)	
15680	Energy, Real 3-Phase Total Usage – First Shift – Last Month	3	Mod10	RO	Y	-	WH	(1)	
15683	Energy, Real 3-Phase Total Usage – Second Shift– Last Month	3	Mod10	RO	Y	-	WH	(1)	
15686	Energy, Real 3-Phase Total Usage – Third Shift – Last Month	3	Mod10	RO	Y	-	WH	(1)	
15689	Energy, Apparent 3-Phase Total Usage – First Shift – Today	3	Mod10	RO	Y	-	VAH	(1)	

15692	Energy, Apparent 3-Phase Total Usage – Second Shift – Today	3	Mod10	RO	Y	-	VAH	(1)	
15695	Energy, Apparent 3-Phase Total Usage – Third Shift – Today	3	Mod10	RO	Y	-	VAH	(1)	
15698	Energy, Apparent 3-Phase Total Usage – First Shift – Yesterday	3	Mod10	RO	Y	-	VAH	(1)	
15701	Energy, Apparent 3-Phase Total Usage – Second Shift – Yesterday	3	Mod10	RO	Y	-	VAH	(1)	
15704	Energy, Apparent 3-Phase Total Usage – Third Shift – Yesterday	3	Mod10	RO	Y	-	VAH	(1)	
15707	Energy, Apparent 3-Phase Total Usage – First Shift – This Week	3	Mod10	RO	Y	-	VAH	(1)	
15710	Energy, Apparent 3-Phase Total Usage – Second Shift – This Week	3	Mod10	RO	Y	-	VAH	(1)	
15713	Energy, Apparent 3-Phase Total Usage – Third Shift – This Week	3	Mod10	RO	Y	-	VAH	(1)	
15716	Energy, Apparent 3-Phase Total Usage – First Shift – Last Week	3	Mod10	RO	Y	-	VAH	(1)	
15719	Energy, Apparent 3-Phase Total Usage – Second Shift – Last Week	3	Mod10	RO	Y	-	VAH	(1)	
15722	Energy, Apparent 3-Phase Total Usage – Third Shift – Last Week	3	Mod10	RO	Y	-	VAH	(1)	
15725	Energy, Apparent 3-Phase Total Usage – First Shift – This Month	3	Mod10	RO	Y	-	VAH	(1)	
15728	Energy, Apparent 3-Phase Total Usage – Second Shift – This Month	3	Mod10	RO	Y	-	VAH	(1)	
15731	Energy, Apparent 3-Phase Total Usage – Third Shift – This Month	3	Mod10	RO	Y	-	VAH	(1)	
15734	Energy, Apparent 3-Phase Total Usage – First Shift – Last Month	3	Mod10	RO	Y	-	VAH	(1)	
15737	Energy, Apparent 3-Phase Total Usage – Second Shift– Last Month	3	Mod10	RO	Y	-	VAH	(1)	
15740	Energy, Apparent 3-Phase Total Usage – Third Shift – Last Month	3	Mod10	RO	Y	-	VAH	(1)	

(1) 0 – 999,999,999,999

Production Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
15745	Production Units – First Shift Today	2	Long	R/W	Y	-	See Reg 6436		
15747	Production Units – Second Shift Today	2	Long	R/W	Y	-	See Reg 6436		
15749	Production Units – Third Shift Today	2	Long	R/W	Y	-	See Reg 6436		
15751	Production Units – First Shift Yesterday	2	Long	R/W	Y	-	See Reg 6436		
15753	Production Units – Second Shift Yesterday	2	Long	R/W	Y	-	See Reg 6436		
15755	Production Units – Third Shift Yesterday	2	Long	R/W	Y	-	See Reg 6436		
15757	Production Units – Total Today	2	Long	R/W	Y	-	See Reg 6436		
15759	Production Units – Total Yesterday	2	Long	R/W	Y	-	See Reg 6436		
15761	Production Units – First Shift This Week	2	Long	R/W	Y	-	See Reg 6436		
15763	Production Units – Second Shift This Week	2	Long	R/W	Y	-	See Reg 6436		
15765	Production Units – Third Shift This Week	2	Long	R/W	Y	-	See Reg 6436		
15767	Production Units – First Shift Last Week	2	Long	R/W	Y	-	See Reg 6436		
15769	Production Units – Second Shift Last Week	2	Long	R/W	Y	-	See Reg 6436		
15771	Production Units – Third Shift Last Week	2	Long	R/W	Y	-	See Reg 6436		
15773	Production Units – Total This Week	2	Long	R/W	Y	-	See Reg 6436		
15775	Production Units – Total Last Week	2	Long	R/W	Y	-	See Reg 6436		
15777	Production Units – First Shift This Month	2	Long	R/W	Y	-	See Reg 6436		
15779	Production Units – Second Shift This Month	2	Long	R/W	Y	-	See Reg 6436		
15781	Production Units – Third Shift This Month	2	Long	R/W	Y	-	See Reg 6436		

15783	Production Units – First Shift Last Month	2	Long	R/W	Y	-	See Reg 6436		
15785	Production Units – Second Shift Last Month	2	Long	R/W	Y	-	See Reg 6436		
15787	Production Units – Third Shift Last Month	2	Long	R/W	Y	-	See Reg 6436		
15789	Production Units – Total This Month	2	Long	R/W	Y	-	See Reg 6436		
15791	Production Units – Total Last Month	2	Long	R/W	Y	-	See Reg 6436		

Utility Registers

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
15800	Utility Registers	200	Integer	R/W	Y	-	-	0x0000 – 0xFFFF	Mailbox registers for customer use.

Email System Configuration & Status

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
16000	Email System Enable/Disable	1	Integer	R/CW	Y	-	-	0 – 1	0 = Disable (default) 1 = Enable
16001	Email System Address Enable/Disable	1	Bitmap	R/CW	Y	-	-	0x0000 – 0xFFFF	Default = 0
16002	Email System Alarm Priority Selection	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0007	Alarm priorities which will trigger an Email Bit 00 = Priority 1 (High) Bit 01 = Priority 2 (Medium) (default) Bit 02 = Priority 3 (Low)
16003	Email System Event Type Selection	1	Bitmap	R/CW	Y	-	-	0x0000 – 0x0010	Event types to be reported in Email Bit 00 = Pickup (default) Bit 01 = Dropout Bit 02 = Diagnostic (default)
16004	Email System Number of Events to Buffer	1	Integer	R/CW	Y	-	-	1 – 30	Number of events to buffer before sending email Default = 30
16005	Email System Time to Buffer Events	1	Integer	R/CW	Y	-	Seconds	1 – 60	Time to buffer events before sending email Default = 45
16006	Email System Timeout	1	Integer	R/CW	Y	-	Seconds	30 – 600	Default = 300
16007	Email System Maximum Number of Retries	1	Integer	R/CW	Y	-	-	0 – 10000	Default = 864
16008	Reserved	1	Integer	R/CW	Y	-	-	-	
16009	Email System Configuration Change Flag	1	Integer	R/CW	Y	-	-	0 – 1	Reserved for use by ECC
16010	Email System Email Outstanding Flag	1	Integer	RO	Y	-	-	0 – 1	0 = No Emails Outstanding (sent to ECC) 1 = Email sent to ECC, Waiting for completion
16011	Email System Number of Emails Pending	1	Integer	RO	Y	-	-	0 – 5	
16012	Email System Number of Emails Sent to ECC	1	Integer	RO	Y	-	-	0 – 32767	
16013	Email System Number Emails Complete by ECC	1	Integer	RO	Y	-	-	0 – 32767	
16014	Email System Number of Events Buffered	1	Integer	RO	Y	-	-	0 – 100	
16015	Email System Time Events Have Been Buffered	1	Integer	RO	Y	-	Seconds	0 – 60	

16016	Email System Number of ECC Timeouts	1	Integer	RO	Y	-	-	0 – 32767	
16017	Email System Number of Emails Failed	1	Integer	RO	Y	-	-	0 – 32767	
16018	Email System Diagnostic	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 = Summary Bit Bit 01 = ECC Not Present Bit 02 = ECC Firmware Version Does Not Support Email
16019	Reserved	1	Integer	RO	Y	-	-	-	
16020	Email System SMTP User Name	25	Char	R/CW	Y	-	-	ASCII Codes	
16045	Email System SMTP Password	10	Char	R/CW	Y	-	-	ASCII Codes	
16055	Email System SMTP IP Address	2	Integer	R/CW	Y	-	-		
16057	Email System SMTP Port	1	Integer	R/CW	Y	-	-		
16058	Email System SMTP Enable/Disable Authentication	1	Integer	R/CW	Y	-	-		0 = Disable (default) 1 = Enable
16059	Reserved	1	Integer	R/CW	Y	-	-	-	
16060	Email System Alarm/Address Assignment	200	Bitmap	R/CW	Y	-	-	0x0000 – 0xEFFF	
16260	Reserved	125	Integer	RO	Y	-	-	-	
16385	Email System "From" Email Address	25	Char	R/CW	Y	-	-	ASCII Codes	
16410	Email System "To" Email Address 1	25	Char	R/CW	Y	-	-	ASCII Codes	
16435	Email System "To" Email Address 2	25	Char	R/CW	Y	-	-	ASCII Codes	
16460	Email System "To" Email Address 3	25	Char	R/CW	Y	-	-	ASCII Codes	
16485	Email System "To" Email Address 4	25	Char	R/CW	Y	-	-	ASCII Codes	
16510	Email System "To" Email Address 5	25	Char	R/CW	Y	-	-	ASCII Codes	
16535	Email System "To" Email Address 6	25	Char	R/CW	Y	-	-	ASCII Codes	
16560	Email System "To" Email Address 7	25	Char	R/CW	Y	-	-	ASCII Codes	

16585	Email System "To" Email Address 8	25	Char	R/CW	Y	-	-	ASCII Codes	
16610	Email System "To" Email Address 9	25	Char	R/CW	Y	-	-	ASCII Codes	
16635	Email System "To" Email Address 10	25	Char	R/CW	Y	-	-	ASCII Codes	
16660	Email System "To" Email Address 11	25	Char	R/CW	Y	-	-	ASCII Codes	
16685	Email System "To" Email Address 12	25	Char	R/CW	Y	-	-	ASCII Codes	
16710	Email System "To" Email Address 13	25	Char	R/CW	Y	-	-	ASCII Codes	
16735	Email System "To" Email Address 14	25	Char	R/CW	Y	-	-	ASCII Codes	
16760	Email System "To" Email Address 15	25	Char	R/CW	Y	-	-	ASCII Codes	
16785	Email System Schedule for Email Address 1	11	Bitmap	R/CW	Y	-	-		
16796	Email System Schedule for Email Address 2	11	Bitmap	R/CW	Y	-	-		
16807	Email System Schedule for Email Address 3	11	Bitmap	R/CW	Y	-	-		
16818	Email System Schedule for Email Address 4	11	Bitmap	R/CW	Y	-	-		
16829	Email System Schedule for Email Address 5	11	Bitmap	R/CW	Y	-	-		
16840	Email System Schedule for Email Address 6	11	Bitmap	R/CW	Y	-	-		
16851	Email System Schedule for Email Address 7	11	Bitmap	R/CW	Y	-	-		
16862	Email System Schedule for Email Address 8	11	Bitmap	R/CW	Y	-	-		
16873	Email System Schedule for Email Address 9	11	Bitmap	R/CW	Y	-	-		
16884	Email System Schedule for Email Address 10	11	Bitmap	R/CW	Y	-	-		
16895	Email System Schedule for Email Address 11	11	Bitmap	R/CW	Y	-	-		
16906	Email System Schedule for Email Address 12	11	Bitmap	R/CW	Y	-	-		
16917	Email System Schedule for Email Address 13	11	Bitmap	R/CW	Y	-	-		

16928	Email System Schedule for Email Address 14	11	Bitmap	R/CW	Y	-	-		
16939	Email System Schedule for Email Address 15	11	Bitmap	R/CW	Y	-	-		
16950	Reserved	20	Integer	RO	Y	-	-		

Alarm Summary Configuration

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
18200	Alarm Summary Group Assignments	185	Bitmap	R/CW	Y	-	-	0x0000 – 0x7FFF	
18385	Alarm Summary Group 11 Configuration	15		R/CW	Y	-	-		
18400	Alarm Summary Group 12 Configuration	15		R/CW	Y	-	-		
18415	Alarm Summary Group 13 Configuration	15		R/CW	Y	-	-		
18430	Alarm Summary Group 14 Configuration	15		R/CW	Y	-	-		
18445	Alarm Summary Group 15 Configuration	15		R/CW	Y	-	-		

Alarm Summary Configuration Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Alarm Summary Group Label	10	Char	R/CW	Y	-	-	ASCII Codes	20 characters

Power Quality Summary Parameters

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
19000	PQ Summary Parameter Alarm Setpoint – Daily Under Voltage – Level 1	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 9500
19001	PQ Summary Parameter Alarm Setpoint – Daily Under Voltage – Level 2	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 9000
19002	PQ Summary Parameter Alarm Setpoint – Daily Over Voltage – Level 1	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 10500
19003	PQ Summary Parameter Alarm Setpoint – Daily Over Voltage – Level 2	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 11000
19004	PQ Summary Parameter Alarm Setpoint – Daily Voltage Imbalance – Level 1	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 200
19005	PQ Summary Parameter Alarm Setpoint – Daily Voltage Imbalance – Level 2	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 500
19006	PQ Summary Parameter Alarm Setpoint – Daily Voltage THD – Level 1	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 400
19007	PQ Summary Parameter Alarm Setpoint – Daily Voltage THD – Level 2	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 500
19008	PQ Summary Parameter Alarm Setpoint – Daily Worst Voltage Harmonic – Level 1	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 250
19009	PQ Summary Parameter Alarm Setpoint – Daily Worst Voltage Harmonic – Level 2	1	Integer	R/CW	Y	-	0.01%	0 – 32767	Default = 300
19010	PQ Summary Parameter Alarm Setpoint – Daily Over Frequency – Level 1	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 10050
19011	PQ Summary Parameter Alarm Setpoint – Daily Over Frequency – Level 2	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 10083

19012	PQ Summary Parameter Alarm Setpoint – Daily Under Frequency – Level 1	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 9950
19013	PQ Summary Parameter Alarm Setpoint – Daily Under Frequency – Level 2	1	Integer	R/CW	Y	-	0.01% Nominal	0 – 32767	Default = 9917
19014	PQ Summary Parameter Alarm Setpoint – Daily Over Flicker – Level 1	1	Integer	R/CW	Y	-	0.01	0 – 32767	Default = 50
19015	PQ Summary Parameter Alarm Setpoint – Daily Over Flicker – Level 2	1	Integer	R/CW	Y	-	0.01	0 – 32767	Default = 100
19016	PQ Summary Parameter Alarm Setpoint – Daily Spare – Level 1	1	Integer	R/CW	Y	-	-	-	
19017	PQ Summary Parameter Alarm Setpoint – Daily Spare – Level 2	1	Integer	R/CW	Y	-	-	-	
19018	PQ Summary Parameter Alarm Setpoint – Daily Spare – Level 1	1	Integer	R/CW	Y	-	-	-	
19019	PQ Summary Parameter Alarm Setpoint – Daily Spare – Level 2	1	Integer	R/CW	Y	-	-	-	
19020	PQ Summary Parameter Alarm Weight – Daily Under Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 240
19021	PQ Summary Parameter Alarm Weight – Daily Under Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 120
19022	PQ Summary Parameter Alarm Weight – Daily Over Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 240
19023	PQ Summary Parameter Alarm Weight – Daily Over Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 120
19024	PQ Summary Parameter Alarm Weight – Daily Voltage Imbalance – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600
19025	PQ Summary Parameter Alarm Weight – Daily Voltage Imbalance – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600

19026	PQ Summary Parameter Alarm Weight – Daily Voltage THD – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600
19027	PQ Summary Parameter Alarm Weight – Daily Voltage THD – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 10
19028	PQ Summary Parameter Alarm Weight – Daily Worst Voltage Harmonic – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600
19029	PQ Summary Parameter Alarm Weight – Daily Worst Voltage Harmonic – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 10
19030	PQ Summary Parameter Alarm Weight – Daily Over Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 120
19031	PQ Summary Parameter Alarm Weight – Daily Over Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 300
19032	PQ Summary Parameter Alarm Weight – Daily Under Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 120
19033	PQ Summary Parameter Alarm Weight – Daily Under Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 300
19034	PQ Summary Parameter Alarm Weight – Daily Over Flicker – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 800
19035	PQ Summary Parameter Alarm Weight – Daily Over Flicker – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600
19036	PQ Summary Parameter Alarm Weight – Daily Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19037	PQ Summary Parameter Alarm Weight – Daily Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19038	PQ Summary Parameter Alarm Weight – Daily Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19039	PQ Summary Parameter Alarm Weight – Daily Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	

19040	PQ Summary Parameter Category Weight – Daily Unused	1	Integer	R/CW	Y	-	-	0 – 10	Default = 0
19041	PQ Summary Parameter Category Weight – Daily Under Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19042	PQ Summary Parameter Category Weight – Daily Over Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 9
19043	PQ Summary Parameter Category Weight – Daily Voltage Imbalance	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19044	PQ Summary Parameter Category Weight – Daily Voltage Waveform Distortion	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19045	PQ Summary Parameter Category Weight – Daily Frequency Variations	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19046	PQ Summary Parameter Category Weight – Daily Voltage Interruptions	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19047	PQ Summary Parameter Category Weight – Daily Voltage Sags	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19048	PQ Summary Parameter Category Weight – Daily Voltage Swells	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19049	PQ Summary Parameter Category Weight – Daily Voltage Flicker	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19050	PQ Summary Parameter Category Weight – Daily Transient Overvoltages	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19056	PQ Summary Parameter Interruption Weight – Daily Short Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Number of Occurrences that would result in PQI of 0. Default = 1
19057	PQ Summary Parameter Interruption Weight – Daily Long Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1
19058	PQ Summary Parameter Voltage Sag Weight – Daily D1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Number of Occurrences that would result in PQI of 0. Default = 100 10 <= Depth of Sag < 20 % Nominal 0.01 <= t < 0.02 Seconds

19059	PQ Summary Parameter Voltage Sag Weight – Daily D1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.02 <= t < 0.05 Seconds
19060	PQ Summary Parameter Voltage Sag Weight – Daily D1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.05 <= t < 0.1 Seconds
19061	PQ Summary Parameter Voltage Sag Weight – Daily D1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.1 <= t < 0.2 Seconds
19062	PQ Summary Parameter Voltage Sag Weight – Daily D1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.2 <= t < 0.5 Seconds
19063	PQ Summary Parameter Voltage Sag Weight – Daily D1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.5 <= t < 1 Seconds
19064	PQ Summary Parameter Voltage Sag Weight – Daily D1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 1<= t < 3 Seconds
19065	PQ Summary Parameter Voltage Sag Weight – Daily D1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 3 <= t < 10 Seconds
19066	PQ Summary Parameter Voltage Sag Weight – Daily D1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 10 <= Depth of Sag < 20 % Nominal 10 <= t < 20 Seconds
19067	PQ Summary Parameter Voltage Sag Weight – Daily D1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 10 <= Depth of Sag < 20 % Nominal 20 <= t < 60 Seconds
19068	PQ Summary Parameter Voltage Sag Weight – Daily D1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 10 <= Depth of Sag < 20 % Nominal 60 <= t < 180 Seconds
19069	PQ Summary Parameter Voltage Sag Weight – Daily D2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.01 <= t < 0.02 Seconds
19070	PQ Summary Parameter Voltage Sag Weight – Daily D2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.02 <= t < 0.05 Seconds
19071	PQ Summary Parameter Voltage Sag Weight – Daily D2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.05 <= t < 0.1 Seconds
19072	PQ Summary Parameter Voltage Sag Weight – Daily D2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.1 <= t < 0.2 Seconds

19073	PQ Summary Parameter Voltage Sag Weight – Daily D2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.2 <= t < 0.5 Seconds
19074	PQ Summary Parameter Voltage Sag Weight – Daily D2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 0.5 <= t < 1 Seconds
19075	PQ Summary Parameter Voltage Sag Weight – Daily D2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 1 <= t < 3 Seconds
19076	PQ Summary Parameter Voltage Sag Weight – Daily D2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 3 <= t < 10 Seconds
19077	PQ Summary Parameter Voltage Sag Weight – Daily D2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 10 <= t < 20 Seconds
19078	PQ Summary Parameter Voltage Sag Weight – Daily D2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 20 <= t < 60 Seconds
19079	PQ Summary Parameter Voltage Sag Weight – Daily D2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 20 <= Depth of Sag < 30 % Nominal 60 <= t < 180 Seconds
19080	PQ Summary Parameter Voltage Sag Weight – Daily D3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 30 <= Depth of Sag < 40 % Nominal 0.01 <= t < 0.02 Seconds
19081	PQ Summary Parameter Voltage Sag Weight – Daily D3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 0.02 <= t < 0.05 Seconds
19082	PQ Summary Parameter Voltage Sag Weight – Daily D3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 0.05 <= t < 0.1 Seconds
19083	PQ Summary Parameter Voltage Sag Weight – Daily D3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 0.1 <= t < 0.2 Seconds
19084	PQ Summary Parameter Voltage Sag Weight – Daily D3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 0.2 <= t < 0.5 Seconds
19085	PQ Summary Parameter Voltage Sag Weight – Daily D3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 0.5 <= t < 1 Seconds
19086	PQ Summary Parameter Voltage Sag Weight – Daily D3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 1 <= t < 3 Seconds

19087	PQ Summary Parameter Voltage Sag Weight – Daily D3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 3 <= t < 10 Seconds
19088	PQ Summary Parameter Voltage Sag Weight – Daily D3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 10 <= t < 20 Seconds
19089	PQ Summary Parameter Voltage Sag Weight – Daily D3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 20 <= t < 60 Seconds
19090	PQ Summary Parameter Voltage Sag Weight – Daily D3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 30 <= Depth of Sag < 40 % Nominal 60 <= t < 180 Seconds
19091	PQ Summary Parameter Voltage Sag Weight – Daily D4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 40 <= Depth of Sag < 50 % Nominal 0.01 <= t < 0.02 Seconds
19092	PQ Summary Parameter Voltage Sag Weight – Daily D4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 0.02 <= t < 0.05 Seconds
19093	PQ Summary Parameter Voltage Sag Weight – Daily D4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 0.05 <= t < 0.1 Seconds
19094	PQ Summary Parameter Voltage Sag Weight – Daily D4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 0.1 <= t < 0.2 Seconds
19095	PQ Summary Parameter Voltage Sag Weight – Daily D4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 0.2 <= t < 0.5 Seconds
19096	PQ Summary Parameter Voltage Sag Weight – Daily D4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 0.5 <= t < 1 Seconds
19097	PQ Summary Parameter Voltage Sag Weight – Daily D4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 1 <= t < 3 Seconds
19098	PQ Summary Parameter Voltage Sag Weight – Daily D4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 3 <= t < 10 Seconds
19099	PQ Summary Parameter Voltage Sag Weight – Daily D4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 10 <= t < 20 Seconds
19100	PQ Summary Parameter Voltage Sag Weight – Daily D4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 20 <= t < 60 Seconds

19101	PQ Summary Parameter Voltage Sag Weight – Daily D4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 40 <= Depth of Sag < 50 % Nominal 60 <= t < 180 Seconds
19102	PQ Summary Parameter Voltage Sag Weight – Daily D5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 50 <= Depth of Sag < 60 % Nominal 0.01 <= t < 0.02 Seconds
19103	PQ Summary Parameter Voltage Sag Weight – Daily D5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 0.02 <= t < 0.05 Seconds
19104	PQ Summary Parameter Voltage Sag Weight – Daily D5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 0.05 <= t < 0.1 Seconds
19105	PQ Summary Parameter Voltage Sag Weight – Daily D5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 0.1 <= t < 0.2 Seconds
19106	PQ Summary Parameter Voltage Sag Weight – Daily D5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 0.2 <= t < 0.5 Seconds
19107	PQ Summary Parameter Voltage Sag Weight – Daily D5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 0.5 <= t < 1 Seconds
19108	PQ Summary Parameter Voltage Sag Weight – Daily D5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 1 <= t < 3 Seconds
19109	PQ Summary Parameter Voltage Sag Weight – Daily D5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 3 <= t < 10 Seconds
19110	PQ Summary Parameter Voltage Sag Weight – Daily D5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 10 <= t < 20 Seconds
19111	PQ Summary Parameter Voltage Sag Weight – Daily D5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 20 <= t < 60 Seconds
19112	PQ Summary Parameter Voltage Sag Weight – Daily D5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 50 <= Depth of Sag < 60 % Nominal 60 <= t < 180 Seconds
19113	PQ Summary Parameter Voltage Sag Weight – Daily D6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 60 <= Depth of Sag < 80 % Nominal 0.01 <= t < 0.02 Seconds
19114	PQ Summary Parameter Voltage Sag Weight – Daily D6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 0.02 <= t < 0.05 Seconds

19115	PQ Summary Parameter Voltage Sag Weight – Daily D6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 0.05 <= t < 0.1 Seconds
19116	PQ Summary Parameter Voltage Sag Weight – Daily D6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 0.1 <= t < 0.2 Seconds
19117	PQ Summary Parameter Voltage Sag Weight – Daily D6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 0.2 <= t < 0.5 Seconds
19118	PQ Summary Parameter Voltage Sag Weight – Daily D6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 0.5 <= t < 1 Seconds
19119	PQ Summary Parameter Voltage Sag Weight – Daily D6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 1 <= t < 3 Seconds
19120	PQ Summary Parameter Voltage Sag Weight – Daily D6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 3 <= t < 10 Seconds
19121	PQ Summary Parameter Voltage Sag Weight – Daily D6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 10 <= t < 20 Seconds
19122	PQ Summary Parameter Voltage Sag Weight – Daily D6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 20 <= t < 60 Seconds
19123	PQ Summary Parameter Voltage Sag Weight – Daily D6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 60 <= Depth of Sag < 80 % Nominal 60 <= t < 180 Seconds
19124	PQ Summary Parameter Voltage Sag Weight – Daily D7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 80 <= Depth of Sag < 99 % Nominal 0.01 <= t < 0.02 Seconds
19125	PQ Summary Parameter Voltage Sag Weight – Daily D7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 0.02 <= t < 0.05 Seconds
19126	PQ Summary Parameter Voltage Sag Weight – Daily D7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 0.05 <= t < 0.1 Seconds
19127	PQ Summary Parameter Voltage Sag Weight – Daily D7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 0.1 <= t < 0.2 Seconds
19128	PQ Summary Parameter Voltage Sag Weight – Daily D7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 0.2 <= t < 0.5 Seconds

19129	PQ Summary Parameter Voltage Sag Weight – Daily D7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 0.5 <= t < 1 Seconds
19130	PQ Summary Parameter Voltage Sag Weight – Daily D7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 1 <= t < 3 Seconds
19131	PQ Summary Parameter Voltage Sag Weight – Daily D7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 3 <= t < 10 Seconds
19132	PQ Summary Parameter Voltage Sag Weight – Daily D7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 10 <= t < 20 Seconds
19133	PQ Summary Parameter Voltage Sag Weight – Daily D7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 20 <= t < 60 Seconds
19134	PQ Summary Parameter Voltage Sag Weight – Daily D7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 80 <= Depth of Sag < 99 % Nominal 60 <= t < 180 Seconds
19135	PQ Summary Parameter Voltage Swell Weight – Daily M1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.01 <= t < 0.02 Seconds
19136	PQ Summary Parameter Voltage Swell Weight – Daily M1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.02 <= t < 0.05 Seconds
19137	PQ Summary Parameter Voltage Swell Weight – Daily M1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.05 <= t < 0.1 Seconds
19138	PQ Summary Parameter Voltage Swell Weight – Daily M1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.1 <= t < 0.2 Seconds
19139	PQ Summary Parameter Voltage Swell Weight – Daily M1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.2 <= t < 0.5 Seconds
19140	PQ Summary Parameter Voltage Swell Weight – Daily M1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 0.5 <= t < 1 Seconds
19141	PQ Summary Parameter Voltage Swell Weight – Daily M1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 1 <= t < 3 Seconds
19142	PQ Summary Parameter Voltage Swell Weight – Daily M1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 3 <= t < 10 Seconds

19143	PQ Summary Parameter Voltage Swell Weight – Daily M1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 10 <= t < 20 Seconds
19144	PQ Summary Parameter Voltage Swell Weight – Daily M1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 20 <= t < 60 Seconds
19145	PQ Summary Parameter Voltage Swell Weight – Daily M1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 110 < Magnitude of Swell <= 120 % Nominal 60 <= t < 180 Seconds
19146	PQ Summary Parameter Voltage Swell Weight – Daily M2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.01 <= t < 0.02 Seconds
19147	PQ Summary Parameter Voltage Swell Weight – Daily M2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.02 <= t < 0.05 Seconds
19148	PQ Summary Parameter Voltage Swell Weight – Daily M2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.05 <= t < 0.1 Seconds
19149	PQ Summary Parameter Voltage Swell Weight – Daily M2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.1 <= t < 0.2 Seconds
19150	PQ Summary Parameter Voltage Swell Weight – Daily M2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.2 <= t < 0.5 Seconds
19151	PQ Summary Parameter Voltage Swell Weight – Daily M2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 0.5 <= t < 1 Seconds
19152	PQ Summary Parameter Voltage Swell Weight – Daily M2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 1 <= t < 3 Seconds
19153	PQ Summary Parameter Voltage Swell Weight – Daily M2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 3 <= t < 10 Seconds
19154	PQ Summary Parameter Voltage Swell Weight – Daily M2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 10 <= t < 20 Seconds
19155	PQ Summary Parameter Voltage Swell Weight – Daily M2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 20 <= t < 60 Seconds
19156	PQ Summary Parameter Voltage Swell Weight – Daily M2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 120 < Magnitude of Swell <= 130 % Nominal 60 <= t < 180 Seconds

19157	PQ Summary Parameter Voltage Swell Weight – Daily M3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.01 <= t < 0.02 Seconds
19158	PQ Summary Parameter Voltage Swell Weight – Daily M3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.02 <= t < 0.05 Seconds
19159	PQ Summary Parameter Voltage Swell Weight – Daily M3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.05 <= t < 0.1 Seconds
19160	PQ Summary Parameter Voltage Swell Weight – Daily M3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.1 <= t < 0.2 Seconds
19161	PQ Summary Parameter Voltage Swell Weight – Daily M3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.2 <= t < 0.5 Seconds
19162	PQ Summary Parameter Voltage Swell Weight – Daily M3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 0.5 <= t < 1 Seconds
19163	PQ Summary Parameter Voltage Swell Weight – Daily M3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 1 <= t < 3 Seconds
19164	PQ Summary Parameter Voltage Swell Weight – Daily M3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 3 <= t < 10 Seconds
19165	PQ Summary Parameter Voltage Swell Weight – Daily M3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 10 <= t < 20 Seconds
19166	PQ Summary Parameter Voltage Swell Weight – Daily M3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 20 <= t < 60 Seconds
19167	PQ Summary Parameter Voltage Swell Weight – Daily M3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 130 < Magnitude of Swell <= 140 % Nominal 60 <= t < 180 Seconds
19168	PQ Summary Parameter Voltage Swell Weight – Daily M4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.01 <= t < 0.02 Seconds
19169	PQ Summary Parameter Voltage Swell Weight – Daily M4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.02 <= t < 0.05 Seconds
19170	PQ Summary Parameter Voltage Swell Weight – Daily M4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.05 <= t < 0.1 Seconds

19171	PQ Summary Parameter Voltage Swell Weight – Daily M4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.1 <= t < 0.2 Seconds
19172	PQ Summary Parameter Voltage Swell Weight – Daily M4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.2 <= t < 0.5 Seconds
19173	PQ Summary Parameter Voltage Swell Weight – Daily M4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 0.5 <= t < 1 Seconds
19174	PQ Summary Parameter Voltage Swell Weight – Daily M4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 1 <= t < 3 Seconds
19175	PQ Summary Parameter Voltage Swell Weight – Daily M4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 3 <= t < 10 Seconds
19176	PQ Summary Parameter Voltage Swell Weight – Daily M4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 10 <= t < 20 Seconds
19177	PQ Summary Parameter Voltage Swell Weight – Daily M4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 20 <= t < 60 Seconds
19178	PQ Summary Parameter Voltage Swell Weight – Daily M4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 140 < Magnitude of Swell <= 150 % Nominal 60 <= t < 180 Seconds
19179	PQ Summary Parameter Voltage Swell Weight – Daily M5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.01 <= t < 0.02 Seconds
19180	PQ Summary Parameter Voltage Swell Weight – Daily M5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.02 <= t < 0.05 Seconds
19181	PQ Summary Parameter Voltage Swell Weight – Daily M5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.05 <= t < 0.1 Seconds
19182	PQ Summary Parameter Voltage Swell Weight – Daily M5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.1 <= t < 0.2 Seconds
19183	PQ Summary Parameter Voltage Swell Weight – Daily M5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.2 <= t < 0.5 Seconds
19184	PQ Summary Parameter Voltage Swell Weight – Daily M5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 0.5 <= t < 1 Seconds

19185	PQ Summary Parameter Voltage Swell Weight – Daily M5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 1 <= t < 3 Seconds
19186	PQ Summary Parameter Voltage Swell Weight – Daily M5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 3 <= t < 10 Seconds
19187	PQ Summary Parameter Voltage Swell Weight – Daily M5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 10 <= t < 20 Seconds
19188	PQ Summary Parameter Voltage Swell Weight – Daily M5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 20 <= t < 60 Seconds
19189	PQ Summary Parameter Voltage Swell Weight – Daily M5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 150 < Magnitude of Swell <= 170 % Nominal 60 <= t < 180 Seconds
19190	PQ Summary Parameter Voltage Swell Weight – Daily M6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.01 <= t < 0.02 Seconds
19191	PQ Summary Parameter Voltage Swell Weight – Daily M6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.02 <= t < 0.05 Seconds
19192	PQ Summary Parameter Voltage Swell Weight – Daily M6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.05 <= t < 0.1 Seconds
19193	PQ Summary Parameter Voltage Swell Weight – Daily M6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.1 <= t < 0.2 Seconds
19194	PQ Summary Parameter Voltage Swell Weight – Daily M6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.2 <= t < 0.5 Seconds
19195	PQ Summary Parameter Voltage Swell Weight – Daily M6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 0.5 <= t < 1 Seconds
19196	PQ Summary Parameter Voltage Swell Weight – Daily M6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 1 <= t < 3 Seconds
19197	PQ Summary Parameter Voltage Swell Weight – Daily M6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 3 <= t < 10 Seconds
19198	PQ Summary Parameter Voltage Swell Weight – Daily M6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 10 <= t < 20 Seconds

19199	PQ Summary Parameter Voltage Swell Weight – Daily M6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 20 <= t < 60 Seconds
19200	PQ Summary Parameter Voltage Swell Weight – Daily M6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 170 < Magnitude of Swell <= 200 % Nominal 60 <= t < 180 Seconds
19201	PQ Summary Parameter Voltage Swell Weight – Daily M7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.01 <= t < 0.02 Seconds
19202	PQ Summary Parameter Voltage Swell Weight – Daily M7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.02 <= t < 0.05 Seconds
19203	PQ Summary Parameter Voltage Swell Weight – Daily M7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.05 <= t < 0.1 Seconds
19204	PQ Summary Parameter Voltage Swell Weight – Daily M7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.1 <= t < 0.2 Seconds
19205	PQ Summary Parameter Voltage Swell Weight – Daily M7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.2 <= t < 0.5 Seconds
19206	PQ Summary Parameter Voltage Swell Weight – Daily M7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 0.5 <= t < 1 Seconds
19207	PQ Summary Parameter Voltage Swell Weight – Daily M7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 1 <= t < 3 Seconds
19208	PQ Summary Parameter Voltage Swell Weight – Daily M7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 3 <= t < 10 Seconds
19209	PQ Summary Parameter Voltage Swell Weight – Daily M7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 10 <= t < 20 Seconds
19210	PQ Summary Parameter Voltage Swell Weight – Daily M7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 20 <= t < 60 Seconds
19211	PQ Summary Parameter Voltage Swell Weight – Daily M7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 1 Magnitude of Swell > 200 % Nominal 60 <= t < 180 Seconds
19212	PQ Summary Parameter Transient Weight – Daily M1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal t < 20 microseconds

19213	PQ Summary Parameter Transient Weight – Daily M1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 20 <= t < 50 microseconds
19214	PQ Summary Parameter Transient Weight – Daily M1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 50 <= t< 100 microseconds
19215	PQ Summary Parameter Transient Weight – Daily M1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 100 <= t < 200 microseconds
19216	PQ Summary Parameter Transient Weight – Daily M1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 200 <= t < 500 microseconds
19217	PQ Summary Parameter Transient Weight – Daily M1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 200 < Magnitude of Transient <= 300 % Nominal 500 <= t < 1000 microseconds
19218	PQ Summary Parameter Transient Weight – Daily M1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 200 < Magnitude of Transient <= 300 % Nominal 1000 <= t < 2000 microseconds
19219	PQ Summary Parameter Transient Weight – Daily M2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal t < 20 microseconds
19220	PQ Summary Parameter Transient Weight – Daily M2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 20 <= t < 50 microseconds
19221	PQ Summary Parameter Transient Weight – Daily M2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 50 <= t< 100 microseconds
19222	PQ Summary Parameter Transient Weight – Daily M2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 100 <= t < 200 microseconds
19223	PQ Summary Parameter Transient Weight – Daily M2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 300 < Magnitude of Transient <= 400 % Nominal 200 <= t < 500 microseconds
19224	PQ Summary Parameter Transient Weight – Daily M2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 300 < Magnitude of Transient <= 400 % Nominal 500 <= t < 1000 microseconds
19225	PQ Summary Parameter Transient Weight – Daily M2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 300 < Magnitude of Transient <= 400 % Nominal 1000 <= t < 2000 microseconds
19226	PQ Summary Parameter Transient Weight – Daily M3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal t < 20 microseconds

19227	PQ Summary Parameter Transient Weight – Daily M3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 20 <= t < 50 microseconds
19228	PQ Summary Parameter Transient Weight – Daily M3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 50 <= t< 100 microseconds
19229	PQ Summary Parameter Transient Weight – Daily M3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 400 < Magnitude of Transient <= 500 % Nominal 100 <= t < 200 microseconds
19230	PQ Summary Parameter Transient Weight – Daily M3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 400 < Magnitude of Transient <= 500 % Nominal 200 <= t < 500 microseconds
19231	PQ Summary Parameter Transient Weight – Daily M3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 400 < Magnitude of Transient <= 500 % Nominal 500 <= t < 1000 microseconds
19232	PQ Summary Parameter Transient Weight – Daily M3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 400 < Magnitude of Transient <= 500 % Nominal 1000 <= t < 2000 microseconds
19233	PQ Summary Parameter Transient Weight – Daily M4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal t < 20 microseconds
19234	PQ Summary Parameter Transient Weight – Daily M4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal 20 <= t < 50 microseconds
19235	PQ Summary Parameter Transient Weight – Daily M4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 500 < Magnitude of Transient <= 600 % Nominal 50 <= t< 100 microseconds
19236	PQ Summary Parameter Transient Weight – Daily M4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 500 < Magnitude of Transient <= 600 % Nominal 100 <= t < 200 microseconds
19237	PQ Summary Parameter Transient Weight – Daily M4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 500 < Magnitude of Transient <= 600 % Nominal 200 <= t < 500 microseconds
19238	PQ Summary Parameter Transient Weight – Daily M4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 500 < Magnitude of Transient <= 600 % Nominal 500 <= t < 1000 microseconds
19239	PQ Summary Parameter Transient Weight – Daily M4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 500 < Magnitude of Transient <= 600 % Nominal 1000 <= t < 2000 microseconds
19240	PQ Summary Parameter Transient Weight – Daily M5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 600 < Magnitude of Transient <= 700 % Nominal t < 20 microseconds

19241	PQ Summary Parameter Transient Weight – Daily M5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 600 < Magnitude of Transient <= 700 % Nominal 20 <= t < 50 microseconds
19242	PQ Summary Parameter Transient Weight – Daily M5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 600 < Magnitude of Transient <= 700 % Nominal 50 <= t< 100 microseconds
19243	PQ Summary Parameter Transient Weight – Daily M5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 600 < Magnitude of Transient <= 700 % Nominal 100 <= t < 200 microseconds
19244	PQ Summary Parameter Transient Weight – Daily M5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 600 < Magnitude of Transient <= 700 % Nominal 200 <= t < 500 microseconds
19245	PQ Summary Parameter Transient Weight – Daily M5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 600 < Magnitude of Transient <= 700 % Nominal 500 <= t < 1000 microseconds
19246	PQ Summary Parameter Transient Weight – Daily M5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 600 < Magnitude of Transient <= 700 % Nominal 1000 <= t < 2000 microseconds
19247	PQ Summary Parameter Transient Weight – Daily M6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 700 < Magnitude of Transient <= 800 % Nominal t < 20 microseconds
19248	PQ Summary Parameter Transient Weight – Daily M6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 700 < Magnitude of Transient <= 800 % Nominal 20 <= t < 50 microseconds
19249	PQ Summary Parameter Transient Weight – Daily M6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 700 < Magnitude of Transient <= 800 % Nominal 50 <= t< 100 microseconds
19250	PQ Summary Parameter Transient Weight – Daily M6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 700 < Magnitude of Transient <= 800 % Nominal 100 <= t < 200 microseconds
19251	PQ Summary Parameter Transient Weight – Daily M6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 700 < Magnitude of Transient <= 800 % Nominal 200 <= t < 500 microseconds
19252	PQ Summary Parameter Transient Weight – Daily M6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 700 < Magnitude of Transient <= 800 % Nominal 500 <= t < 1000 microseconds
19253	PQ Summary Parameter Transient Weight – Daily M6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 700 < Magnitude of Transient <= 800 % Nominal 1000 <= t < 2000 microseconds
19254	PQ Summary Parameter Transient Weight – Daily M7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 800 < Magnitude of Transient <= 900 % Nominal t < 20 microseconds

19255	PQ Summary Parameter Transient Weight – Daily M7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 800 < Magnitude of Transient <= 900 % Nominal 20 <= t < 50 microseconds
19256	PQ Summary Parameter Transient Weight – Daily M7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 800 < Magnitude of Transient <= 900 % Nominal 50 <= t< 100 microseconds
19257	PQ Summary Parameter Transient Weight – Daily M7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 800 < Magnitude of Transient <= 900 % Nominal 100 <= t < 200 microseconds
19258	PQ Summary Parameter Transient Weight – Daily M7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 800 < Magnitude of Transient <= 900 % Nominal 200 <= t < 500 microseconds
19259	PQ Summary Parameter Transient Weight – Daily M7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 800 < Magnitude of Transient <= 900 % Nominal 500 <= t < 1000 microseconds
19260	PQ Summary Parameter Transient Weight – Daily M7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 800 < Magnitude of Transient <= 900 % Nominal 1000 <= t < 2000 microseconds
19261	PQ Summary Parameter Transient Weight – Daily M8T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 900 < Magnitude of Transient <= 1000 % Nominal t < 20 microseconds
19262	PQ Summary Parameter Transient Weight – Daily M8T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 900 < Magnitude of Transient <= 1000 % Nominal 20 <= t < 50 microseconds
19263	PQ Summary Parameter Transient Weight – Daily M8T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 900 < Magnitude of Transient <= 1000 % Nominal 50 <= t< 100 microseconds
19264	PQ Summary Parameter Transient Weight – Daily M8T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 900 < Magnitude of Transient <= 1000 % Nominal 100 <= t < 200 microseconds
19265	PQ Summary Parameter Transient Weight – Daily M8T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 900 < Magnitude of Transient <= 1000 % Nominal 200 <= t < 500 microseconds
19266	PQ Summary Parameter Transient Weight – Daily M8T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 900 < Magnitude of Transient <= 1000 % Nominal 500 <= t < 1000 microseconds
19267	PQ Summary Parameter Transient Weight – Daily M8T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 900 < Magnitude of Transient <= 1000 % Nominal 1000 <= t < 2000 microseconds
19268	PQ Summary Parameter Transient Weight – Daily M9T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 Magnitude of Transient > 1000 % Nominal t < 20 microseconds

19269	PQ Summary Parameter Transient Weight – Daily M9T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 Magnitude of Transient > 1000 % Nominal 20 <= t < 50 microseconds
19270	PQ Summary Parameter Transient Weight – Daily M9T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3 Magnitude of Transient > 1000 % Nominal 50 <= t< 100 microseconds
19271	PQ Summary Parameter Transient Weight – Daily M9T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Transient > 1000 % Nominal 100 <= t < 200 microseconds
19272	PQ Summary Parameter Transient Weight – Daily M9T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Transient > 1000 % Nominal 200 <= t < 500 microseconds
19273	PQ Summary Parameter Transient Weight – Daily M9T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Transient > 1000 % Nominal 500 <= t < 1000 microseconds
19274	PQ Summary Parameter Transient Weight – Daily M9T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Transient > 1000 % Nominal 1000 <= t < 2000 microseconds
19294	PQ Summary Parameter Alarm Weight – Weekly Under Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 1680
19295	PQ Summary Parameter Alarm Weight – Weekly Under Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 840
19296	PQ Summary Parameter Alarm Weight – Weekly Over Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 1680
19297	PQ Summary Parameter Alarm Weight – Weekly Over Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 840
19298	PQ Summary Parameter Alarm Weight – Weekly Voltage Imbalance – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 1800
19299	PQ Summary Parameter Alarm Weight – Weekly Voltage Imbalance – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 180
19300	PQ Summary Parameter Alarm Weight – Weekly Voltage THD – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 4200
19301	PQ Summary Parameter Alarm Weight – Weekly Voltage THD – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 70

19302	PQ Summary Parameter Alarm Weight – Weekly Worst Voltage Harmonic – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 4200
19303	PQ Summary Parameter Alarm Weight – Weekly Worst Voltage Harmonic – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 70
19304	PQ Summary Parameter Alarm Weight – Weekly Over Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 840
19305	PQ Summary Parameter Alarm Weight – Weekly Over Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 210
19306	PQ Summary Parameter Alarm Weight – Weekly Under Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 840
19307	PQ Summary Parameter Alarm Weight – Weekly Under Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 210
19308	PQ Summary Parameter Alarm Weight – Weekly Over Flicker – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 5600
19309	PQ Summary Parameter Alarm Weight – Weekly Over Flicker – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 420
19310	PQ Summary Parameter Alarm Weight – Weekly Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19311	PQ Summary Parameter Alarm Weight – Weekly Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19312	PQ Summary Parameter Alarm Weight – Weekly Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19313	PQ Summary Parameter Alarm Weight – Weekly Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19314	PQ Summary Parameter Category Weight – Weekly Unused	1	Integer	R/CW	Y	-	-	0 – 10	Default = 0
19315	PQ Summary Parameter Category Weight – Weekly Under Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10

19316	PQ Summary Parameter Category Weight – Weekly Over Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 9
19317	PQ Summary Parameter Category Weight – Weekly Voltage Imbalance	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19318	PQ Summary Parameter Category Weight – Weekly Voltage Waveform Distortion	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19319	PQ Summary Parameter Category Weight – Weekly Frequency Variations	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19320	PQ Summary Parameter Category Weight – Weekly Voltage Interruptions	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19321	PQ Summary Parameter Category Weight – Weekly Voltage Sags	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19322	PQ Summary Parameter Category Weight – Weekly Voltage Swells	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19323	PQ Summary Parameter Category Weight – Weekly Voltage Flicker	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19324	PQ Summary Parameter Category Weight – Weekly Transient Overvoltages	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19325	PQ Summary Parameter Category Weight – Weekly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19326	PQ Summary Parameter Category Weight – Weekly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19327	PQ Summary Parameter Category Weight – Weekly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19328	PQ Summary Parameter Category Weight – Weekly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19329	PQ Summary Parameter Category Weight – Weekly Spare	1	Integer	R/CW	Y	-	-	0 – 10	

19330	PQ Summary Parameter Interruption Weight – Weekly Short Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2
19331	PQ Summary Parameter Interruption Weight – Weekly Long Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2
19332	PQ Summary Parameter Voltage Sag Weight – Weekly D1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Number of Occurrences that would result in PQI of 0. Default = 100 10 <= Depth of Sag < 20 % Nominal 0.01 <= t < 0.02 Seconds
19333	PQ Summary Parameter Voltage Sag Weight – Weekly D1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.02 <= t < 0.05 Seconds
19334	PQ Summary Parameter Voltage Sag Weight – Weekly D1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.05 <= t < 0.1 Seconds
19335	PQ Summary Parameter Voltage Sag Weight – Weekly D1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.1 <= t < 0.2 Seconds
19336	PQ Summary Parameter Voltage Sag Weight – Weekly D1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.2 <= t < 0.5 Seconds
19337	PQ Summary Parameter Voltage Sag Weight – Weekly D1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.5 <= t < 1 Seconds
19338	PQ Summary Parameter Voltage Sag Weight – Weekly D1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 1<= t < 3 Seconds
19339	PQ Summary Parameter Voltage Sag Weight – Weekly D1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 3 <= t < 10 Seconds
19340	PQ Summary Parameter Voltage Sag Weight – Weekly D1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 10 <= Depth of Sag < 20 % Nominal 10 <= t < 20 Seconds
19341	PQ Summary Parameter Voltage Sag Weight – Weekly D1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 10 <= Depth of Sag < 20 % Nominal 20 <= t < 60 Seconds
19342	PQ Summary Parameter Voltage Sag Weight – Weekly D1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 10 <= Depth of Sag < 20 % Nominal 60 <= t < 180 Seconds
19343	PQ Summary Parameter Voltage Sag Weight – Weekly D2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.01 <= t < 0.02 Seconds

19344	PQ Summary Parameter Voltage Sag Weight – Weekly D2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.02 <= t < 0.05 Seconds
19345	PQ Summary Parameter Voltage Sag Weight – Weekly D2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.05 <= t < 0.1 Seconds
19346	PQ Summary Parameter Voltage Sag Weight – Weekly D2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.1 <= t < 0.2 Seconds
19347	PQ Summary Parameter Voltage Sag Weight – Weekly D2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.2 <= t < 0.5 Seconds
19348	PQ Summary Parameter Voltage Sag Weight – Weekly D2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 0.5 <= t < 1 Seconds
19349	PQ Summary Parameter Voltage Sag Weight – Weekly D2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 1 <= t < 3 Seconds
19350	PQ Summary Parameter Voltage Sag Weight – Weekly D2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 3 <= t < 10 Seconds
19351	PQ Summary Parameter Voltage Sag Weight – Weekly D2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 10 <= t < 20 Seconds
19352	PQ Summary Parameter Voltage Sag Weight – Weekly D2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 20 <= t < 60 Seconds
19353	PQ Summary Parameter Voltage Sag Weight – Weekly D2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 20 <= Depth of Sag < 30 % Nominal 60 <= t < 180 Seconds
19354	PQ Summary Parameter Voltage Sag Weight – Weekly D3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 30 <= Depth of Sag < 40 % Nominal 0.01 <= t < 0.02 Seconds
19355	PQ Summary Parameter Voltage Sag Weight – Weekly D3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 0.02 <= t < 0.05 Seconds
19356	PQ Summary Parameter Voltage Sag Weight – Weekly D3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 0.05 <= t < 0.1 Seconds
19357	PQ Summary Parameter Voltage Sag Weight – Weekly D3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 0.1 <= t < 0.2 Seconds

19358	PQ Summary Parameter Voltage Sag Weight – Weekly D3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 0.2 <= t < 0.5 Seconds
19359	PQ Summary Parameter Voltage Sag Weight – Weekly D3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 0.5 <= t < 1 Seconds
19360	PQ Summary Parameter Voltage Sag Weight – Weekly D3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 1 <= t < 3 Seconds
19361	PQ Summary Parameter Voltage Sag Weight – Weekly D3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 3 <= t < 10 Seconds
19362	PQ Summary Parameter Voltage Sag Weight – Weekly D3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 10 <= t < 20 Seconds
19363	PQ Summary Parameter Voltage Sag Weight – Weekly D3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 20 <= t < 60 Seconds
19364	PQ Summary Parameter Voltage Sag Weight – Weekly D3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 30 <= Depth of Sag < 40 % Nominal 60 <= t < 180 Seconds
19365	PQ Summary Parameter Voltage Sag Weight – Weekly D4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 40 <= Depth of Sag < 50 % Nominal 0.01 <= t < 0.02 Seconds
19366	PQ Summary Parameter Voltage Sag Weight – Weekly D4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 0.02 <= t < 0.05 Seconds
19367	PQ Summary Parameter Voltage Sag Weight – Weekly D4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 0.05 <= t < 0.1 Seconds
19368	PQ Summary Parameter Voltage Sag Weight – Weekly D4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 0.1 <= t < 0.2 Seconds
19369	PQ Summary Parameter Voltage Sag Weight – Weekly D4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 0.2 <= t < 0.5 Seconds
19370	PQ Summary Parameter Voltage Sag Weight – Weekly D4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 0.5 <= t < 1 Seconds
19371	PQ Summary Parameter Voltage Sag Weight – Weekly D4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 1 <= t < 3 Seconds

19372	PQ Summary Parameter Voltage Sag Weight – Weekly D4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 3 <= t < 10 Seconds
19373	PQ Summary Parameter Voltage Sag Weight – Weekly D4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 10 <= t < 20 Seconds
19374	PQ Summary Parameter Voltage Sag Weight – Weekly D4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 20 <= t < 60 Seconds
19375	PQ Summary Parameter Voltage Sag Weight – Weekly D4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 40 <= Depth of Sag < 50 % Nominal 60 <= t < 180 Seconds
19376	PQ Summary Parameter Voltage Sag Weight – Weekly D5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 50 <= Depth of Sag < 60 % Nominal 0.01 <= t < 0.02 Seconds
19377	PQ Summary Parameter Voltage Sag Weight – Weekly D5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 0.02 <= t < 0.05 Seconds
19378	PQ Summary Parameter Voltage Sag Weight – Weekly D5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 0.05 <= t < 0.1 Seconds
19379	PQ Summary Parameter Voltage Sag Weight – Weekly D5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 0.1 <= t < 0.2 Seconds
19380	PQ Summary Parameter Voltage Sag Weight – Weekly D5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 0.2 <= t < 0.5 Seconds
19381	PQ Summary Parameter Voltage Sag Weight – Weekly D5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 0.5 <= t < 1 Seconds
19382	PQ Summary Parameter Voltage Sag Weight – Weekly D5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 1 <= t < 3 Seconds
19383	PQ Summary Parameter Voltage Sag Weight – Weekly D5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 3 <= t < 10 Seconds
19384	PQ Summary Parameter Voltage Sag Weight – Weekly D5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 10 <= t < 20 Seconds
19385	PQ Summary Parameter Voltage Sag Weight – Weekly D5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 20 <= t < 60 Seconds

19386	PQ Summary Parameter Voltage Sag Weight – Weekly D5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 50 <= Depth of Sag < 60 % Nominal 60 <= t < 180 Seconds
19387	PQ Summary Parameter Voltage Sag Weight – Weekly D6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 60 <= Depth of Sag < 80 % Nominal 0.01 <= t < 0.02 Seconds
19388	PQ Summary Parameter Voltage Sag Weight – Weekly D6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 0.02 <= t < 0.05 Seconds
19389	PQ Summary Parameter Voltage Sag Weight – Weekly D6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 0.05 <= t < 0.1 Seconds
19390	PQ Summary Parameter Voltage Sag Weight – Weekly D6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 0.1 <= t < 0.2 Seconds
19391	PQ Summary Parameter Voltage Sag Weight – Weekly D6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 0.2 <= t < 0.5 Seconds
19392	PQ Summary Parameter Voltage Sag Weight – Weekly D6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 0.5 <= t < 1 Seconds
19393	PQ Summary Parameter Voltage Sag Weight – Weekly D6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 1 <= t < 3 Seconds
19394	PQ Summary Parameter Voltage Sag Weight – Weekly D6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 3 <= t < 10 Seconds
19395	PQ Summary Parameter Voltage Sag Weight – Weekly D6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 10 <= t < 20 Seconds
19396	PQ Summary Parameter Voltage Sag Weight – Weekly D6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 20 <= t < 60 Seconds
19397	PQ Summary Parameter Voltage Sag Weight – Weekly D6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 60 <= Depth of Sag < 80 % Nominal 60 <= t < 180 Seconds
19398	PQ Summary Parameter Voltage Sag Weight – Weekly D7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 80 <= Depth of Sag < 99 % Nominal 0.01 <= t < 0.02 Seconds
19399	PQ Summary Parameter Voltage Sag Weight – Weekly D7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 0.02 <= t < 0.05 Seconds

19400	PQ Summary Parameter Voltage Sag Weight – Weekly D7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 0.05 <= t < 0.1 Seconds
19401	PQ Summary Parameter Voltage Sag Weight – Weekly D7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 0.1 <= t < 0.2 Seconds
19402	PQ Summary Parameter Voltage Sag Weight – Weekly D7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 0.2 <= t < 0.5 Seconds
19403	PQ Summary Parameter Voltage Sag Weight – Weekly D7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 0.5 <= t < 1 Seconds
19404	PQ Summary Parameter Voltage Sag Weight – Weekly D7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 1 <= t < 3 Seconds
19405	PQ Summary Parameter Voltage Sag Weight – Weekly D7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 3 <= t < 10 Seconds
19406	PQ Summary Parameter Voltage Sag Weight – Weekly D7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 10 <= t < 20 Seconds
19407	PQ Summary Parameter Voltage Sag Weight – Weekly D7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 20 <= t < 60 Seconds
19408	PQ Summary Parameter Voltage Sag Weight – Weekly D7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 80 <= Depth of Sag < 99 % Nominal 60 <= t < 180 Seconds
19409	PQ Summary Parameter Voltage Swell Weight – Weekly D1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.01 <= t < 0.02 Seconds
19410	PQ Summary Parameter Voltage Swell Weight – Weekly D1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.02 <= t < 0.05 Seconds
19411	PQ Summary Parameter Voltage Swell Weight – Weekly D1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.05 <= t < 0.1 Seconds
19412	PQ Summary Parameter Voltage Swell Weight – Weekly D1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.1 <= t < 0.2 Seconds
19413	PQ Summary Parameter Voltage Swell Weight – Weekly D1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.2 <= t < 0.5 Seconds

19414	PQ Summary Parameter Voltage Swell Weight – Weekly D1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 0.5 <= t < 1 Seconds
19415	PQ Summary Parameter Voltage Swell Weight – Weekly D1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 1 <= t < 3 Seconds
19416	PQ Summary Parameter Voltage Swell Weight – Weekly D1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 3 <= t < 10 Seconds
19417	PQ Summary Parameter Voltage Swell Weight – Weekly D1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 10 <= t < 20 Seconds
19418	PQ Summary Parameter Voltage Swell Weight – Weekly D1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 20 <= t < 60 Seconds
19419	PQ Summary Parameter Voltage Swell Weight – Weekly D1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 110 < Magnitude of Swell <= 120 % Nominal 60 <= t < 180 Seconds
19420	PQ Summary Parameter Voltage Swell Weight – Weekly D2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.01 <= t < 0.02 Seconds
19421	PQ Summary Parameter Voltage Swell Weight – Weekly D2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.02 <= t < 0.05 Seconds
19422	PQ Summary Parameter Voltage Swell Weight – Weekly D2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.05 <= t < 0.1 Seconds
19423	PQ Summary Parameter Voltage Swell Weight – Weekly D2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.1 <= t < 0.2 Seconds
19424	PQ Summary Parameter Voltage Swell Weight – Weekly D2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.2 <= t < 0.5 Seconds
19425	PQ Summary Parameter Voltage Swell Weight – Weekly D2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 0.5 <= t < 1 Seconds
19426	PQ Summary Parameter Voltage Swell Weight – Weekly D2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 1 <= t < 3 Seconds
19427	PQ Summary Parameter Voltage Swell Weight – Weekly D2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 3 <= t < 10 Seconds

19428	PQ Summary Parameter Voltage Swell Weight – Weekly D2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 10 <= t < 20 Seconds
19429	PQ Summary Parameter Voltage Swell Weight – Weekly D2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 20 <= t < 60 Seconds
19430	PQ Summary Parameter Voltage Swell Weight – Weekly D2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 120 < Magnitude of Swell <= 130 % Nominal 60 <= t < 180 Seconds
19431	PQ Summary Parameter Voltage Swell Weight – Weekly D3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.01 <= t < 0.02 Seconds
19432	PQ Summary Parameter Voltage Swell Weight – Weekly D3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.02 <= t < 0.05 Seconds
19433	PQ Summary Parameter Voltage Swell Weight – Weekly D3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.05 <= t < 0.1 Seconds
19434	PQ Summary Parameter Voltage Swell Weight – Weekly D3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.1 <= t < 0.2 Seconds
19435	PQ Summary Parameter Voltage Swell Weight – Weekly D3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.2 <= t < 0.5 Seconds
19436	PQ Summary Parameter Voltage Swell Weight – Weekly D3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 0.5 <= t < 1 Seconds
19437	PQ Summary Parameter Voltage Swell Weight – Weekly D3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 1 <= t < 3 Seconds
19438	PQ Summary Parameter Voltage Swell Weight – Weekly D3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 3 <= t < 10 Seconds
19439	PQ Summary Parameter Voltage Swell Weight – Weekly D3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 10 <= t < 20 Seconds
19440	PQ Summary Parameter Voltage Swell Weight – Weekly D3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 20 <= t < 60 Seconds
19441	PQ Summary Parameter Voltage Swell Weight – Weekly D3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 130 < Magnitude of Swell <= 140 % Nominal 60 <= t < 180 Seconds

19442	PQ Summary Parameter Voltage Swell Weight – Weekly D4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.01 <= t < 0.02 Seconds
19443	PQ Summary Parameter Voltage Swell Weight – Weekly D4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.02 <= t < 0.05 Seconds
19444	PQ Summary Parameter Voltage Swell Weight – Weekly D4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.05 <= t < 0.1 Seconds
19445	PQ Summary Parameter Voltage Swell Weight – Weekly D4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.1 <= t < 0.2 Seconds
19446	PQ Summary Parameter Voltage Swell Weight – Weekly D4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.2 <= t < 0.5 Seconds
19447	PQ Summary Parameter Voltage Swell Weight – Weekly D4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 0.5 <= t < 1 Seconds
19448	PQ Summary Parameter Voltage Swell Weight – Weekly D4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 1 <= t < 3 Seconds
19449	PQ Summary Parameter Voltage Swell Weight – Weekly D4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 3 <= t < 10 Seconds
19450	PQ Summary Parameter Voltage Swell Weight – Weekly D4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 10 <= t < 20 Seconds
19451	PQ Summary Parameter Voltage Swell Weight – Weekly D4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 20 <= t < 60 Seconds
19452	PQ Summary Parameter Voltage Swell Weight – Weekly D4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 140 < Magnitude of Swell <= 150 % Nominal 60 <= t < 180 Seconds
19453	PQ Summary Parameter Voltage Swell Weight – Weekly D5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.01 <= t < 0.02 Seconds
19454	PQ Summary Parameter Voltage Swell Weight – Weekly D5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.02 <= t < 0.05 Seconds
19455	PQ Summary Parameter Voltage Swell Weight – Weekly D5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.05 <= t < 0.1 Seconds

19456	PQ Summary Parameter Voltage Swell Weight – Weekly D5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.1 <= t < 0.2 Seconds
19457	PQ Summary Parameter Voltage Swell Weight – Weekly D5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.2 <= t < 0.5 Seconds
19458	PQ Summary Parameter Voltage Swell Weight – Weekly D5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 0.5 <= t < 1 Seconds
19459	PQ Summary Parameter Voltage Swell Weight – Weekly D5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 1 <= t < 3 Seconds
19460	PQ Summary Parameter Voltage Swell Weight – Weekly D5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 3 <= t < 10 Seconds
19461	PQ Summary Parameter Voltage Swell Weight – Weekly D5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 10 <= t < 20 Seconds
19462	PQ Summary Parameter Voltage Swell Weight – Weekly D5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 20 <= t < 60 Seconds
19463	PQ Summary Parameter Voltage Swell Weight – Weekly D5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 150 < Magnitude of Swell <= 170 % Nominal 60 <= t < 180 Seconds
19464	PQ Summary Parameter Voltage Swell Weight – Weekly D6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.01 <= t < 0.02 Seconds
19465	PQ Summary Parameter Voltage Swell Weight – Weekly D6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.02 <= t < 0.05 Seconds
19466	PQ Summary Parameter Voltage Swell Weight – Weekly D6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.05 <= t < 0.1 Seconds
19467	PQ Summary Parameter Voltage Swell Weight – Weekly D6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.1 <= t < 0.2 Seconds
19468	PQ Summary Parameter Voltage Swell Weight – Weekly D6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.2 <= t < 0.5 Seconds
19469	PQ Summary Parameter Voltage Swell Weight – Weekly D6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 0.5 <= t < 1 Seconds

19470	PQ Summary Parameter Voltage Swell Weight – Weekly D6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 1 <= t < 3 Seconds
19471	PQ Summary Parameter Voltage Swell Weight – Weekly D6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 3 <= t < 10 Seconds
19472	PQ Summary Parameter Voltage Swell Weight – Weekly D6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 10 <= t < 20 Seconds
19473	PQ Summary Parameter Voltage Swell Weight – Weekly D6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 20 <= t < 60 Seconds
19474	PQ Summary Parameter Voltage Swell Weight – Weekly D6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 170 < Magnitude of Swell <= 200 % Nominal 60 <= t < 180 Seconds
19475	PQ Summary Parameter Voltage Swell Weight – Weekly D7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.01 <= t < 0.02 Seconds
19476	PQ Summary Parameter Voltage Swell Weight – Weekly D7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.02 <= t < 0.05 Seconds
19477	PQ Summary Parameter Voltage Swell Weight – Weekly D7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.05 <= t < 0.1 Seconds
19478	PQ Summary Parameter Voltage Swell Weight – Weekly D7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.1 <= t < 0.2 Seconds
19479	PQ Summary Parameter Voltage Swell Weight – Weekly D7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.2 <= t < 0.5 Seconds
19480	PQ Summary Parameter Voltage Swell Weight – Weekly D7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 0.5 <= t < 1 Seconds
19481	PQ Summary Parameter Voltage Swell Weight – Weekly D7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 1 <= t < 3 Seconds
19482	PQ Summary Parameter Voltage Swell Weight – Weekly D7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 3 <= t < 10 Seconds
19483	PQ Summary Parameter Voltage Swell Weight – Weekly D7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 10 <= t < 20 Seconds

19484	PQ Summary Parameter Voltage Swell Weight – Weekly D7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 20 <= t < 60 Seconds
19485	PQ Summary Parameter Voltage Swell Weight – Weekly D7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 2 Magnitude of Swell > 200 % Nominal 60 <= t < 180 Seconds
19486	PQ Summary Parameter Transient Weight – Weekly M1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 200 < Magnitude of Transient <= 300 % Nominal t < 20 microseconds
19487	PQ Summary Parameter Transient Weight – Weekly M1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 200 < Magnitude of Transient <= 300 % Nominal 20 <= t < 50 microseconds
19488	PQ Summary Parameter Transient Weight – Weekly M1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 200 < Magnitude of Transient <= 300 % Nominal 50 <= t< 100 microseconds
19489	PQ Summary Parameter Transient Weight – Weekly M1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 200 < Magnitude of Transient <= 300 % Nominal 100 <= t < 200 microseconds
19490	PQ Summary Parameter Transient Weight – Weekly M1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 200 < Magnitude of Transient <= 300 % Nominal 200 <= t < 500 microseconds
19491	PQ Summary Parameter Transient Weight – Weekly M1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 500 <= t < 1000 microseconds
19492	PQ Summary Parameter Transient Weight – Weekly M1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 200 < Magnitude of Transient <= 300 % Nominal 1000 <= t < 2000 microseconds
19493	PQ Summary Parameter Transient Weight – Weekly M2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 300 < Magnitude of Transient <= 400 % Nominal t < 20 microseconds
19494	PQ Summary Parameter Transient Weight – Weekly M2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 300 < Magnitude of Transient <= 400 % Nominal 20 <= t < 50 microseconds
19495	PQ Summary Parameter Transient Weight – Weekly M2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 300 < Magnitude of Transient <= 400 % Nominal 50 <= t< 100 microseconds
19496	PQ Summary Parameter Transient Weight – Weekly M2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 300 < Magnitude of Transient <= 400 % Nominal 100 <= t < 200 microseconds
19497	PQ Summary Parameter Transient Weight – Weekly M2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 200 <= t < 500 microseconds

19498	PQ Summary Parameter Transient Weight – Weekly M2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 500 <= t < 1000 microseconds
19499	PQ Summary Parameter Transient Weight – Weekly M2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 1000 <= t < 2000 microseconds
19500	PQ Summary Parameter Transient Weight – Weekly M3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 400 < Magnitude of Transient <= 500 % Nominal t < 20 microseconds
19501	PQ Summary Parameter Transient Weight – Weekly M3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 400 < Magnitude of Transient <= 500 % Nominal 20 <= t < 50 microseconds
19502	PQ Summary Parameter Transient Weight – Weekly M3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 400 < Magnitude of Transient <= 500 % Nominal 50 <= t< 100 microseconds
19503	PQ Summary Parameter Transient Weight – Weekly M3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 100 <= t < 200 microseconds
19504	PQ Summary Parameter Transient Weight – Weekly M3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 200 <= t < 500 microseconds
19505	PQ Summary Parameter Transient Weight – Weekly M3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 500 <= t < 1000 microseconds
19506	PQ Summary Parameter Transient Weight – Weekly M3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 400 < Magnitude of Transient <= 500 % Nominal 1000 <= t < 2000 microseconds
19507	PQ Summary Parameter Transient Weight – Weekly M4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 500 < Magnitude of Transient <= 600 % Nominal t < 20 microseconds
19508	PQ Summary Parameter Transient Weight – Weekly M4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 500 < Magnitude of Transient <= 600 % Nominal 20 <= t < 50 microseconds
19509	PQ Summary Parameter Transient Weight – Weekly M4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 500 < Magnitude of Transient <= 600 % Nominal 50 <= t< 100 microseconds
19510	PQ Summary Parameter Transient Weight – Weekly M4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal 100 <= t < 200 microseconds
19511	PQ Summary Parameter Transient Weight – Weekly M4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal 200 <= t < 500 microseconds

19512	PQ Summary Parameter Transient Weight – Weekly M4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal 500 <= t < 1000 microseconds
19513	PQ Summary Parameter Transient Weight – Weekly M4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 500 < Magnitude of Transient <= 600 % Nominal 1000 <= t < 2000 microseconds
19514	PQ Summary Parameter Transient Weight – Weekly M5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 600 < Magnitude of Transient <= 700 % Nominal t < 20 microseconds
19515	PQ Summary Parameter Transient Weight – Weekly M5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 20 <= t < 50 microseconds
19516	PQ Summary Parameter Transient Weight – Weekly M5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 50 <= t< 100 microseconds
19517	PQ Summary Parameter Transient Weight – Weekly M5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 600 < Magnitude of Transient <= 700 % Nominal 100 <= t < 200 microseconds
19518	PQ Summary Parameter Transient Weight – Weekly M5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 600 < Magnitude of Transient <= 700 % Nominal 200 <= t < 500 microseconds
19519	PQ Summary Parameter Transient Weight – Weekly M5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 600 < Magnitude of Transient <= 700 % Nominal 500 <= t < 1000 microseconds
19520	PQ Summary Parameter Transient Weight – Weekly M5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 600 < Magnitude of Transient <= 700 % Nominal 1000 <= t < 2000 microseconds
19521	PQ Summary Parameter Transient Weight – Weekly M6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 700 < Magnitude of Transient <= 800 % Nominal t < 20 microseconds
19522	PQ Summary Parameter Transient Weight – Weekly M6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 20 <= t < 50 microseconds
19523	PQ Summary Parameter Transient Weight – Weekly M6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 50 <= t< 100 microseconds
19524	PQ Summary Parameter Transient Weight – Weekly M6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 700 < Magnitude of Transient <= 800 % Nominal 100 <= t < 200 microseconds
19525	PQ Summary Parameter Transient Weight – Weekly M6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 700 < Magnitude of Transient <= 800 % Nominal 200 <= t < 500 microseconds

19526	PQ Summary Parameter Transient Weight – Weekly M6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 700 < Magnitude of Transient <= 800 % Nominal 500 <= t < 1000 microseconds
19527	PQ Summary Parameter Transient Weight – Weekly M6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 700 < Magnitude of Transient <= 800 % Nominal 1000 <= t < 2000 microseconds
19528	PQ Summary Parameter Transient Weight – Weekly M7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal t < 20 microseconds
19529	PQ Summary Parameter Transient Weight – Weekly M7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 20 <= t < 50 microseconds
19530	PQ Summary Parameter Transient Weight – Weekly M7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 50 <= t< 100 microseconds
19531	PQ Summary Parameter Transient Weight – Weekly M7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 800 < Magnitude of Transient <= 900 % Nominal 100 <= t < 200 microseconds
19532	PQ Summary Parameter Transient Weight – Weekly M7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 800 < Magnitude of Transient <= 900 % Nominal 200 <= t < 500 microseconds
19533	PQ Summary Parameter Transient Weight – Weekly M7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 800 < Magnitude of Transient <= 900 % Nominal 500 <= t < 1000 microseconds
19534	PQ Summary Parameter Transient Weight – Weekly M7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 800 < Magnitude of Transient <= 900 % Nominal 1000 <= t < 2000 microseconds
19535	PQ Summary Parameter Transient Weight – Weekly M8T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal t < 20 microseconds
19536	PQ Summary Parameter Transient Weight – Weekly M8T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 20 <= t < 50 microseconds
19537	PQ Summary Parameter Transient Weight – Weekly M8T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 50 <= t< 100 microseconds
19538	PQ Summary Parameter Transient Weight – Weekly M8T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 900 < Magnitude of Transient <= 1000 % Nominal 100 <= t < 200 microseconds
19539	PQ Summary Parameter Transient Weight – Weekly M8T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 900 < Magnitude of Transient <= 1000 % Nominal 200 <= t < 500 microseconds

19540	PQ Summary Parameter Transient Weight – Weekly M8T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 900 < Magnitude of Transient <= 1000 % Nominal 500 <= t < 1000 microseconds
19541	PQ Summary Parameter Transient Weight – Weekly M8T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 900 < Magnitude of Transient <= 1000 % Nominal 1000 <= t < 2000 microseconds
19542	PQ Summary Parameter Transient Weight – Weekly M9T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal t < 20 microseconds
19543	PQ Summary Parameter Transient Weight – Weekly M9T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 20 <= t < 50 microseconds
19544	PQ Summary Parameter Transient Weight – Weekly M9T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 50 <= t< 100 microseconds
19545	PQ Summary Parameter Transient Weight – Weekly M9T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 Magnitude of Transient > 1000 % Nominal 100 <= t < 200 microseconds
19546	PQ Summary Parameter Transient Weight – Weekly M9T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 Magnitude of Transient > 1000 % Nominal 200 <= t < 500 microseconds
19547	PQ Summary Parameter Transient Weight – Weekly M9T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 Magnitude of Transient > 1000 % Nominal 500 <= t < 1000 microseconds
19548	PQ Summary Parameter Transient Weight – Weekly M9T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 Magnitude of Transient > 1000 % Nominal 1000 <= t < 2000 microseconds
19569	PQ Summary Parameter Alarm Weight – Monthly Under Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 7200
19570	PQ Summary Parameter Alarm Weight – Monthly Under Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 3600
19571	PQ Summary Parameter Alarm Weight – Monthly Over Voltage – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 7200
19572	PQ Summary Parameter Alarm Weight – Monthly Over Voltage – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 3600
19573	PQ Summary Parameter Alarm Weight – Monthly Voltage Imbalance – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 6000

19574	PQ Summary Parameter Alarm Weight – Monthly Voltage Imbalance – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 600
19575	PQ Summary Parameter Alarm Weight – Monthly Voltage THD – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 18000
19576	PQ Summary Parameter Alarm Weight – Monthly Voltage THD – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 300
19577	PQ Summary Parameter Alarm Weight – Monthly Worst Voltage Harmonic – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 18000
19578	PQ Summary Parameter Alarm Weight – Monthly Worst Voltage Harmonic – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 300
19579	PQ Summary Parameter Alarm Weight – Monthly Over Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 3600
19580	PQ Summary Parameter Alarm Weight – Monthly Over Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 900
19581	PQ Summary Parameter Alarm Weight – Monthly Under Frequency – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 3600
19582	PQ Summary Parameter Alarm Weight – Monthly Under Frequency – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 900
19583	PQ Summary Parameter Alarm Weight – Monthly Over Flicker – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 24000
19584	PQ Summary Parameter Alarm Weight – Monthly Over Flicker – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	Default = 1800
19585	PQ Summary Parameter Alarm Weight – Monthly Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19586	PQ Summary Parameter Alarm Weight – Monthly Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19587	PQ Summary Parameter Alarm Weight – Monthly Spare – Level 1	1	Integer	R/CW	Y	-	Seconds	0 – 32767	

19588	PQ Summary Parameter Alarm Weight – Monthly Spare – Level 2	1	Integer	R/CW	Y	-	Seconds	0 – 32767	
19589	PQ Summary Parameter Category Weight – Monthly Unused	1	Integer	R/CW	Y	-	-	0 – 10	Default = 0
19590	PQ Summary Parameter Category Weight – Monthly Under Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19591	PQ Summary Parameter Category Weight – Monthly Over Voltage	1	Integer	R/CW	Y	-	-	0 – 10	Default = 9
19592	PQ Summary Parameter Category Weight – Monthly Voltage Imbalance	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19593	PQ Summary Parameter Category Weight – Monthly Voltage Waveform Distortion	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19594	PQ Summary Parameter Category Weight – Monthly Frequency Variations	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19595	PQ Summary Parameter Category Weight – Monthly Voltage Interruptions	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19596	PQ Summary Parameter Category Weight – Monthly Voltage Sags	1	Integer	R/CW	Y	-	-	0 – 10	Default = 10
19597	PQ Summary Parameter Category Weight – Monthly Voltage Swells	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19598	PQ Summary Parameter Category Weight – Monthly Voltage Flicker	1	Integer	R/CW	Y	-	-	0 – 10	Default = 4
19599	PQ Summary Parameter Category Weight – Monthly Transient Overvoltages	1	Integer	R/CW	Y	-	-	0 – 10	Default = 8
19600	PQ Summary Parameter Category Weight – Monthly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19601	PQ Summary Parameter Category Weight – Monthly Spare	1	Integer	R/CW	Y	-	-	0 – 10	

19602	PQ Summary Parameter Category Weight – Monthly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19603	PQ Summary Parameter Category Weight – Monthly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19604	PQ Summary Parameter Category Weight – Monthly Spare	1	Integer	R/CW	Y	-	-	0 – 10	
19605	PQ Summary Parameter Interruption Weight – Monthly Short Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3
19606	PQ Summary Parameter Interruption Weight – Monthly Long Interruptions	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 3
19607	PQ Summary Parameter Voltage Sag Weight – Monthly D1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Number of Occurrences that would result in PQI of 0. Default = 100 10 <= Depth of Sag < 20 % Nominal 0.01 <= t < 0.02 Seconds
19608	PQ Summary Parameter Voltage Sag Weight – Monthly D1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.02 <= t < 0.05 Seconds
19609	PQ Summary Parameter Voltage Sag Weight – Monthly D1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.05 <= t < 0.1 Seconds
19610	PQ Summary Parameter Voltage Sag Weight – Monthly D1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.1 <= t < 0.2 Seconds
19611	PQ Summary Parameter Voltage Sag Weight – Monthly D1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.2 <= t < 0.5 Seconds
19612	PQ Summary Parameter Voltage Sag Weight – Monthly D1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 0.5 <= t < 1 Seconds
19613	PQ Summary Parameter Voltage Sag Weight – Monthly D1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 1<= t < 3 Seconds
19614	PQ Summary Parameter Voltage Sag Weight – Monthly D1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 10 <= Depth of Sag < 20 % Nominal 3 <= t < 10 Seconds
19615	PQ Summary Parameter Voltage Sag Weight – Monthly D1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 10 <= Depth of Sag < 20 % Nominal 10 <= t < 20 Seconds

19616	PQ Summary Parameter Voltage Sag Weight – Monthly D1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 10 <= Depth of Sag < 20 % Nominal 20 <= t < 60 Seconds
19617	PQ Summary Parameter Voltage Sag Weight – Monthly D1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 10 <= Depth of Sag < 20 % Nominal 60 <= t < 180 Seconds
19618	PQ Summary Parameter Voltage Sag Weight – Monthly D2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.01 <= t < 0.02 Seconds
19619	PQ Summary Parameter Voltage Sag Weight – Monthly D2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.02 <= t < 0.05 Seconds
19620	PQ Summary Parameter Voltage Sag Weight – Monthly D2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.05 <= t < 0.1 Seconds
19621	PQ Summary Parameter Voltage Sag Weight – Monthly D2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.1 <= t < 0.2 Seconds
19622	PQ Summary Parameter Voltage Sag Weight – Monthly D2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 20 <= Depth of Sag < 30 % Nominal 0.2 <= t < 0.5 Seconds
19623	PQ Summary Parameter Voltage Sag Weight – Monthly D2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 0.5 <= t < 1 Seconds
19624	PQ Summary Parameter Voltage Sag Weight – Monthly D2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 1 <= t < 3 Seconds
19625	PQ Summary Parameter Voltage Sag Weight – Monthly D2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 3 <= t < 10 Seconds
19626	PQ Summary Parameter Voltage Sag Weight – Monthly D2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 10 <= t < 20 Seconds
19627	PQ Summary Parameter Voltage Sag Weight – Monthly D2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 20 <= t < 60 Seconds
19628	PQ Summary Parameter Voltage Sag Weight – Monthly D2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 20 <= Depth of Sag < 30 % Nominal 60 <= t < 180 Seconds
19629	PQ Summary Parameter Voltage Sag Weight – Monthly D3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 30 <= Depth of Sag < 40 % Nominal 0.01 <= t < 0.02 Seconds

19630	PQ Summary Parameter Voltage Sag Weight – Monthly D3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 0.02 <= t < 0.05 Seconds
19631	PQ Summary Parameter Voltage Sag Weight – Monthly D3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 0.05 <= t < 0.1 Seconds
19632	PQ Summary Parameter Voltage Sag Weight – Monthly D3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 0.1 <= t < 0.2 Seconds
19633	PQ Summary Parameter Voltage Sag Weight – Monthly D3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 0.2 <= t < 0.5 Seconds
19634	PQ Summary Parameter Voltage Sag Weight – Monthly D3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 0.5 <= t < 1 Seconds
19635	PQ Summary Parameter Voltage Sag Weight – Monthly D3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 1 <= t < 3 Seconds
19636	PQ Summary Parameter Voltage Sag Weight – Monthly D3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 3 <= t < 10 Seconds
19637	PQ Summary Parameter Voltage Sag Weight – Monthly D3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 10 <= t < 20 Seconds
19638	PQ Summary Parameter Voltage Sag Weight – Monthly D3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 20 <= t < 60 Seconds
19639	PQ Summary Parameter Voltage Sag Weight – Monthly D3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 30 <= Depth of Sag < 40 % Nominal 60 <= t < 180 Seconds
19640	PQ Summary Parameter Voltage Sag Weight – Monthly D4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 40 <= Depth of Sag < 50 % Nominal 0.01 <= t < 0.02 Seconds
19641	PQ Summary Parameter Voltage Sag Weight – Monthly D4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 0.02 <= t < 0.05 Seconds
19642	PQ Summary Parameter Voltage Sag Weight – Monthly D4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 0.05 <= t < 0.1 Seconds
19643	PQ Summary Parameter Voltage Sag Weight – Monthly D4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 0.1 <= t < 0.2 Seconds

19644	PQ Summary Parameter Voltage Sag Weight – Monthly D4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 0.2 <= t < 0.5 Seconds
19645	PQ Summary Parameter Voltage Sag Weight – Monthly D4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 0.5 <= t < 1 Seconds
19646	PQ Summary Parameter Voltage Sag Weight – Monthly D4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 1 <= t < 3 Seconds
19647	PQ Summary Parameter Voltage Sag Weight – Monthly D4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 3 <= t < 10 Seconds
19648	PQ Summary Parameter Voltage Sag Weight – Monthly D4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 10 <= t < 20 Seconds
19649	PQ Summary Parameter Voltage Sag Weight – Monthly D4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 20 <= t < 60 Seconds
19650	PQ Summary Parameter Voltage Sag Weight – Monthly D4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 40 <= Depth of Sag < 50 % Nominal 60 <= t < 180 Seconds
19651	PQ Summary Parameter Voltage Sag Weight – Monthly D5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 50 <= Depth of Sag < 60 % Nominal 0.01 <= t < 0.02 Seconds
19652	PQ Summary Parameter Voltage Sag Weight – Monthly D5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 0.02 <= t < 0.05 Seconds
19653	PQ Summary Parameter Voltage Sag Weight – Monthly D5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 0.05 <= t < 0.1 Seconds
19654	PQ Summary Parameter Voltage Sag Weight – Monthly D5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 0.1 <= t < 0.2 Seconds
19655	PQ Summary Parameter Voltage Sag Weight – Monthly D5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 0.2 <= t < 0.5 Seconds
19656	PQ Summary Parameter Voltage Sag Weight – Monthly D5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 0.5 <= t < 1 Seconds
19657	PQ Summary Parameter Voltage Sag Weight – Monthly D5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 1 <= t < 3 Seconds

19658	PQ Summary Parameter Voltage Sag Weight – Monthly D5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 3 <= t < 10 Seconds
19659	PQ Summary Parameter Voltage Sag Weight – Monthly D5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 10 <= t < 20 Seconds
19660	PQ Summary Parameter Voltage Sag Weight – Monthly D5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 20 <= t < 60 Seconds
19661	PQ Summary Parameter Voltage Sag Weight – Monthly D5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 50 <= Depth of Sag < 60 % Nominal 60 <= t < 180 Seconds
19662	PQ Summary Parameter Voltage Sag Weight – Monthly D6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 60 <= Depth of Sag < 80 % Nominal 0.01 <= t < 0.02 Seconds
19663	PQ Summary Parameter Voltage Sag Weight – Monthly D6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 0.02 <= t < 0.05 Seconds
19664	PQ Summary Parameter Voltage Sag Weight – Monthly D6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 0.05 <= t < 0.1 Seconds
19665	PQ Summary Parameter Voltage Sag Weight – Monthly D6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 0.1 <= t < 0.2 Seconds
19666	PQ Summary Parameter Voltage Sag Weight – Monthly D6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 0.2 <= t < 0.5 Seconds
19667	PQ Summary Parameter Voltage Sag Weight – Monthly D6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 0.5 <= t < 1 Seconds
19668	PQ Summary Parameter Voltage Sag Weight – Monthly D6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 1 <= t < 3 Seconds
19669	PQ Summary Parameter Voltage Sag Weight – Monthly D6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 3 <= t < 10 Seconds
19670	PQ Summary Parameter Voltage Sag Weight – Monthly D6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 10 <= t < 20 Seconds
19671	PQ Summary Parameter Voltage Sag Weight – Monthly D6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 20 <= t < 60 Seconds

19672	PQ Summary Parameter Voltage Sag Weight – Monthly D6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 60 <= Depth of Sag < 80 % Nominal 60 <= t < 180 Seconds
19673	PQ Summary Parameter Voltage Sag Weight – Monthly D7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 80 <= Depth of Sag < 99 % Nominal 0.01 <= t < 0.02 Seconds
19674	PQ Summary Parameter Voltage Sag Weight – Monthly D7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 0.02 <= t < 0.05 Seconds
19675	PQ Summary Parameter Voltage Sag Weight – Monthly D7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 0.05 <= t < 0.1 Seconds
19676	PQ Summary Parameter Voltage Sag Weight – Monthly D7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 0.1 <= t < 0.2 Seconds
19677	PQ Summary Parameter Voltage Sag Weight – Monthly D7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 0.2 <= t < 0.5 Seconds
19678	PQ Summary Parameter Voltage Sag Weight – Monthly D7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 0.5 <= t < 1 Seconds
19679	PQ Summary Parameter Voltage Sag Weight – Monthly D7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 1 <= t < 3 Seconds
19680	PQ Summary Parameter Voltage Sag Weight – Monthly D7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 3 <= t < 10 Seconds
19681	PQ Summary Parameter Voltage Sag Weight – Monthly D7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 10 <= t < 20 Seconds
19682	PQ Summary Parameter Voltage Sag Weight – Monthly D7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 20 <= t < 60 Seconds
19683	PQ Summary Parameter Voltage Sag Weight – Monthly D7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 80 <= Depth of Sag < 99 % Nominal 60 <= t < 180 Seconds
19684	PQ Summary Parameter Voltage Swell Weight – Monthly D1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.01 <= t < 0.02 Seconds
19685	PQ Summary Parameter Voltage Swell Weight – Monthly D1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.02 <= t < 0.05 Seconds

19686	PQ Summary Parameter Voltage Swell Weight – Monthly D1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.05 <= t < 0.1 Seconds
19687	PQ Summary Parameter Voltage Swell Weight – Monthly D1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.1 <= t < 0.2 Seconds
19688	PQ Summary Parameter Voltage Swell Weight – Monthly D1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 100 110 < Magnitude of Swell <= 120 % Nominal 0.2 <= t < 0.5 Seconds
19689	PQ Summary Parameter Voltage Swell Weight – Monthly D1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 0.5 <= t < 1 Seconds
19690	PQ Summary Parameter Voltage Swell Weight – Monthly D1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 1 <= t < 3 Seconds
19691	PQ Summary Parameter Voltage Swell Weight – Monthly D1T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 3 <= t < 10 Seconds
19692	PQ Summary Parameter Voltage Swell Weight – Monthly D1T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 10 <= t < 20 Seconds
19693	PQ Summary Parameter Voltage Swell Weight – Monthly D1T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 20 <= t < 60 Seconds
19694	PQ Summary Parameter Voltage Swell Weight – Monthly D1T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 110 < Magnitude of Swell <= 120 % Nominal 60 <= t < 180 Seconds
19695	PQ Summary Parameter Voltage Swell Weight – Monthly D2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.01 <= t < 0.02 Seconds
19696	PQ Summary Parameter Voltage Swell Weight – Monthly D2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.02 <= t < 0.05 Seconds
19697	PQ Summary Parameter Voltage Swell Weight – Monthly D2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.05 <= t < 0.1 Seconds
19698	PQ Summary Parameter Voltage Swell Weight – Monthly D2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.1 <= t < 0.2 Seconds
19699	PQ Summary Parameter Voltage Swell Weight – Monthly D2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.2 <= t < 0.5 Seconds

19700	PQ Summary Parameter Voltage Swell Weight – Monthly D2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 0.5 <= t < 1 Seconds
19701	PQ Summary Parameter Voltage Swell Weight – Monthly D2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 1 <= t < 3 Seconds
19702	PQ Summary Parameter Voltage Swell Weight – Monthly D2T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 3 <= t < 10 Seconds
19703	PQ Summary Parameter Voltage Swell Weight – Monthly D2T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 10 <= t < 20 Seconds
19704	PQ Summary Parameter Voltage Swell Weight – Monthly D2T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 20 <= t < 60 Seconds
19705	PQ Summary Parameter Voltage Swell Weight – Monthly D2T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 120 < Magnitude of Swell <= 130 % Nominal 60 <= t < 180 Seconds
19706	PQ Summary Parameter Voltage Swell Weight – Monthly D3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.01 <= t < 0.02 Seconds
19707	PQ Summary Parameter Voltage Swell Weight – Monthly D3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.02 <= t < 0.05 Seconds
19708	PQ Summary Parameter Voltage Swell Weight – Monthly D3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.05 <= t < 0.1 Seconds
19709	PQ Summary Parameter Voltage Swell Weight – Monthly D3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.1 <= t < 0.2 Seconds
19710	PQ Summary Parameter Voltage Swell Weight – Monthly D3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.2 <= t < 0.5 Seconds
19711	PQ Summary Parameter Voltage Swell Weight – Monthly D3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 0.5 <= t < 1 Seconds
19712	PQ Summary Parameter Voltage Swell Weight – Monthly D3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 1 <= t < 3 Seconds
19713	PQ Summary Parameter Voltage Swell Weight – Monthly D3T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 3 <= t < 10 Seconds

19714	PQ Summary Parameter Voltage Swell Weight – Monthly D3T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 10 <= t < 20 Seconds
19715	PQ Summary Parameter Voltage Swell Weight – Monthly D3T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 20 <= t < 60 Seconds
19716	PQ Summary Parameter Voltage Swell Weight – Monthly D3T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 130 < Magnitude of Swell <= 140 % Nominal 60 <= t < 180 Seconds
19717	PQ Summary Parameter Voltage Swell Weight – Monthly D4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.01 <= t < 0.02 Seconds
19718	PQ Summary Parameter Voltage Swell Weight – Monthly D4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.02 <= t < 0.05 Seconds
19719	PQ Summary Parameter Voltage Swell Weight – Monthly D4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.05 <= t < 0.1 Seconds
19720	PQ Summary Parameter Voltage Swell Weight – Monthly D4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.1 <= t < 0.2 Seconds
19721	PQ Summary Parameter Voltage Swell Weight – Monthly D4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.2 <= t < 0.5 Seconds
19722	PQ Summary Parameter Voltage Swell Weight – Monthly D4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 0.5 <= t < 1 Seconds
19723	PQ Summary Parameter Voltage Swell Weight – Monthly D4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 1 <= t < 3 Seconds
19724	PQ Summary Parameter Voltage Swell Weight – Monthly D4T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 3 <= t < 10 Seconds
19725	PQ Summary Parameter Voltage Swell Weight – Monthly D4T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 10 <= t < 20 Seconds
19726	PQ Summary Parameter Voltage Swell Weight – Monthly D4T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 20 <= t < 60 Seconds
19727	PQ Summary Parameter Voltage Swell Weight – Monthly D4T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 140 < Magnitude of Swell <= 150 % Nominal 60 <= t < 180 Seconds

19728	PQ Summary Parameter Voltage Swell Weight – Monthly D5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.01 <= t < 0.02 Seconds
19729	PQ Summary Parameter Voltage Swell Weight – Monthly D5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.02 <= t < 0.05 Seconds
19730	PQ Summary Parameter Voltage Swell Weight – Monthly D5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.05 <= t < 0.1 Seconds
19731	PQ Summary Parameter Voltage Swell Weight – Monthly D5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.1 <= t < 0.2 Seconds
19732	PQ Summary Parameter Voltage Swell Weight – Monthly D5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.2 <= t < 0.5 Seconds
19733	PQ Summary Parameter Voltage Swell Weight – Monthly D5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 0.5 <= t < 1 Seconds
19734	PQ Summary Parameter Voltage Swell Weight – Monthly D5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 1 <= t < 3 Seconds
19735	PQ Summary Parameter Voltage Swell Weight – Monthly D5T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 3 <= t < 10 Seconds
19736	PQ Summary Parameter Voltage Swell Weight – Monthly D5T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 10 <= t < 20 Seconds
19737	PQ Summary Parameter Voltage Swell Weight – Monthly D5T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 20 <= t < 60 Seconds
19738	PQ Summary Parameter Voltage Swell Weight – Monthly D5T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 150 < Magnitude of Swell <= 170 % Nominal 60 <= t < 180 Seconds
19739	PQ Summary Parameter Voltage Swell Weight – Monthly D6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.01 <= t < 0.02 Seconds
19740	PQ Summary Parameter Voltage Swell Weight – Monthly D6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.02 <= t < 0.05 Seconds
19741	PQ Summary Parameter Voltage Swell Weight – Monthly D6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.05 <= t < 0.1 Seconds

19742	PQ Summary Parameter Voltage Swell Weight – Monthly D6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.1 <= t < 0.2 Seconds
19743	PQ Summary Parameter Voltage Swell Weight – Monthly D6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.2 <= t < 0.5 Seconds
19744	PQ Summary Parameter Voltage Swell Weight – Monthly D6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 0.5 <= t < 1 Seconds
19745	PQ Summary Parameter Voltage Swell Weight – Monthly D6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 1 <= t < 3 Seconds
19746	PQ Summary Parameter Voltage Swell Weight – Monthly D6T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 3 <= t < 10 Seconds
19747	PQ Summary Parameter Voltage Swell Weight – Monthly D6T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 10 <= t < 20 Seconds
19748	PQ Summary Parameter Voltage Swell Weight – Monthly D6T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 20 <= t < 60 Seconds
19749	PQ Summary Parameter Voltage Swell Weight – Monthly D6T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 170 < Magnitude of Swell <= 200 % Nominal 60 <= t < 180 Seconds
19750	PQ Summary Parameter Voltage Swell Weight – Monthly D7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.01 <= t < 0.02 Seconds
19751	PQ Summary Parameter Voltage Swell Weight – Monthly D7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.02 <= t < 0.05 Seconds
19752	PQ Summary Parameter Voltage Swell Weight – Monthly D7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.05 <= t < 0.1 Seconds
19753	PQ Summary Parameter Voltage Swell Weight – Monthly D7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.1 <= t < 0.2 Seconds
19754	PQ Summary Parameter Voltage Swell Weight – Monthly D7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.2 <= t < 0.5 Seconds
19755	PQ Summary Parameter Voltage Swell Weight – Monthly D7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 0.5 <= t < 1 Seconds

19756	PQ Summary Parameter Voltage Swell Weight – Monthly D7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 1 <= t < 3 Seconds
19757	PQ Summary Parameter Voltage Swell Weight – Monthly D7T8	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 3 <= t < 10 Seconds
19758	PQ Summary Parameter Voltage Swell Weight – Monthly D7T9	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 10 <= t < 20 Seconds
19759	PQ Summary Parameter Voltage Swell Weight – Monthly D7T10	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 20 <= t < 60 Seconds
19760	PQ Summary Parameter Voltage Swell Weight – Monthly D7T11	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Swell > 200 % Nominal 60 <= t < 180 Seconds
19761	PQ Summary Parameter Transient Weight – Monthly M1T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 200 < Magnitude of Transient <= 300 % Nominal t < 20 microseconds
19762	PQ Summary Parameter Transient Weight – Monthly M1T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 200 < Magnitude of Transient <= 300 % Nominal 20 <= t < 50 microseconds
19763	PQ Summary Parameter Transient Weight – Monthly M1T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 200 < Magnitude of Transient <= 300 % Nominal 50 <= t< 100 microseconds
19764	PQ Summary Parameter Transient Weight – Monthly M1T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 200 < Magnitude of Transient <= 300 % Nominal 100 <= t < 200 microseconds
19765	PQ Summary Parameter Transient Weight – Monthly M1T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 200 < Magnitude of Transient <= 300 % Nominal 200 <= t < 500 microseconds
19766	PQ Summary Parameter Transient Weight – Monthly M1T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 200 < Magnitude of Transient <= 300 % Nominal 500 <= t < 1000 microseconds
19767	PQ Summary Parameter Transient Weight – Monthly M1T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 200 < Magnitude of Transient <= 300 % Nominal 1000 <= t < 2000 microseconds
19768	PQ Summary Parameter Transient Weight – Monthly M2T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 300 < Magnitude of Transient <= 400 % Nominal t < 20 microseconds
19769	PQ Summary Parameter Transient Weight – Monthly M2T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 300 < Magnitude of Transient <= 400 % Nominal 20 <= t < 50 microseconds

19770	PQ Summary Parameter Transient Weight – Monthly M2T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 300 < Magnitude of Transient <= 400 % Nominal 50 <= t< 100 microseconds
19771	PQ Summary Parameter Transient Weight – Monthly M2T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 300 < Magnitude of Transient <= 400 % Nominal 100 <= t < 200 microseconds
19772	PQ Summary Parameter Transient Weight – Monthly M2T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 4 300 < Magnitude of Transient <= 400 % Nominal 200 <= t < 500 microseconds
19773	PQ Summary Parameter Transient Weight – Monthly M2T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 300 < Magnitude of Transient <= 400 % Nominal 500 <= t < 1000 microseconds
19774	PQ Summary Parameter Transient Weight – Monthly M2T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 300 < Magnitude of Transient <= 400 % Nominal 1000 <= t < 2000 microseconds
19775	PQ Summary Parameter Transient Weight – Monthly M3T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 400 < Magnitude of Transient <= 500 % Nominal t < 20 microseconds
19776	PQ Summary Parameter Transient Weight – Monthly M3T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 400 < Magnitude of Transient <= 500 % Nominal 20 <= t < 50 microseconds
19777	PQ Summary Parameter Transient Weight – Monthly M3T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 400 < Magnitude of Transient <= 500 % Nominal 50 <= t< 100 microseconds
19778	PQ Summary Parameter Transient Weight – Monthly M3T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 400 < Magnitude of Transient <= 500 % Nominal 100 <= t < 200 microseconds
19779	PQ Summary Parameter Transient Weight – Monthly M3T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 400 < Magnitude of Transient <= 500 % Nominal 200 <= t < 500 microseconds
19780	PQ Summary Parameter Transient Weight – Monthly M3T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 400 < Magnitude of Transient <= 500 % Nominal 500 <= t < 1000 microseconds
19781	PQ Summary Parameter Transient Weight – Monthly M3T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 400 < Magnitude of Transient <= 500 % Nominal 1000 <= t < 2000 microseconds
19782	PQ Summary Parameter Transient Weight – Monthly M4T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 500 < Magnitude of Transient <= 600 % Nominal t < 20 microseconds
19783	PQ Summary Parameter Transient Weight – Monthly M4T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 500 < Magnitude of Transient <= 600 % Nominal 20 <= t < 50 microseconds

19784	PQ Summary Parameter Transient Weight – Monthly M4T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 500 < Magnitude of Transient <= 600 % Nominal 50 <= t< 100 microseconds
19785	PQ Summary Parameter Transient Weight – Monthly M4T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 500 < Magnitude of Transient <= 600 % Nominal 100 <= t < 200 microseconds
19786	PQ Summary Parameter Transient Weight – Monthly M4T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 500 < Magnitude of Transient <= 600 % Nominal 200 <= t < 500 microseconds
19787	PQ Summary Parameter Transient Weight – Monthly M4T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 500 < Magnitude of Transient <= 600 % Nominal 500 <= t < 1000 microseconds
19788	PQ Summary Parameter Transient Weight – Monthly M4T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 500 < Magnitude of Transient <= 600 % Nominal 1000 <= t < 2000 microseconds
19789	PQ Summary Parameter Transient Weight – Monthly M5T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 600 < Magnitude of Transient <= 700 % Nominal t < 20 microseconds
19790	PQ Summary Parameter Transient Weight – Monthly M5T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 600 < Magnitude of Transient <= 700 % Nominal 20 <= t < 50 microseconds
19791	PQ Summary Parameter Transient Weight – Monthly M5T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 600 < Magnitude of Transient <= 700 % Nominal 50 <= t< 100 microseconds
19792	PQ Summary Parameter Transient Weight – Monthly M5T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 100 <= t < 200 microseconds
19793	PQ Summary Parameter Transient Weight – Monthly M5T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 200 <= t < 500 microseconds
19794	PQ Summary Parameter Transient Weight – Monthly M5T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 500 <= t < 1000 microseconds
19795	PQ Summary Parameter Transient Weight – Monthly M5T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 600 < Magnitude of Transient <= 700 % Nominal 1000 <= t < 2000 microseconds
19796	PQ Summary Parameter Transient Weight – Monthly M6T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 10 700 < Magnitude of Transient <= 800 % Nominal t < 20 microseconds
19797	PQ Summary Parameter Transient Weight – Monthly M6T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 700 < Magnitude of Transient <= 800 % Nominal 20 <= t < 50 microseconds

19798	PQ Summary Parameter Transient Weight – Monthly M6T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 700 < Magnitude of Transient <= 800 % Nominal 50 <= t< 100 microseconds
19799	PQ Summary Parameter Transient Weight – Monthly M6T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 100 <= t < 200 microseconds
19800	PQ Summary Parameter Transient Weight – Monthly M6T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 200 <= t < 500 microseconds
19801	PQ Summary Parameter Transient Weight – Monthly M6T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 500 <= t < 1000 microseconds
19802	PQ Summary Parameter Transient Weight – Monthly M6T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 700 < Magnitude of Transient <= 800 % Nominal 1000 <= t < 2000 microseconds
19803	PQ Summary Parameter Transient Weight – Monthly M7T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 800 < Magnitude of Transient <= 900 % Nominal t < 20 microseconds
19804	PQ Summary Parameter Transient Weight – Monthly M7T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 800 < Magnitude of Transient <= 900 % Nominal 20 <= t < 50 microseconds
19805	PQ Summary Parameter Transient Weight – Monthly M7T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 800 < Magnitude of Transient <= 900 % Nominal 50 <= t< 100 microseconds
19806	PQ Summary Parameter Transient Weight – Monthly M7T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 100 <= t < 200 microseconds
19807	PQ Summary Parameter Transient Weight – Monthly M7T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 200 <= t < 500 microseconds
19808	PQ Summary Parameter Transient Weight – Monthly M7T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 500 <= t < 1000 microseconds
19809	PQ Summary Parameter Transient Weight – Monthly M7T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 800 < Magnitude of Transient <= 900 % Nominal 1000 <= t < 2000 microseconds
19810	PQ Summary Parameter Transient Weight – Monthly M8T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 900 < Magnitude of Transient <= 1000 % Nominal t < 20 microseconds
19811	PQ Summary Parameter Transient Weight – Monthly M8T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 900 < Magnitude of Transient <= 1000 % Nominal 20 <= t < 50 microseconds

19812	PQ Summary Parameter Transient Weight – Monthly M8T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 900 < Magnitude of Transient <= 1000 % Nominal 50 <= t< 100 microseconds
19813	PQ Summary Parameter Transient Weight – Monthly M8T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 100 <= t < 200 microseconds
19814	PQ Summary Parameter Transient Weight – Monthly M8T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 200 <= t < 500 microseconds
19815	PQ Summary Parameter Transient Weight – Monthly M8T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 500 <= t < 1000 microseconds
19816	PQ Summary Parameter Transient Weight – Monthly M8T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 900 < Magnitude of Transient <= 1000 % Nominal 1000 <= t < 2000 microseconds
19817	PQ Summary Parameter Transient Weight – Monthly M9T1	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Transient > 1000 % Nominal t < 20 microseconds
19818	PQ Summary Parameter Transient Weight – Monthly M9T2	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Transient > 1000 % Nominal 20 <= t < 50 microseconds
19819	PQ Summary Parameter Transient Weight – Monthly M9T3	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 8 Magnitude of Transient > 1000 % Nominal 50 <= t< 100 microseconds
19820	PQ Summary Parameter Transient Weight – Monthly M9T4	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 100 <= t < 200 microseconds
19821	PQ Summary Parameter Transient Weight – Monthly M9T5	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 200 <= t < 500 microseconds
19822	PQ Summary Parameter Transient Weight – Monthly M9T6	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 500 <= t < 1000 microseconds
19823	PQ Summary Parameter Transient Weight – Monthly M9T7	1	Integer	R/CW	Y	-	Occurrence	1 – 32767	Default = 6 Magnitude of Transient > 1000 % Nominal 1000 <= t < 2000 microseconds

Energy Cost

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
19825	Energy Cost – First Shift Today	2	Long	RO	Y	-	See Reg 6434		
19827	Energy Cost – Second Shift Today	2	Long	RO	Y	-	See Reg 6434		
19829	Energy Cost – Third Shift Today	2	Long	RO	Y	-	See Reg 6434		
19831	Energy Cost – First Shift Yesterday	2	Long	RO	Y	-	See Reg 6434		
19833	Energy Cost – Second Shift Yesterday	2	Long	RO	Y	-	See Reg 6434		
19835	Energy Cost – Third Shift Yesterday	2	Long	RO	Y	-	See Reg 6434		
19837	Energy Cost – First Shift This Week	2	Long	RO	Y	-	See Reg 6434		
19839	Energy Cost – Second Shift This Week	2	Long	RO	Y	-	See Reg 6434		
19841	Energy Cost – Third Shift This Week	2	Long	RO	Y	-	See Reg 6434		
19843	Energy Cost – First Shift Last Week	2	Long	RO	Y	-	See Reg 6434		
19845	Energy Cost – Second Shift Last Week	2	Long	RO	Y	-	See Reg 6434		
19847	Energy Cost – Third Shift Last Week	2	Long	RO	Y	-	See Reg 6434		
19849	Energy Cost – First Shift This Month	2	Long	RO	Y	-	See Reg 6434		
19851	Energy Cost – Second Shift This Month	2	Long	RO	Y	-	See Reg 6434		
19853	Energy Cost – Third Shift This Month	2	Long	RO	Y	-	See Reg 6434		
19855	Energy Cost – First Shift Last Month	2	Long	RO	Y	-	See Reg 6434		
19857	Energy Cost – Second Shift Last Month	2	Long	RO	Y	-	See Reg 6434		
19859	Energy Cost – Third Shift Last Month	2	Long	RO	Y	-	See Reg 6434		
19861	Energy Usage Per Production Unit – First Shift – Today	2	Float	RO	Y	-	WH		

19863	Energy Usage Per Production Unit – Second Shift – Today	2	Float	RO	Y	-	WH		
19865	Energy Usage Per Production Unit – Third Shift – Today	2	Float	RO	Y	-	WH		
19867	Energy Usage Per Production Unit – First Shift – Yesterday	2	Float	RO	Y	-	WH		
19869	Energy Usage Per Production Unit – Second Shift – Yesterday	2	Float	RO	Y	-	WH		
19871	Energy Usage Per Production Unit – Third Shift – Yesterday	2	Float	RO	Y	-	WH		
19873	Energy Usage Per Production Unit – Today	2	Float	RO	Y	-	WH		
19875	Energy Usage Per Production Unit – Yesterday	2	Float	RO	Y	-	WH		
19877	Energy Usage Per Production Unit – First Shift – This Week	2	Float	RO	Y	-	WH		
19879	Energy Usage Per Production Unit – Second Shift – This Week	2	Float	RO	Y	-	WH		
19881	Energy Usage Per Production Unit – Third Shift – This Week	2	Float	RO	Y	-	WH		
19883	Energy Usage Per Production Unit – First Shift – Last Week	2	Float	RO	Y	-	WH		
19885	Energy Usage Per Production Unit – Second Shift – Last Week	2	Float	RO	Y	-	WH		
19887	Energy Usage Per Production Unit – Third Shift – Last Week	2	Float	RO	Y	-	WH		
19889	Energy Usage Per Production Unit – This Week	2	Float	RO	Y	-	WH		
19891	Energy Usage Per Production Unit – Last Week	2	Float	RO	Y	-	WH		
19893	Energy Usage Per Production Unit – First Shift – This Month	2	Float	RO	Y	-	WH		
19895	Energy Usage Per Production Unit – Second Shift – This Month	2	Float	RO	Y	-	WH		
19897	Energy Usage Per Production Unit – Third Shift – This Month	2	Float	RO	Y	-	WH		
19899	Energy Usage Per Production Unit – First Shift – Last Month	2	Float	RO	Y	-	WH		
19901	Energy Usage Per Production Unit – Second Shift – Last Month	2	Float	RO	Y	-	WH		
19903	Energy Usage Per Production Unit – Third Shift – Last Month	2	Float	RO	Y	-	WH		

19905	Energy Usage Per Production Unit – This Month	2	Float	RO	Y	-	WH		
19907	Energy Usage Per Production Unit – Last Month	2	Float	RO	Y	-	WH		
19909	Energy Cost Per Production Unit – First Shift – Today	2	Float	RO	Y	-	See Reg 6434		
19911	Energy Cost Per Production Unit – Second Shift – Today	2	Float	RO	Y	-	See Reg 6434		
19913	Energy Cost Per Production Unit – Third Shift – Today	2	Float	RO	Y	-	See Reg 6434		
19915	Energy Cost Per Production Unit – First Shift – Yesterday	2	Float	RO	Y	-	See Reg 6434		
19917	Energy Cost Per Production Unit – Second Shift – Yesterday	2	Float	RO	Y	-	See Reg 6434		
19919	Energy Cost Per Production Unit – Third Shift – Yesterday	2	Float	RO	Y	-	See Reg 6434		
19921	Energy Cost Per Production Unit – Today	2	Float	RO	Y	-	See Reg 6434		
19923	Energy Cost Per Production Unit – Yesterday	2	Float	RO	Y	-	See Reg 6434		
19925	Energy Cost Per Production Unit – First Shift – This Week	2	Float	RO	Y	-	See Reg 6434		
19927	Energy Cost Per Production Unit – Second Shift – This Week	2	Float	RO	Y	-	See Reg 6434		
19929	Energy Cost Per Production Unit – Third Shift – This Week	2	Float	RO	Y	-	See Reg 6434		
19931	Energy Cost Per Production Unit – First Shift – Last Week	2	Float	RO	Y	-	See Reg 6434		
19933	Energy Cost Per Production Unit – Second Shift – Last Week	2	Float	RO	Y	-	See Reg 6434		
19935	Energy Cost Per Production Unit – Third Shift – Last Week	2	Float	RO	Y	-	See Reg 6434		
19937	Energy Cost Per Production Unit – This Week	2	Float	RO	Y	-	See Reg 6434		
19939	Energy Cost Per Production Unit – Last Week	2	Float	RO	Y	-	See Reg 6434		
19941	Energy Cost Per Production Unit – First Shift – This Month	2	Float	RO	Y	-	See Reg 6434		
19943	Energy Cost Per Production Unit – Second Shift – This Month	2	Float	RO	Y	-	See Reg 6434		
19945	Energy Cost Per Production Unit – Third Shift – This Month	2	Float	RO	Y	-	See Reg 6434		

19947	Energy Cost Per Production Unit – First Shift – Last Month	2	Float	RO	Y	-	See Reg 6434		
19949	Energy Cost Per Production Unit – Second Shift – Last Month	2	Float	RO	Y	-	See Reg 6434		
19951	Energy Cost Per Production Unit – Third Shift – Last Month	2	Float	RO	Y	-	See Reg 6434		
19953	Energy Cost Per Production Unit – This Month	2	Float	RO	Y	-	See Reg 6434		
19955	Energy Cost Per Production Unit – Last Month	2	Float	RO	Y	-	See Reg 6434		

Harmonic Power Flow

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
28290	Harmonic Power Flow – Real Phase A	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28332	Harmonic Power Flow – Real Phase B	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28374	Harmonic Power Flow – Real Phase C	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28416	Harmonic Power Flow – Reactive Phase A	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28458	Harmonic Power Flow – Reactive Phase B	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28500	Harmonic Power Flow – Reactive Phase C	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28542	Harmonic Power Flow – Apparent Phase A	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28584	Harmonic Power Flow – Apparent Phase B	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template
28626	Harmonic Power Flow – Apparent Phase C	42	Integer	RO	N	-	-	-	See Harmonic Power Flow Data Template

Harmonic Power Flow – Data Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Harmonic Power Flow – H1	1	Integer	RO	N	F	kW/Scale kVAr/Scale kVA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +1	Harmonic Power Flow – H2	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +2	Harmonic Power Flow – H3	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +3	Harmonic Power Flow – H4	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +4	Harmonic Power Flow – H5	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

Base +5	Harmonic Power Flow – H6	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +6	Harmonic Power Flow – H7	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +7	Harmonic Power Flow – H8	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +8	Harmonic Power Flow – H9	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +9	Harmonic Power Flow – H10	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +10	Harmonic Power Flow – H11	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +11	Harmonic Power Flow – H12	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +12	Harmonic Power Flow – H13	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +13	Harmonic Power Flow – H14	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +14	Harmonic Power Flow – H15	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +15	Harmonic Power Flow – H16	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +16	Harmonic Power Flow – H17	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +17	Harmonic Power Flow – H18	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +18	Harmonic Power Flow – H19	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

Base +19	Harmonic Power Flow – H20	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +20	Harmonic Power Flow – H21	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +21	Harmonic Power Flow – H22	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +22	Harmonic Power Flow – H23	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +23	Harmonic Power Flow – H24	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +24	Harmonic Power Flow – H25	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +25	Harmonic Power Flow – H26	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +26	Harmonic Power Flow – H27	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +27	Harmonic Power Flow – H28	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +28	Harmonic Power Flow – H29	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +29	Harmonic Power Flow – H30	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +30	Harmonic Power Flow – H31	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +31	Harmonic Power Flow – H32	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +32	Harmonic Power Flow – H33	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

Base +33	Harmonic Power Flow – H34	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +34	Harmonic Power Flow – H35	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +35	Harmonic Power Flow – H36	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +36	Harmonic Power Flow – H37	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +37	Harmonic Power Flow – H38	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +38	Harmonic Power Flow – H39	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +39	Harmonic Power Flow – H40	1	Integer	RO	N	I	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +40	Harmonic Power FlowTotal In	1	Integer	RO	N	F	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only
Base +41	Harmonic Power FlowTotal Out	1	Integer	RO	N	F	W/Scale VAr/Scale VA/Scale	-32,767 – 32,767 (-32,768 if N/A)	4-wire system only

Spectral Components – Harmonic Magnitudes and Angles

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
28672	Harmonic Magnitudes and Angles, Voltage A-B	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
28800	Harmonic Magnitudes and Angles, Voltage B-C	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
28928	Harmonic Magnitudes and Angles, Voltage C-A	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29056	Harmonic Magnitudes and Angles, Voltage A-N	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29184	Harmonic Magnitudes and Angles, Voltage B-N	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29312	Harmonic Magnitudes and Angles, Voltage C-N	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29440	Harmonic Magnitudes and Angles, Voltage N-G	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29568	Harmonic Magnitudes and Angles, Current, Phase A	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29696	Harmonic Magnitudes and Angles, Current, Phase B	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29824	Harmonic Magnitudes and Angles, Current, Phase C	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
29952	Harmonic Magnitudes and Angles, Current, Neutral	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
30080	Harmonic Magnitudes and Angles, Current, Ground	128	Integer	RO	N	-	-	-	See Spectral Components Data Template
30592	Worst Harmonic, Voltage A-B	1	Integer	RO	N	-	-	2 – 63	
30593	Worst Harmonic Magnitude, Voltage A-B	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30594	Worst Harmonic Angle, Voltage A-B	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30595	Worst Harmonic, Voltage B-C	1	Integer	RO	N	-	-	2 – 63	
30596	Worst Harmonic Magnitude, Voltage B-C	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30597	Worst Harmonic Angle, Voltage B-C	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

30598	Worst Harmonic, Voltage C-A	1	Integer	RO	N	-	-	2 – 63	
30599	Worst Harmonic Magnitude, Voltage C-A	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30600	Worst Harmonic Angle, Voltage C-A	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30601	Worst Harmonic, Voltage A-N	1	Integer	RO	N	-	-	2 – 63	
30602	Worst Harmonic Magnitude, Voltage A-N	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30603	Worst Harmonic Angle, Voltage A-N	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30604	Worst Harmonic, Voltage B-N	1	Integer	RO	N	-	-	2 – 63	
30605	Worst Harmonic Magnitude, Voltage B-N	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30606	Worst Harmonic Angle, Voltage B-N	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30607	Worst Harmonic, Voltage C-N	1	Integer	RO	N	-	-	2 – 63	
30608	Worst Harmonic Magnitude, Voltage C-N	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30609	Worst Harmonic Angle, Voltage C-N	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30610	Worst Harmonic, Voltage N-G	1	Integer	RO	N	-	-	2 – 63	
30611	Worst Harmonic Magnitude, Voltage N-G	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30612	Worst Harmonic Angle, Voltage N-G	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30613	Worst Harmonic, Current, Phase A	1	Integer	RO	N	-	-	2 – 63	
30614	Worst Harmonic Magnitude, Current, Phase A	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30615	Worst Harmonic Angle, Current, Phase A	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

30616	Worst Harmonic, Current, Phase B	1	Integer	RO	N	-	-	2 – 63	
30617	Worst Harmonic Magnitude, Current, Phase B	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30618	Worst Harmonic Angle, Current, Phase B	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30619	Worst Harmonic, Current, Phase C	1	Integer	RO	N	-	-	2 – 63	
30620	Worst Harmonic Magnitude, Current, Phase C	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30621	Worst Harmonic Angle, Current, Phase C	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30622	Worst Harmonic, Current, Phase N	1	Integer	RO	N	-	-	2 – 63	
30623	Worst Harmonic Magnitude, Current, Phase N	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30624	Worst Harmonic Angle, Current, Phase N	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
30625	Worst Harmonic, Current, Phase G	1	Integer	RO	N	-	-	2 – 63	
30626	Worst Harmonic Magnitude, Current, Phase G	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of worst harmonic.
30627	Worst Harmonic Angle, Current, Phase G	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of worst harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Spectral Components – Data Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Reference Magnitude	1	Integer	RO	N	-	Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of fundamental or of overall RMS value upon which harmonic percentages are based.Selection of format based on value in register 3241.
Base +1	Scale Factor	1	Integer	RO	N	-	1	-3 – 3 (-32,768 if N/A)	Power of 10

Base +2	H1 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 1st harmonic.
Base +3	H1 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 1st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +4	H2 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 2nd harmonic.
Base +5	H2 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 2nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +6	H3 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 3rd harmonic.
Base +7	H3 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 3rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +8	H4 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 4th harmonic.
Base +9	H4 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 4th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +10	H5 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 5th harmonic.
Base +11	H5 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 5th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +12	H6 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 6th harmonic.
Base +13	H6 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 6th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +14	H7 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 7th harmonic.
Base +15	H7 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 7th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base +16	H8 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 8th harmonic.
Base +17	H8 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 8th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 18	H9 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 9th harmonic.
Base + 19	H9 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 9th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 20	H10 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 10th harmonic.
Base + 21	H10 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 10th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 22	H11 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 11th harmonic.
Base + 23	H11 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 11th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 24	H12 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 12th harmonic.
Base + 25	H12 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 12th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 26	H13 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 13th harmonic.
Base + 27	H13 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 13th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 28	H14 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 14th harmonic.
Base + 29	H14 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 14th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 30	H15 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 15th harmonic.
Base + 31	H15 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 15th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 32	H16 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 16th harmonic.
Base + 33	H16 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 16th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 34	H17 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 17th harmonic.
Base + 35	H17 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 17th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 36	H18 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 18th harmonic.
Base + 37	H18 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 18th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 38	H19 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 19th harmonic.
Base + 39	H19 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 19th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 40	H20 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 20th harmonic.
Base + 41	H20 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 20th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 42	H21 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 21st harmonic.
Base + 43	H21 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 21st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 44	H22 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 22nd harmonic.
Base + 45	H22 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 22nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 46	H23 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 23rd harmonic.
Base + 47	H23 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 23rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 48	H24 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 24th harmonic.
Base + 49	H24 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 24th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 50	H25 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 25th harmonic.
Base + 51	H25 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 25th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 52	H26 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 26th harmonic.
Base + 53	H26 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 26th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 54	H27 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 27th harmonic.
Base + 55	H27 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 27th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 56	H28 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 28th harmonic.
Base + 57	H28 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 28th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 58	H29 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 29th harmonic.
Base + 59	H29 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 29th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 60	H30 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 30th harmonic.
Base + 61	H30 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 30th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 62	H31 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 31st harmonic.
Base + 63	H31 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 31st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 64	H32 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 32nd harmonic.
Base + 65	H32 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 32nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 66	H33 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 33rd harmonic.
Base + 67	H33 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 33rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 68	H34 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 34th harmonic.
Base + 69	H34 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 34th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 70	H35 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 35th harmonic.
Base + 71	H35 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 35th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 72	H36 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 36th harmonic.
Base + 73	H36 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 36th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 74	H37 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 37th harmonic.
Base + 75	H37 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 37th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 76	H38 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 38th harmonic.
Base + 77	H38 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 38th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 78	H39 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 39th harmonic.
Base + 79	H39 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 39th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 80	H40 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 40th harmonic.
Base + 81	H40 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 40th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 82	H41 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 41st harmonic.
Base + 83	H41 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 41st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 84	H42 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 42nd harmonic.
Base + 85	H42 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 42nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 86	H43 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 43rd harmonic.
Base + 87	H43 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 43rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 88	H44 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 44th harmonic.
Base + 89	H44 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 44th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 90	H45 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 45th harmonic.
Base + 91	H45 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 45th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 92	H46 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 46th harmonic.
Base + 93	H46 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 46th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 94	H47 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 47th harmonic.
Base + 95	H47 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 47th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 96	H48 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 48th harmonic.
Base + 97	H48 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 48th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 98	H49 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 49th harmonic.
Base + 99	H49 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 49th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 100	H50 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 50th harmonic.
Base + 101	H50 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 50th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 102	H51 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 51st harmonic.
Base + 103	H51 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 51st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 104	H52 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 52nd harmonic.
Base + 105	H52 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 52nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 106	H53 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 53rd harmonic.
Base + 107	H53 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 53rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 108	H54 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 54th harmonic.
Base + 109	H54 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 54th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 110	H55 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 55th harmonic.
Base + 111	H55 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 55th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 112	H56 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 56th harmonic.
Base + 113	H56 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 56th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Base + 114	H57 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 57th harmonic.
Base + 115	H57 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 57th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 116	H58 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 58th harmonic.
Base + 117	H58 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 58th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 118	H59 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 59th harmonic.
Base + 119	H59 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 59th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 120	H60 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 60th harmonic.
Base + 121	H60 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 60th harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 122	H61 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 61st harmonic.
Base + 123	H61 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 61st harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 124	H62 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 62nd harmonic.
Base + 125	H62 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 62nd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).
Base + 126	H63 Magnitude	1	Integer	RO	N	-	0.01% Volts/Scale Amps/Scale	0 – 32,767 (-32,768 if N/A)	Magnitude of 63rd harmonic.
Base + 127	H63 Angle	1	Integer	RO	N	-	0.1°	0 – 3,599 (-32,678 if N/A)	Angle of 63rd harmonic referenced to fundamental Voltage A-N (4-wire) or Voltage A-B (3-wire).

Trending & Forecasting Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
32768	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15500 Default = Current, 3-Phase Average
33268	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15501 Default = Voltage, L-L, 3-Phase Average
33768	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15502 Default = Power, Real, 3-Phase Total
34268	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15503 Default = Power, Reactive, 3-Phase Total
34768	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15504 Default = Power, Apparent, 3-Phase Total
35268	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15505 Default = Power Factor, 3-Phase
35768	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15506 Default = Frequency
36268	Trending & Forecasting User-Defined Quantity	500	Integer	RO	Y	-	-	Trending & Forecasting Data Template	Controlled by register 15507 Default = THD Vab
36768	Trending & Forecasting Data Analysis Data Available Via Command	692	Integer	RO	N	-	-	-	These registers are used as a scratch pad for viewing data returned by Commands 10010 and 10020.

Trending & Forecasting Data Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
0	Metered Register Number	1	Integer	RO	Y	-	1	1000 – 65536	Register number of data item being trended.
1	Scale Factor	1	Integer	RO	Y	-	1	-3 – 3	Power of 10

2	Label	8	Char	RO	Y	-	-	ASCII Codes	16 Characters
10	Second Last Update	1	Integer	RO	Y	-	Second	0 – 59	Meter clock, seconds at last update
11	1-Second Readings	60	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	A FIFO (First-In-First-Out) list of 1-second meter readings with the newest reading in register offset 11.
71	1-Minute Statistics, Date/Time of Last Update	6	Integer	RO	Y	-	1	0 – 2042 (-32,768 if N/A)	Date/Time of last update of 1-minute statistics; year, month, day, hour, minute, second.
77	1-Minute Statistics	180	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	A FIFO list of 60 1-minute statistics with the newest reading in register offset 77. Statistics are: average of previous 60 1-second readings, minimum of previous 60 1-second readings, maximum of previous 60 1-second readings.
257	1-Hour Statistics, Date/Time of Last Update	6	Integer	RO	Y	-	1	0 – 2042 (-32,768 if N/A)	Date/Time of last update of 1-hour statistics; year, month, day, hour, minute, second.
263	1-Hour Statistics	72	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	A FIFO list of 24 1-hour statistics with the newest reading in register offset 263. Statistics are: average of previous 60 1-minute averages, minimum of previous 60 1-minute averages, maximum of previous 60 1-minute averages.
335	1-Day Statistics, Date/Time of Last Update	6	Integer	RO	Y	-	1	0 – 2042 (-32,768 if N/A)	Date/Time of last update of 1-day statistics; year, month, day, hour, minute, second.
341	1-Day Statistics	93	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	A FIFO list of 31 1-day statistics with the newest reading in register offset 341. Statistics are: average of previous 24 1-hour averages, minimum of previous 24 1-hour averages, maximum of previous 24 1-hour averages.
434	1-Month Statistics, Date/Time of Last Update	6	Integer	RO	Y	-	1	0 – 2042 (-32,768 if N/A)	Date/Time of last update of 1-month statistics; year, month, day, hour, minute, second.
440	1-Month Statistics	36	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	A FIFO list of 12 1-month statistics with the newest reading in register offset 440. Statistics are: average of previous month of 1-day averages, minimum of previous month of 1-day averages, maximum of previous month of 1-day averages.
476	Hourly Forecast	8	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	Forecast of the metered value for the next 4 hours. Values posted are average and standard deviation.
484	Daily Forecast	8	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	Forecast of the metered value for the next 4 days. Values posted are average and standard deviation.
492	Summary of Hourly Statistics	4	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	Accumulated hourly values for this hour of the week. Values are average, minimum, maximum, and standard deviation.
496	Summary of Weekly Statistics	4	Integer	RO	Y	-1	Value/Scale	0 – 32,767 (-32,768 if N/A)	Accumulated weekly values for this week of the year. Values are average, minimum, maximum, and standard deviation.

(1) Scale factor in register offset 1 applies to all meter values for this data item.

Portals For Data Access
Alarm Setpoint Learning Summaries

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38000	Alarm Setpoint Learning Active Bitmap	12	Portal	RO	Y	-	-	-	Bitmap of alarms with Alarm Setpoint Learning active
38001	Alarm Setpoint Learning Summary Alarm Position #001	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38002	Alarm Setpoint Learning Summary Alarm Position #002	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38003	Alarm Setpoint Learning Summary Alarm Position #003	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38004	Alarm Setpoint Learning Summary Alarm Position #004	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38005	Alarm Setpoint Learning Summary Alarm Position #005	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38006	Alarm Setpoint Learning Summary Alarm Position #006	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38007	Alarm Setpoint Learning Summary Alarm Position #007	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38008	Alarm Setpoint Learning Summary Alarm Position #008	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38009	Alarm Setpoint Learning Summary Alarm Position #009	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38010	Alarm Setpoint Learning Summary Alarm Position #010	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38011	Alarm Setpoint Learning Summary Alarm Position #011	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38012	Alarm Setpoint Learning Summary Alarm Position #012	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38013	Alarm Setpoint Learning Summary Alarm Position #013	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38014	Alarm Setpoint Learning Summary Alarm Position #014	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38015	Alarm Setpoint Learning Summary Alarm Position #015	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38016	Alarm Setpoint Learning Summary Alarm Position #016	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38017	Alarm Setpoint Learning Summary Alarm Position #017	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template

38018	Alarm Setpoint Learning Summary Alarm Position #018	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38019	Alarm Setpoint Learning Summary Alarm Position #019	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38020	Alarm Setpoint Learning Summary Alarm Position #020	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38021	Alarm Setpoint Learning Summary Alarm Position #021	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38022	Alarm Setpoint Learning Summary Alarm Position #022	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38023	Alarm Setpoint Learning Summary Alarm Position #023	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38024	Alarm Setpoint Learning Summary Alarm Position #024	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38025	Alarm Setpoint Learning Summary Alarm Position #025	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38026	Alarm Setpoint Learning Summary Alarm Position #026	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38027	Alarm Setpoint Learning Summary Alarm Position #027	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38028	Alarm Setpoint Learning Summary Alarm Position #028	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38029	Alarm Setpoint Learning Summary Alarm Position #029	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38030	Alarm Setpoint Learning Summary Alarm Position #030	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38031	Alarm Setpoint Learning Summary Alarm Position #031	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38032	Alarm Setpoint Learning Summary Alarm Position #032	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38033	Alarm Setpoint Learning Summary Alarm Position #033	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38034	Alarm Setpoint Learning Summary Alarm Position #034	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38035	Alarm Setpoint Learning Summary Alarm Position #035	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38036	Alarm Setpoint Learning Summary Alarm Position #036	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38037	Alarm Setpoint Learning Summary Alarm Position #037	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38038	Alarm Setpoint Learning Summary Alarm Position #038	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template

38039	Alarm Setpoint Learning Summary Alarm Position #039	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38040	Alarm Setpoint Learning Summary Alarm Position #040	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38041	Alarm Setpoint Learning Summary Alarm Position #041	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38042	Alarm Setpoint Learning Summary Alarm Position #042	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38043	Alarm Setpoint Learning Summary Alarm Position #043	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38044	Alarm Setpoint Learning Summary Alarm Position #044	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38045	Alarm Setpoint Learning Summary Alarm Position #045	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38046	Alarm Setpoint Learning Summary Alarm Position #046	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38047	Alarm Setpoint Learning Summary Alarm Position #047	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38048	Alarm Setpoint Learning Summary Alarm Position #048	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38049	Alarm Setpoint Learning Summary Alarm Position #049	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38050	Alarm Setpoint Learning Summary Alarm Position #050	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38051	Alarm Setpoint Learning Summary Alarm Position #051	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38052	Alarm Setpoint Learning Summary Alarm Position #052	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38053	Alarm Setpoint Learning Summary Alarm Position #053	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38054	Alarm Setpoint Learning Summary Alarm Position #054	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38055	Alarm Setpoint Learning Summary Alarm Position #055	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38056	Alarm Setpoint Learning Summary Alarm Position #056	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38057	Alarm Setpoint Learning Summary Alarm Position #057	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38058	Alarm Setpoint Learning Summary Alarm Position #058	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38059	Alarm Setpoint Learning Summary Alarm Position #059	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template

38060	Alarm Setpoint Learning Summary Alarm Position #060	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38061	Alarm Setpoint Learning Summary Alarm Position #061	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38062	Alarm Setpoint Learning Summary Alarm Position #062	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38063	Alarm Setpoint Learning Summary Alarm Position #063	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38064	Alarm Setpoint Learning Summary Alarm Position #064	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38065	Alarm Setpoint Learning Summary Alarm Position #065	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38066	Alarm Setpoint Learning Summary Alarm Position #066	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38067	Alarm Setpoint Learning Summary Alarm Position #067	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38068	Alarm Setpoint Learning Summary Alarm Position #068	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38069	Alarm Setpoint Learning Summary Alarm Position #069	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38070	Alarm Setpoint Learning Summary Alarm Position #070	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38071	Alarm Setpoint Learning Summary Alarm Position #071	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38072	Alarm Setpoint Learning Summary Alarm Position #072	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38073	Alarm Setpoint Learning Summary Alarm Position #073	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38074	Alarm Setpoint Learning Summary Alarm Position #074	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38075	Alarm Setpoint Learning Summary Alarm Position #075	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38076	Alarm Setpoint Learning Summary Alarm Position #076	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38077	Alarm Setpoint Learning Summary Alarm Position #077	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38078	Alarm Setpoint Learning Summary Alarm Position #078	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38079	Alarm Setpoint Learning Summary Alarm Position #079	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38080	Alarm Setpoint Learning Summary Alarm Position #080	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template

38081	Alarm Setpoint Learning Summary Alarm Position #081	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38082	Alarm Setpoint Learning Summary Alarm Position #082	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38083	Alarm Setpoint Learning Summary Alarm Position #083	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38084	Alarm Setpoint Learning Summary Alarm Position #084	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38085	Alarm Setpoint Learning Summary Alarm Position #085	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38086	Alarm Setpoint Learning Summary Alarm Position #086	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38087	Alarm Setpoint Learning Summary Alarm Position #087	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38088	Alarm Setpoint Learning Summary Alarm Position #088	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38089	Alarm Setpoint Learning Summary Alarm Position #089	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38090	Alarm Setpoint Learning Summary Alarm Position #090	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38091	Alarm Setpoint Learning Summary Alarm Position #091	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38092	Alarm Setpoint Learning Summary Alarm Position #092	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38093	Alarm Setpoint Learning Summary Alarm Position #093	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38094	Alarm Setpoint Learning Summary Alarm Position #094	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38095	Alarm Setpoint Learning Summary Alarm Position #095	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38096	Alarm Setpoint Learning Summary Alarm Position #096	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38097	Alarm Setpoint Learning Summary Alarm Position #097	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38098	Alarm Setpoint Learning Summary Alarm Position #098	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38099	Alarm Setpoint Learning Summary Alarm Position #099	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38100	Alarm Setpoint Learning Summary Alarm Position #100	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38101	Alarm Setpoint Learning Summary Alarm Position #101	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template

38102	Alarm Setpoint Learning Summary Alarm Position #102	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38103	Alarm Setpoint Learning Summary Alarm Position #103	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38104	Alarm Setpoint Learning Summary Alarm Position #104	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38105	Alarm Setpoint Learning Summary Alarm Position #105	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38106	Alarm Setpoint Learning Summary Alarm Position #106	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38107	Alarm Setpoint Learning Summary Alarm Position #107	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38108	Alarm Setpoint Learning Summary Alarm Position #108	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38109	Alarm Setpoint Learning Summary Alarm Position #109	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38110	Alarm Setpoint Learning Summary Alarm Position #110	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38111	Alarm Setpoint Learning Summary Alarm Position #111	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38112	Alarm Setpoint Learning Summary Alarm Position #112	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38113	Alarm Setpoint Learning Summary Alarm Position #113	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38114	Alarm Setpoint Learning Summary Alarm Position #114	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38115	Alarm Setpoint Learning Summary Alarm Position #115	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38116	Alarm Setpoint Learning Summary Alarm Position #116	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38117	Alarm Setpoint Learning Summary Alarm Position #117	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38118	Alarm Setpoint Learning Summary Alarm Position #118	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38119	Alarm Setpoint Learning Summary Alarm Position #119	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38120	Alarm Setpoint Learning Summary Alarm Position #120	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template
38121	Alarm Setpoint Learning Summary Alarm Position #121 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	

38122	Alarm Setpoint Learning Summary Alarm Position #122 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	
38123	Alarm Setpoint Learning Summary Alarm Position #123 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	
38124	Alarm Setpoint Learning Summary Alarm Position #124 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	
38125	Alarm Setpoint Learning Summary Alarm Position #125 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	
38126	Alarm Setpoint Learning Summary Alarm Position #181 Waveshape Alarm	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template – Waveshape Alarms
38127	Alarm Setpoint Learning Summary Alarm Position #182 Waveshape Alarm	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template – Waveshape Alarms
38128	Alarm Setpoint Learning Summary Alarm Position #183 Waveshape Alarm	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template – Waveshape Alarms
38129	Alarm Setpoint Learning Summary Alarm Position #184 Waveshape Alarm	15	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Summary Template – Waveshape Alarms
38130	Alarm Setpoint Learning Summary Alarm Position #185 FUTURE FEATURE	15	Portal	RO	Y	-	-	-	

Alarm Setpoint Learning Histograms

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38131	Alarm Setpoint Learning Histogram Alarm Position #001	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38132	Alarm Setpoint Learning Histogram Alarm Position #002	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38133	Alarm Setpoint Learning Histogram Alarm Position #003	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38134	Alarm Setpoint Learning Histogram Alarm Position #004	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38135	Alarm Setpoint Learning Histogram Alarm Position #005	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38136	Alarm Setpoint Learning Histogram Alarm Position #006	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38137	Alarm Setpoint Learning Histogram Alarm Position #007	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38138	Alarm Setpoint Learning Histogram Alarm Position #008	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38139	Alarm Setpoint Learning Histogram Alarm Position #009	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38140	Alarm Setpoint Learning Histogram Alarm Position #010	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38141	Alarm Setpoint Learning Histogram Alarm Position #011	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38142	Alarm Setpoint Learning Histogram Alarm Position #012	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38143	Alarm Setpoint Learning Histogram Alarm Position #013	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38144	Alarm Setpoint Learning Histogram Alarm Position #014	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38145	Alarm Setpoint Learning Histogram Alarm Position #015	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38146	Alarm Setpoint Learning Histogram Alarm Position #016	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38147	Alarm Setpoint Learning Histogram Alarm Position #017	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38148	Alarm Setpoint Learning Histogram Alarm Position #018	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38149	Alarm Setpoint Learning Histogram Alarm Position #019	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38150	Alarm Setpoint Learning Histogram Alarm Position #020	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38151	Alarm Setpoint Learning Histogram Alarm Position #021	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38152	Alarm Setpoint Learning Histogram Alarm Position #022	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38153	Alarm Setpoint Learning Histogram Alarm Position #023	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38154	Alarm Setpoint Learning Histogram Alarm Position #024	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38155	Alarm Setpoint Learning Histogram Alarm Position #025	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38156	Alarm Setpoint Learning Histogram Alarm Position #026	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38157	Alarm Setpoint Learning Histogram Alarm Position #027	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38158	Alarm Setpoint Learning Histogram Alarm Position #028	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38159	Alarm Setpoint Learning Histogram Alarm Position #029	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38160	Alarm Setpoint Learning Histogram Alarm Position #030	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38161	Alarm Setpoint Learning Histogram Alarm Position #031	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38162	Alarm Setpoint Learning Histogram Alarm Position #032	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38163	Alarm Setpoint Learning Histogram Alarm Position #033	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38164	Alarm Setpoint Learning Histogram Alarm Position #034	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38165	Alarm Setpoint Learning Histogram Alarm Position #035	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38166	Alarm Setpoint Learning Histogram Alarm Position #036	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38167	Alarm Setpoint Learning Histogram Alarm Position #037	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38168	Alarm Setpoint Learning Histogram Alarm Position #038	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38169	Alarm Setpoint Learning Histogram Alarm Position #039	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38170	Alarm Setpoint Learning Histogram Alarm Position #040	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38171	Alarm Setpoint Learning Histogram Alarm Position #041	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38172	Alarm Setpoint Learning Histogram Alarm Position #042	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38173	Alarm Setpoint Learning Histogram Alarm Position #043	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38174	Alarm Setpoint Learning Histogram Alarm Position #044	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38175	Alarm Setpoint Learning Histogram Alarm Position #045	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38176	Alarm Setpoint Learning Histogram Alarm Position #046	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38177	Alarm Setpoint Learning Histogram Alarm Position #047	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38178	Alarm Setpoint Learning Histogram Alarm Position #048	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38179	Alarm Setpoint Learning Histogram Alarm Position #049	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38180	Alarm Setpoint Learning Histogram Alarm Position #050	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38181	Alarm Setpoint Learning Histogram Alarm Position #051	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38182	Alarm Setpoint Learning Histogram Alarm Position #052	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38183	Alarm Setpoint Learning Histogram Alarm Position #053	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38184	Alarm Setpoint Learning Histogram Alarm Position #054	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38185	Alarm Setpoint Learning Histogram Alarm Position #055	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38186	Alarm Setpoint Learning Histogram Alarm Position #056	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38187	Alarm Setpoint Learning Histogram Alarm Position #057	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38188	Alarm Setpoint Learning Histogram Alarm Position #058	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38189	Alarm Setpoint Learning Histogram Alarm Position #059	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38190	Alarm Setpoint Learning Histogram Alarm Position #060	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38191	Alarm Setpoint Learning Histogram Alarm Position #061	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38192	Alarm Setpoint Learning Histogram Alarm Position #062	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38193	Alarm Setpoint Learning Histogram Alarm Position #063	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38194	Alarm Setpoint Learning Histogram Alarm Position #064	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38195	Alarm Setpoint Learning Histogram Alarm Position #065	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38196	Alarm Setpoint Learning Histogram Alarm Position #066	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38197	Alarm Setpoint Learning Histogram Alarm Position #067	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38198	Alarm Setpoint Learning Histogram Alarm Position #068	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38199	Alarm Setpoint Learning Histogram Alarm Position #069	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38200	Alarm Setpoint Learning Histogram Alarm Position #070	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38201	Alarm Setpoint Learning Histogram Alarm Position #071	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38202	Alarm Setpoint Learning Histogram Alarm Position #072	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38203	Alarm Setpoint Learning Histogram Alarm Position #073	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38204	Alarm Setpoint Learning Histogram Alarm Position #074	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38205	Alarm Setpoint Learning Histogram Alarm Position #075	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38206	Alarm Setpoint Learning Histogram Alarm Position #076	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38207	Alarm Setpoint Learning Histogram Alarm Position #077	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38208	Alarm Setpoint Learning Histogram Alarm Position #078	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38209	Alarm Setpoint Learning Histogram Alarm Position #079	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38210	Alarm Setpoint Learning Histogram Alarm Position #080	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38211	Alarm Setpoint Learning Histogram Alarm Position #081	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38212	Alarm Setpoint Learning Histogram Alarm Position #082	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38213	Alarm Setpoint Learning Histogram Alarm Position #083	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38214	Alarm Setpoint Learning Histogram Alarm Position #084	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38215	Alarm Setpoint Learning Histogram Alarm Position #085	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38216	Alarm Setpoint Learning Histogram Alarm Position #086	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38217	Alarm Setpoint Learning Histogram Alarm Position #087	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38218	Alarm Setpoint Learning Histogram Alarm Position #088	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38219	Alarm Setpoint Learning Histogram Alarm Position #089	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38220	Alarm Setpoint Learning Histogram Alarm Position #090	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38221	Alarm Setpoint Learning Histogram Alarm Position #091	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38222	Alarm Setpoint Learning Histogram Alarm Position #092	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38223	Alarm Setpoint Learning Histogram Alarm Position #093	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38224	Alarm Setpoint Learning Histogram Alarm Position #094	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38225	Alarm Setpoint Learning Histogram Alarm Position #095	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38226	Alarm Setpoint Learning Histogram Alarm Position #096	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38227	Alarm Setpoint Learning Histogram Alarm Position #097	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38228	Alarm Setpoint Learning Histogram Alarm Position #098	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38229	Alarm Setpoint Learning Histogram Alarm Position #099	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38230	Alarm Setpoint Learning Histogram Alarm Position #100	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38231	Alarm Setpoint Learning Histogram Alarm Position #101	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38232	Alarm Setpoint Learning Histogram Alarm Position #102	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38233	Alarm Setpoint Learning Histogram Alarm Position #103	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38234	Alarm Setpoint Learning Histogram Alarm Position #104	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38235	Alarm Setpoint Learning Histogram Alarm Position #105	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38236	Alarm Setpoint Learning Histogram Alarm Position #106	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38237	Alarm Setpoint Learning Histogram Alarm Position #107	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38238	Alarm Setpoint Learning Histogram Alarm Position #108	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38239	Alarm Setpoint Learning Histogram Alarm Position #109	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38240	Alarm Setpoint Learning Histogram Alarm Position #110	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38241	Alarm Setpoint Learning Histogram Alarm Position #111	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38242	Alarm Setpoint Learning Histogram Alarm Position #112	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38243	Alarm Setpoint Learning Histogram Alarm Position #113	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38244	Alarm Setpoint Learning Histogram Alarm Position #114	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38245	Alarm Setpoint Learning Histogram Alarm Position #115	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38246	Alarm Setpoint Learning Histogram Alarm Position #116	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38247	Alarm Setpoint Learning Histogram Alarm Position #117	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38248	Alarm Setpoint Learning Histogram Alarm Position #118	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38249	Alarm Setpoint Learning Histogram Alarm Position #119	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38250	Alarm Setpoint Learning Histogram Alarm Position #120	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38251	Alarm Setpoint Learning Histogram Alarm Position #121 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38252	Alarm Setpoint Learning Histogram Alarm Position #122 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38253	Alarm Setpoint Learning Histogram Alarm Position #123 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38254	Alarm Setpoint Learning Histogram Alarm Position #124 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38255	Alarm Setpoint Learning Histogram Alarm Position #125 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38256	Alarm Setpoint Learning Histogram Alarm Position #181 Waveshape Alarm	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

38257	Alarm Setpoint Learning Histogram Alarm Position #182 Waveshape Alarm	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38258	Alarm Setpoint Learning Histogram Alarm Position #183 Waveshape Alarm	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38259	Alarm Setpoint Learning Histogram Alarm Position #184 Waveshape Alarm	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template
38260	Alarm Setpoint Learning Histogram Alarm Position #185 FUTURE FEATURE	20	Portal	RO	Y	-	-	-	See Alarm Setpoint Learning Histogram Template

Alarm Setpoint Learning Summary Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Alarm Unique Identifier	2	Long	RO	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register For Disturbance alarms Test Register is: 1 = Vab 2 = Vbc 3 = Vca 4 = Van 5 = Vbn 6 = Vcn 7 = Vng 8 = Ia 9 = Ib 10 = Ic 11 = In 12 = Ig 13 = Alt V2 14 = Alt I2 15 = Alt I4

Base +2	Alarm Setpoint Learning Enable/Disable Mode	1	Integer	RO	Y	-	-	0 – FF	0x00 = Disabled, not learning (default) 0xAA = Disabled, learning 0xCC = Enabled with fixed histogram setpoints, not learning 0xDD = Enabled with dynamic (learned) setpoints, learning 0xEE = Enabled with fixed setpoints, learning 0xFF = Enabled with fixed setpoints, not learning
Base +3	Alarm Setpoint Learning Present Configuration Pickup Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +4	Alarm Setpoint LearningPresent ConfigurationPickup Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms
Base +5	Alarm Setpoint Learning Present Configuration Dropout Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +6	Alarm Setpoint Learning Present Configuration Dropout Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms
Base +7	Alarm Setpoint Learning Present Learned Pickup Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +8	Alarm Setpoint Learning Present Learned Pickup Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms
Base +9	Alarm Setpoint Learning Present Learned Dropout Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +10	Alarm Setpoint Learning Present Learned Dropout Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms
Base +11	Alarm Setpoint Learning In Service Pickup Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +12	Alarm Setpoint Learning In Service Pickup Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms
Base +13	Alarm Setpoint Learning In Service Dropout Value	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +14	Alarm Setpoint Learning In Service Dropout Delay	1	Integer	RO	Y	-	1s 100ms Cycle	0 – 32,767 0 – 999 0 – 999	Standard Speed Alarms High Speed Alarms Disturbance Alarms

Alarm Setpoint Learning Summary Template – Waveshape Alarms

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Unique Identifier	2	Long	R/CW	Y	-	-	0 – 0xFFFFFFFF	Bits 00 – 07 = Level (0 – 9) Bits 08 – 15 = Alarm Type Bits 16 – 31 = Test Register Alarm Type: 110 = Waveshape Test Register for Waveshape: 1 = Phase Voltage 2 = N-G Voltage 3 = Phase Current 4 = Neutral Current
Base +2	Enable/Disable Mode	1	Integer	R/W	Y	-	-	0 – FF	0x00 = Disabled, not learning (default) 0xAA = Disabled, learning 0xDD = Enabled with dynamic (learned) setpoints, learning 0xEE = Enabled with fixed setpoints, learning 0xFF = Enabled with fixed setpoints, not learning
Base +3	Alarm Setpoint Learning Present Configuration Threshold Magnitude	1	Integer	RO	Y	-	-	1 – 100	Waveshape Alarm Threshold (Default = 100)
Base +4	Alarm Setpoint Learning Present Configuration Waveshape Alarm Detection Sensitivity	1	Integer	RO	Y	-	-	1 – 5	Waveshape Alarm Detection Sensitivity (Evaluation Window Size) 1 = Low Sensitivity (default) 2 = Medium 3 = High 4 = Very High 5 = Extreme Sensitivity
Base +5	Alarm Setpoint Learning Present Configuration Waveshape Alarm Detection Resolution	1	Integer	RO	Y	-	-	1 – 5	1 = 32 points/cycle (only selection for currents) 2 = 64 points/cycle 3 = 128 points/cycle (default for voltages) 4 = 256 points/cycle 5 = 512 points/cycle
Base +6	Alarm Setpoint Learning Present Configuration Waveshape Alarm Detection Upper Limit	1	Integer	RO	Y	-	-	1 – 100	Waveshape Alarm value above which alarm is not reported

Base +7	Alarm Setpoint Learning Present Learned Threshold Magnitude	1	Integer	RO	Y	-	-	1 – 100	Waveshape Alarm Threshold (Default = 100)
Base +8	Reserved	1	Integer	RO	Y	-	-	-	
Base +9	Reserved	1	Integer	RO	Y	-	-	-	
Base +10	Reserved	1	Integer	RO	Y	-	-	-	
Base +11	Alarm Setpoint Learning In Service Threshold Magnitude	1	Integer	RO	Y	-	-	1 – 100	Waveshape Alarm Threshold (Default = 100)
Base +12	Alarm Setpoint Learning In Service Waveshape Alarm Detection Sensitivity	1	Integer	RO	Y	-	-	1 – 5	Waveshape Alarm Detection Sensitivity (Evaluation Window Size) 1 = Low Sensitivity (default) 2 = Medium 3 = High 4 = Very High 5 = Extreme Sensitivity
Base +13	Alarm Setpoint Learning In Service Waveshape Alarm Detection Resolution	1	Integer	RO	Y	-	-	1 – 5	1 = 32 points/cycle (only selection for currents) 2 = 64 points/cycle 3 = 128 points/cycle (default for voltages) 4 = 256 points/cycle 5 = 512 points/cycle
Base +14	Alarm Setpoint Learning In Service Waveshape Alarm Detection Upper Limit	1	Integer	RO	Y	-	-	1 – 100	Waveshape Alarm value above which alarm is not reported

Alarm Setpoint Learning Histogram Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Alarm Setpoint Learning Histogram Maximum Value For 1 Second	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +1	Alarm Setpoint Learning Histogram Maximum Value For 2 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +2	Alarm Setpoint Learning Histogram Maximum Value For 4 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +3	Alarm Setpoint Learning Histogram Maximum Value For 8 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	

Base +4	Alarm Setpoint Learning Histogram Maximum Value For 16 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +5	Alarm Setpoint Learning Histogram Maximum Value For 32 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +6	Alarm Setpoint Learning Histogram Maximum Value For 64 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +7	Alarm Setpoint Learning Histogram Maximum Value For 128 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +8	Alarm Setpoint Learning Histogram Maximum Value For 256 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +9	Alarm Setpoint Learning Histogram Maximum Value For >256 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +10	Alarm Setpoint Learning Histogram Minimum Value For 1 Second	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +11	Alarm Setpoint Learning Histogram Minimum Value For 2 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +12	Alarm Setpoint Learning Histogram Minimum Value For 4 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +13	Alarm Setpoint Learning Histogram Minimum Value For 8 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +14	Alarm Setpoint Learning Histogram Minimum Value For 16 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +15	Alarm Setpoint Learning Histogram Minimum Value For 32 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +16	Alarm Setpoint Learning Histogram Minimum Value For 64 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +17	Alarm Setpoint Learning Histogram Minimum Value For 128 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +18	Alarm Setpoint Learning Histogram Minimum Value For 256 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	
Base +19	Alarm Setpoint Learning Histogram Minimum Value For >256 Seconds	1	Integer	RO	Y	A-F	Units/Scale	0 – 32,767	

EN50160 Metering Evaluations

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38270	EN50160 Summary	18	Portal	RO	Y	-	-	Metering Evaluation Summary Template	

38271	EN50160 Metering Evaluation Frequency	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1180
38272	EN50160 Metering Evaluation Va	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1120 (3-wire) or 1124 (4-wire)
38273	EN50160 Metering Evaluation Vb	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1121 (3-wire) or 1125 (4-wire)
38274	EN50160 Metering Evaluation Vc	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1122 (3-wire) or 1126 (4-wire)
38275	EN50160 Metering Evaluation Flicker Va	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 2846
38276	EN50160 Metering Evaluation Flicker Vb	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 2847
38277	EN50160 Metering Evaluation Flicker Vc	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 2848
38278	EN50160 Metering Evaluation Voltage Unbalance	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1299
38279	EN50160 Metering Evaluation THD Va	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1211 (3-wire) or 1207 (4-wire)
38280	EN50160 Metering Evaluation THD Vb	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1212 (3-wire) or 1208 (4-wire)
38281	EN50160 Metering Evaluation THD Vc	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1213 (3-wire) or 1209 (4-wire)
38282	EN50160 Metering Evaluation Va H2	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28676 (3-wire) or 29060 (4-wire)
38283	EN50160 Metering Evaluation Va H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28678 (3-wire) or 29062 (4-wire)
38284	EN50160 Metering Evaluation Va H4	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28680 (3-wire) or 29064 (4-wire)

38285	EN50160 Metering Evaluation Va H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28682 (3-wire) or 29066 (4-wire)
38286	EN50160 Metering Evaluation Va H6	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28684 (3-wire) or 29068 (4-wire)
38287	EN50160 Metering Evaluation Va H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28686 (3-wire) or 29070 (4-wire)
38288	EN50160 Metering Evaluation Va H8	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28688 (3-wire) or 29072 (4-wire)
38289	EN50160 Metering Evaluation Va H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28690 (3-wire) or 29074 (4-wire)
38290	EN50160 Metering Evaluation Va H10	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28692 (3-wire) or 29076 (4-wire)
38291	EN50160 Metering Evaluation Va H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28694 (3-wire) or 29078 (4-wire)
38292	EN50160 Metering Evaluation Va H12	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28696 (3-wire) or 29080 (4-wire)
38293	EN50160 Metering Evaluation Va H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28698 (3-wire) or 29082 (4-wire)
38294	EN50160 Metering Evaluation Va H14	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28700 (3-wire) or 29084 (4-wire)
38295	EN50160 Metering Evaluation Va H15	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28702 (3-wire) or 29086 (4-wire)
38296	EN50160 Metering Evaluation Va H16	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28704 (3-wire) or 29088 (4-wire)
38297	EN50160 Metering Evaluation Va H17	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28706 (3-wire) or 29090 (4-wire)
38298	EN50160 Metering Evaluation Va H18	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28708 (3-wire) or 29092 (4-wire)

38299	EN50160 Metering Evaluation Va H19	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28710 (3-wire) or 29094 (4-wire)
38300	EN50160 Metering Evaluation Va H20	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28712 (3-wire) or 29096 (4-wire)
38301	EN50160 Metering Evaluation Va H21	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28714 (3-wire) or 29098 (4-wire)
38302	EN50160 Metering Evaluation Va H22	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28716 (3-wire) or 29100 (4-wire)
38303	EN50160 Metering Evaluation Va H23	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28718 (3-wire) or 29102 (4-wire)
38304	EN50160 Metering Evaluation Va H24	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28720 (3-wire) or 29104 (4-wire)
38305	EN50160 Metering Evaluation Va H25	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28722 (3-wire) or 29106 (4-wire)
38306	EN50160 Metering Evaluation Vb H2	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28804 (3-wire) or 29188 (4-wire)
38307	EN50160 Metering Evaluation Vb H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28806 (3-wire) or 29190 (4-wire)
38308	EN50160 Metering Evaluation Vb H4	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28808 (3-wire) or 29192 (4-wire)
38309	EN50160 Metering Evaluation Vb H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28810 (3-wire) or 29194 (4-wire)
38310	EN50160 Metering Evaluation Vb H6	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28812 (3-wire) or 29196 (4-wire)
38311	EN50160 Metering Evaluation Vb H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28816 (3-wire) or 29198 (4-wire)
38312	EN50160 Metering Evaluation Vb H8	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28818 (3-wire) or 29200 (4-wire)

38313	EN50160 Metering Evaluation Vb H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28820 (3-wire) or 29202 (4-wire)
38314	EN50160 Metering Evaluation Vb H10	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28822 (3-wire) or 29204 (4-wire)
38315	EN50160 Metering Evaluation Vb H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28824 (3-wire) or 29206 (4-wire)
38316	EN50160 Metering Evaluation Vb H12	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28826 (3-wire) or 29208 (4-wire)
38317	EN50160 Metering Evaluation Vb H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28828 (3-wire) or 29210 (4-wire)
38318	EN50160 Metering Evaluation Vb H14	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28830 (3-wire) or 29212 (4-wire)
38319	EN50160 Metering Evaluation Vb H15	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28832 (3-wire) or 29214 (4-wire)
38320	EN50160 Metering Evaluation Vb H16	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28834 (3-wire) or 29216 (4-wire)
38321	EN50160 Metering Evaluation Vb H17	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28836 (3-wire) or 29218 (4-wire)
38322	EN50160 Metering Evaluation Vb H18	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28838 (3-wire) or 29220 (4-wire)
38323	EN50160 Metering Evaluation Vb H19	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28840 (3-wire) or 29222 (4-wire)
38324	EN50160 Metering Evaluation Vb H20	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28842 (3-wire) or 29224 (4-wire)
38325	EN50160 Metering Evaluation Vb H21	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28844 (3-wire) or 29226 (4-wire)
38326	EN50160 Metering Evaluation Vb H22	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28846 (3-wire) or 29228 (4-wire)

38327	EN50160 Metering Evaluation Vb H23	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28848 (3-wire) or 29230 (4-wire)
38328	EN50160 Metering Evaluation Vb H24	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28850 (3-wire) or 29232 (4-wire)
38329	EN50160 Metering Evaluation Vb H25	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28852 (3-wire) or 29234 (4-wire)
38330	EN50160 Metering Evaluation Vc H2	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28932 (3-wire) or 29316 (4-wire)
38331	EN50160 Metering Evaluation Vc H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28934 (3-wire) or 29318 (4-wire)
38332	EN50160 Metering Evaluation Vc H4	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28936 (3-wire) or 29320 (4-wire)
38333	EN50160 Metering Evaluation Vc H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28938 (3-wire) or 29322 (4-wire)
38334	EN50160 Metering Evaluation Vc H6	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28940 (3-wire) or 29324 (4-wire)
38335	EN50160 Metering Evaluation Vc H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28942 (3-wire) or 29326 (4-wire)
38336	EN50160 Metering Evaluation Vc H8	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28944 (3-wire) or 29328 (4-wire)
38337	EN50160 Metering Evaluation Vc H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28946 (3-wire) or 29330 (4-wire)
38338	EN50160 Metering Evaluation Vc H10	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28948 (3-wire) or 29332 (4-wire)
38339	EN50160 Metering Evaluation Vc H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28950 (3-wire) or 29334 (4-wire)
38340	EN50160 Metering Evaluation Vc H12	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28952 (3-wire) or 29336 (4-wire)

38341	EN50160 Metering Evaluation Vc H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28954 (3-wire) or 29338 (4-wire)
38342	EN50160 Metering Evaluation Vc H14	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28956 (3-wire) or 29340 (4-wire)
38343	EN50160 Metering Evaluation Vc H15	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28958 (3-wire) or 29342 (4-wire)
38344	EN50160 Metering Evaluation Vc H16	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28960 (3-wire) or 29344 (4-wire)
38345	EN50160 Metering Evaluation Vc H17	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28962 (3-wire) or 29346 (4-wire)
38346	EN50160 Metering Evaluation Vc H18	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28964 (3-wire) or 29348 (4-wire)
38347	EN50160 Metering Evaluation Vc H19	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28966 (3-wire) or 29350 (4-wire)
38348	EN50160 Metering Evaluation Vc H20	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28968 (3-wire) or 29352 (4-wire)
38349	EN50160 Metering Evaluation Vc H21	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28970 (3-wire) or 29354 (4-wire)
38350	EN50160 Metering Evaluation Vc H22	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28972 (3-wire) or 29356 (4-wire)
38351	EN50160 Metering Evaluation Vc H23	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28974 (3-wire) or 29358 (4-wire)
38352	EN50160 Metering Evaluation Vc H24	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28976 (3-wire) or 29360 (4-wire)
38353	EN50160 Metering Evaluation Vc H25	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 28978 (3-wire) or 29362 (4-wire)
38354	EN50160 Metering Evaluation V 3PH	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1123.

38355	EN50160 Metering Evaluation kW 3PH	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1143.
38356	EN50160 Metering Evaluation kVAr 3PH	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1147.
38357	EN50160 Metering Evaluation Ia	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1100.
38358	EN50160 Metering Evaluation Ib	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1101.
38359	EN50160 Metering Evaluation Ic	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 1102.
38360	EN50160 Metering Evaluation Ia H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29574.
38361	EN50160 Metering Evaluation Ib H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29702.
38362	EN50160 Metering Evaluation Ic H3	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29830.
38363	EN50160 Metering Evaluation Ia H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29578.
38364	EN50160 Metering Evaluation Ib H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29706.
38365	EN50160 Metering Evaluation Ic H5	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29834.
38366	EN50160 Metering Evaluation Ia H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29582.
38367	EN50160 Metering Evaluation Ib H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29710.
38368	EN50160 Metering Evaluation Ic H7	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29838.

38369	EN50160 Metering Evaluation Ia H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29586.
38370	EN50160 Metering Evaluation Ib H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29714.
38371	EN50160 Metering Evaluation Ic H9	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29842.
38372	EN50160 Metering Evaluation Ia H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29590.
38373	EN50160 Metering Evaluation Ib H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29718.
38374	EN50160 Metering Evaluation Ic H11	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29846.
38375	EN50160 Metering Evaluation Ia H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29594.
38376	EN50160 Metering Evaluation Ib H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29722.
38377	EN50160 Metering Evaluation Ic H13	33	Portal	RO	Y	-	-	Metering Evaluation Template	Metering register 29850.
38378	EN50160 Metering Evaluation	34	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38379	EN50160 Metering Evaluation	35	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38380	EN50160 Metering Evaluation	36	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38381	EN50160 Metering Evaluation	37	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38382	EN50160 Metering Evaluation	38	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.

38383	EN50160 Metering Evaluation	39	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38384	EN50160 Metering Evaluation	40	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38385	EN50160 Metering Evaluation	41	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38386	EN50160 Metering Evaluation	42	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38387	EN50160 Metering Evaluation	43	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38388	EN50160 Metering Evaluation	44	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38389	EN50160 Metering Evaluation	45	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.
38390	EN50160 Metering Evaluation	46	Portal	RO	Y	-	-	Metering Evaluation Template	Reserved for future development.

EN50160 Event Summaries

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38391	EN50160 Event Summary Rapid Voltage Changes Phase A	12	Portal	RO	Y	-	-	Rapid Voltage Change Template	
38392	EN50160 Event Summary Rapid Voltage Changes Phase B	12	Portal	RO	Y	-	-	Rapid Voltage Change Template	
38393	EN50160 Event Summary Rapid Voltage Changes Phase C	12	Portal	RO	Y	-	-	Rapid Voltage Change Template	
38394	EN50160 Event Summary Voltage Dips This Week Phase A	104	Portal	RO	Y	-	-	Voltage Dips Template	

38395	EN50160 Event Summary Voltage Dips This Week Phase B	104	Portal	RO	Y	-	-	Voltage Dips Template	
38396	EN50160 Event Summary Voltage Dips This Week Phase C	104	Portal	RO	Y	-	-	Voltage Dips Template	
38397	EN50160 Event Summary Voltage Dips Last Week Phase A	104	Portal	RO	Y	-	-	Voltage Dips Template	
38398	EN50160 Event Summary Voltage Dips Last Week Phase B	104	Portal	RO	Y	-	-	Voltage Dips Template	
38399	EN50160 Event Summary Voltage Dips Last Week Phase C	104	Portal	RO	Y	-	-	Voltage Dips Template	
38400	EN50160 Event Summary Supply Voltage Interruptions 3-Phase	34	Portal	RO	Y	-	-	Voltage Interruptions Template	
38401	EN50160 Event Summary Supply Voltage Interruptions Phase A	34	Portal	RO	Y	-	-	Voltage Interruptions Template	
38402	EN50160 Event Summary Supply Voltage Interruptions Phase B	34	Portal	RO	Y	-	-	Voltage Interruptions Template	
38403	EN50160 Event Summary Supply Voltage Interruptions Phase C	34	Portal	RO	Y	-	-	Voltage Interruptions Template	
38404	EN50160 Event Summary Temporary Overvoltages This Week Phase A	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	
38405	EN50160 Event Summary Temporary Overvoltages This Week Phase B	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	
38406	EN50160 Event Summary Temporary Overvoltages This Week Phase C	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	

38407	EN50160 Event Summary Temporary Overvoltages Last Week Phase A	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	
38408	EN50160 Event Summary Temporary Overvoltages Last Week Phase B	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	
38409	EN50160 Event Summary Temporary Overvoltages Last Week Phase C	104	Portal	RO	Y	-	-	Temporary Overvoltage Template	
38410	EN50160 Event Summary Transient Overvoltages This Week Phase A	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38411	EN50160 Event Summary Transient Overvoltages This Week Phase B	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38412	EN50160 Event Summary Transient Overvoltages This Week Phase C	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38413	EN50160 Event Summary Transient Overvoltages Last Week Phase A	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38414	EN50160 Event Summary Transient Overvoltages Last Week Phase B	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38415	EN50160 Event Summary Transient Overvoltages Last Week Phase C	88	Portal	RO	Y	-	-	Transient Overvoltage Template	
38416	Reserved	4	Portal	RO	Y	-	-	-	Reserved for future development.

EN50160 Metering Evaluation Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Register Number	1	Integer	RO	Y	-	-	1120 – 29362	Can be used to confirm data item being reported.
Base +1	Register Value	1	Integer	RO	N			0 – 32,767	Present metered value

Base +2	Average Value	1	Integer	RO	Y			0 – 32,767	At end of last completed averaging period.
Base +3	Minimum Value During This Average Period	1	Integer	RO	Y			0 – 32,767	
Base +4	Maximum Value During This Average Period	1	Integer	RO	Y			0 – 32,767	
Base +5	Minimum Value This Interval	1	Integer	RO	Y			0 – 32,767	
Base +6	Maximum Value This Interval	1	Integer	RO	Y			0 – 32,767	
Base +7	Minimum Value Last Interval	1	Integer	RO	Y			0 – 32,767	
Base +8	Maximum Value Last Interval	1	Integer	RO	Y			0 – 32,767	
Base +9	Percent in Range 1 This Interval	1	Integer	RO	Y	-	0.01%	0 – 10,000	
Base +10	Percent in Range 2 This Interval (when applicable)	1	Integer	RO	Y	-	0.01%	0 – 10,000	
Base +11	Percent in Range 1 Last Interval	1	Integer	RO	Y	-	0.01%	0 – 10,000	
Base +12	Percent in Range 2 Last Interval (when applicable)	1	Integer	RO	Y	-	0.01%	0 – 10,000	
Base +13	Count in Range 1	2	Mod10	RO	Y	-	1	0 – 99,999,999	
Base +15	Count in Range 2 (when applicable)	2	Mod10	RO	Y	-	1	0 – 99,999,999	
Base +17	Count Total Range 1	2	Mod10	RO	Y	-	1	0 – 99,999,999	
Base +19	Count Total Range 2 (when applicable)	2	Mod10	RO	Y	-	1	0 – 99,999,999	
Base +21	Date/Time Last Excursion Range 1	4	DateTime	RO	Y	-	-	-	
Base +25	Date/Time Last Excursion Range 2 (when applicable)	4	DateTime	RO	Y	-	-	-	
Base +29	Date/Time Last Reset	4	DateTime	RO	Y	-	-	-	

EN50160 Event Summary Template – Rapid Voltage Changes

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	Count of rapid voltage increases this week	1	Integer	RO	Y	-	1	0 – 32,767	
Base +1	Count of rapid voltage decreases this week	1	Integer	RO	Y	-	1	0 – 32,767	
Base +2	Count of rapid voltage increases last week	1	Integer	RO	Y	-	1	0 – 32,767	
Base +3	Count of rapid voltage decreases last week	1	Integer	RO	Y	-	1	0 – 32,767	
Base +4	Date/Time last rapid voltage change	4	DateTime	RO	Y	-	-	-	
Base +8	Date/Time last reset	4	DateTime	RO	Y	-	-	-	

EN50160 Event Summary Template – Voltage Dips

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Count of dips by magnitude & duration	96	Integer	RO	Y	-	1	0 – 32,767	
Base +96	Date/Time last voltage dip	4	DateTime	RO	Y	-	-	-	
Base +100	Date/Time last reset	4	DateTime	RO	Y	-	-	-	

EN50160 Event Summary Template – Supply Voltage Interruptions

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Flag indicating interruption is active	1	Integer	RO	Y	-	1	0 – 1	
Base +1	Elapsed seconds for interruption in progress	1	Integer	RO	Y	-	1	0 – 32,767	
Base +2	Count of short interruptions this year	1	Integer	RO	Y	-	1	0 – 32,767	
Base +3	Count of long interruption this year	1	Integer	RO	Y	-	1	0 – 32,767	
Base +4	Count of short interruptions last year	1	Integer	RO	Y	-	1	0 – 32,767	
Base +5	Count of long interruptions last year	1	Integer	RO	Y	-	1	0 – 32,767	

Base +6	Count of interruptions by duration this year	10	Integer	RO	Y	-	1	0 – 32,767	
Base +16	Count of interruptions by duration last year	10	Integer	RO	Y	-	1	0 – 32,767	
Base +26	Date/Time last interruption	4	DateTime	RO	Y	-	-	-	
Base +30	Date/Time last reset	4	DateTime	RO	Y	-	-	-	

EN50160 Event Summary Template – Overvoltages

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Count of overvoltages by magnitude & duration	96	Integer	RO	Y	-	1	0 – 32,767	
Base +96	Date/Time last Overvoltage	4	DateTime	RO	Y	-	-	-	
Base +100	Date/Time last reset	4	DateTime	RO	Y	-	-	-	

EN50160 Event Summary Template – Transient Overvoltages

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Count of transients by magnitude & duration	80	Integer	RO	Y	-	1	0 – 32,767	
Base +96	Date/Time last transient	4	DateTime	RO	Y	-	-	-	
Base +100	Date/Time last reset	4	DateTime	RO	Y	-	-	-	

EN50160 Metering Evaluation Summary Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes

Base	Bitmap of active evaluations (same as register 3910)	1	Bitmap	RO	Y	-	-	0x0000 – 0x1FFF	Bit 00 – Summary bit – at least one EN50160 evaluation is active Bit 01 – Frequency Bit 02 – Supply voltage variations Bit 03 – Magnitude of rapid voltage changes Bit 04 – Flicker Bit 05 – Supply voltage dips Bit 06 – Short interruptions of the supply voltage Bit 07 – Long interruptions of the supply voltage Bit 08 – Temporary power frequency overvoltages Bit 09 – Transient overvoltages Bit 10 – Supply voltage unbalance Bit 11 – Harmonic voltage Bit 12 – THD Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used
Base +1	Bitmap of evaluation status summary (same as register 3911)	1	Bitmap	RO	Y	-	-	0x0000 – 0x1FFF	Bit 00 – Summary bit – at least one EN50160 evaluation has failed Bit 01 – Frequency Bit 02 – Supply voltage variations Bit 03 – Magnitude of rapid voltage changes Bit 04 – Flicker Bit 05 – Supply voltage dips Bit 06 – Short interruptions of the supply voltage Bit 07 – Long interruptions of the supply voltage Bit 08 – Temporary power frequency overvoltages Bit 09 – Transient overvoltages Bit 10 – Supply voltage unbalance Bit 11 – Harmonic voltage Bit 12 – THD Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used

Base +2	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Frequency Bit 01 – Va Bit 02 – Vb Bit 03 – Vc Bit 04 – Flicker Va Bit 05 – Flicker Vb Bit 06 – Flicker Vc Bit 07 – Voltage Unbalance Bit 08 – THD Va Bit 09 – THD Vb Bit 10 – THD Vc Bit 11 – Va H2 Bit 12 – Va H3 Bit 13 – Va H4 Bit 14 – Va H5 Bit 15 – Va H6
Base +3	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Va H7 Bit 01 – Va H8 Bit 02 – Va H9 Bit 03 – Va H10 Bit 04 – Va H11 Bit 05 – Va H12 Bit 06 – Va H13 Bit 07 – Va H14 Bit 08 – Va H15 Bit 09 – Va H16 Bit 10 – Va H17 Bit 11 – Va H18 Bit 12 – Va H19 Bit 13 – Va H20 Bit 14 – Va H21 Bit 15 – Va H22

Base +4	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Va H23 Bit 01 – Va H24 Bit 02 – Va H25 Bit 03 – Vb H2 Bit 04 – Vb H3 Bit 05 – Vb H4 Bit 06 – Vb H5 Bit 07 – Vb H6 Bit 08 – Vb H7 Bit 09 – Vb H8 Bit 10 – Vb H9 Bit 11 – Vb H10 Bit 12 – Vb H11 Bit 13 – Vb H12 Bit 14 – Vb H13 Bit 15 – Vb H14
Base +5	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vb H15 Bit 01 – Vb H16 Bit 02 – Vb H17 Bit 03 – Vb H18 Bit 04 – Vb H19 Bit 05 – Vb H20 Bit 06 – Vb H21 Bit 07 – Vb H22 Bit 08 – Vb H23 Bit 09 – Vb H24 Bit 10 – Vb H25 Bit 11 – Vc H2 Bit 12 – Vc H3 Bit 13 – Vc H4 Bit 14 – Vc H5 Bit 15 – Vc H6

Base +6	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vc H7 Bit 01 – Vc H8 Bit 02 – Vc H9 Bit 03 – Vc H10 Bit 04 – Vc H11 Bit 05 – Vc H12 Bit 06 – Vc H13 Bit 07 – Vc H14 Bit 08 – Vc H15 Bit 09 – Vc H16 Bit 10 – Vc H17 Bit 11 – Vc H18 Bit 12 – Vc H19 Bit 13 – Vc H20 Bit 14 – Vc H21 Bit 15 – Vc H22
Base +7	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vc H23 Bit 01 – Vc H24 Bit 02 – Vc H25 Bit 03 – V 3PH Bit 04 – KW 3PH Bit 05 – KVAR 3PH Bit 06 – Ia Bit 07 – Ib Bit 08 – Ic Bit 09 – Ia H3 Bit 10 – Ib H3 Bit 11 – Ic H3 Bit 12 – Ia H5 Bit 13 – Ib H5 Bit 14 – Ic H5 Bit 15 – Ia H7

Base +8	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Ib H7 Bit 01 – Ic H7 Bit 02 – Ia H9 Bit 03 – Ib H9 Bit 04 – Ic H9 Bit 05 – Ia H11 Bit 06 – Ib H11 Bit 07 – Ic H11 Bit 08 – Ia H13 Bit 09 – Ib H13 Bit 10 – Ic H13 Bit 11 – Reserved Bit 12 – Reserved Bit 13 – Reserved Bit 14 – Reserved Bit 15 – Reserved
Base +9	Bitmap of evaluation status of individual evaluations for Range 1	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Reserved Bit 01 – Reserved Bit 02 – Reserved Bit 03 – Reserved Bit 04 – Reserved Bit 05 – Reserved Bit 06 – Reserved Bit 07 – Reserved Bit 08 – Not used Bit 09 – Not used Bit 10 – Not used Bit 11 – Not used Bit 12 – Not used Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used

Base +10	Bitmap of evaluation status of individual evaluations for Range 2	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Frequency Bit 01 – Va Bit 02 – Vb Bit 03 – Vc Bit 04 – Flicker Va Bit 05 – Flicker Vb Bit 06 – Flicker Vc Bit 07 – Voltage Unbalance Bit 08 – THD Va Bit 09 – THD Vb Bit 10 – THD Vc Bit 11 – Va H2 Bit 12 – Va H3 Bit 13 – Va H4 Bit 14 – Va H5 Bit 15 – Va H6
Base +11	Bitmap of evaluation status of individual evaluations for Range 2	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Va H7 Bit 01 – Va H8 Bit 02 – Va H9 Bit 03 – Va H10 Bit 04 – Va H11 Bit 05 – Va H12 Bit 06 – Va H13 Bit 07 – Va H14 Bit 08 – Va H15 Bit 09 – Va H16 Bit 10 – Va H17 Bit 11 – Va H18 Bit 12 – Va H19 Bit 13 – Va H20 Bit 14 – Va H21 Bit 15 – Va H22

Base +12	Bitmap of evaluation status of individual evaluations for Range 2	1	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Va H23 Bit 01 – Va H24 Bit 02 – Va H25 Bit 03 – Vb H2 Bit 04 – Vb H3 Bit 05 – Vb H4 Bit 06 – Vb H5 Bit 07 – Vb H6 Bit 08 – Vb H7 Bit 09 – Vb H8 Bit 10 – Vb H9 Bit 11 – Vb H10 Bit 12 – Vb H11 Bit 13 – Vb H12 Bit 14 – Vb H13 Bit 15 – Vb H14
Base +13	Bitmap of evaluation status of individual evaluations for Range 2	2	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vb H15 Bit 01 – Vb H16 Bit 02 – Vb H17 Bit 03 – Vb H18 Bit 04 – Vb H19 Bit 05 – Vb H20 Bit 06 – Vb H21 Bit 07 – Vb H22 Bit 08 – Vb H23 Bit 09 – Vb H24 Bit 10 – Vb H25 Bit 11 – Vc H2 Bit 12 – Vc H3 Bit 13 – Vc H4 Bit 14 – Vc H5 Bit 15 – Vc H6

Base +14	Bitmap of evaluation status of individual evaluations for Range 2	2	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vc H7 Bit 01 – Vc H8 Bit 02 – Vc H9 Bit 03 – Vc H10 Bit 04 – Vc H11 Bit 05 – Vc H12 Bit 06 – Vc H13 Bit 07 – Vc H14 Bit 08 – Vc H15 Bit 09 – Vc H16 Bit 10 – Vc H17 Bit 11 – Vc H18 Bit 12 – Vc H19 Bit 13 – Vc H20 Bit 14 – Vc H21 Bit 15 – Vc H22
Base +15	Bitmap of evaluation status of individual evaluations for Range 2	2	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Vc H23 Bit 01 – Vc H24 Bit 02 – Vc H25 Bit 03 – V 3PH Bit 04 – KW 3PH Bit 05 – KVAR 3PH Bit 06 – Ia Bit 07 – Ib Bit 08 – Ic Bit 09 – Ia H3 Bit 10 – Ib H3 Bit 11 – Ic H3 Bit 12 – Ia H5 Bit 13 – Ib H5 Bit 14 – Ic H5 Bit 15 – Ia H7

Base +16	Bitmap of evaluation status of individual evaluations for Range 2	2	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Ib H7 Bit 01 – Ic H7 Bit 02 – Ia H9 Bit 03 – Ib H9 Bit 04 – Ic H9 Bit 05 – Ia H11 Bit 06 – Ib H11 Bit 07 – Ic H11 Bit 08 – Ia H13 Bit 09 – Ib H13 Bit 10 – Ic H13 Bit 11 – Reserved Bit 12 – Reserved Bit 13 – Reserved Bit 14 – Reserved Bit 15 – Reserved
Base +17	Bitmap of evaluation status of individual evaluations for Range 2	4	Bitmap	RO	Y	-	-	0x0000 – 0xFFFF	Bit 00 – Reserved Bit 01 – Reserved Bit 02 – Reserved Bit 03 – Reserved Bit 04 – Reserved Bit 05 – Reserved Bit 06 – Reserved Bit 07 – Reserved Bit 08 – Not used Bit 09 – Not used Bit 10 – Not used Bit 11 – Not used Bit 12 – Not used Bit 13 – Not used Bit 14 – Not used Bit 15 – Not used

Power Quality Trending

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38421	Overall Power Quality Index Daily	76	Portal	RO	Y	-	-	-	
38422	Overall Power Quality Index Weekly	118	Portal	RO	Y	-	-	-	

38423	Overall Power Quality Index Monthly	38	Portal	RO	Y	-	-	-	
38424	Under Voltage Daily	76	Portal	RO	Y	-	-	-	
38425	Under Voltage Weekly	118	Portal	RO	Y	-	-	-	
38426	Under Voltage Monthly	38	Portal	RO	Y	-	-	-	
38427	Over Voltage Daily	76	Portal	RO	Y	-	-	-	
38428	Over Voltage Weekly	118	Portal	RO	Y	-	-	-	
38429	Over Voltage Monthly	38	Portal	RO	Y	-	-	-	
38430	Voltage Imbalance Daily	76	Portal	RO	Y	-	-	-	
38431	Voltage Imbalance Weekly	118	Portal	RO	Y	-	-	-	
38432	Voltage Imbalance Monthly	38	Portal	RO	Y	-	-	-	
38433	Waveform Distortion Daily	76	Portal	RO	Y	-	-	-	
38434	Waveform Distortion Weekly	118	Portal	RO	Y	-	-	-	
38435	Waveform Distortion Monthly	38	Portal	RO	Y	-	-	-	
38436	Frequency Variations Daily	76	Portal	RO	Y	-	-	-	
38437	Frequency Variations Weekly	118	Portal	RO	Y	-	-	-	
38438	Frequency Variations Monthly	38	Portal	RO	Y	-	-	-	
38439	Flicker Daily	76	Portal	RO	Y	-	-	-	
38440	Flicker Weekly	118	Portal	RO	Y	-	-	-	
38441	Flicker Monthly	38	Portal	RO	Y	-	-	-	
38442	Voltage Sags Daily	76	Portal	RO	Y	-	-	-	
38443	Voltage Sags Weekly	118	Portal	RO	Y	-	-	-	

38444	Voltage Sags Monthly	38	Portal	RO	Y	-	-	-	
38445	Voltage Swells Daily	76	Portal	RO	Y	-	-	-	
38446	Voltage Swells Weekly	118	Portal	RO	Y	-	-	-	
38447	Voltage Swells Monthly	38	Portal	RO	Y	-	-	-	
38448	Interruptions Daily	76	Portal	RO	Y	-	-	-	
38449	Interruptions Weekly	118	Portal	RO	Y	-	-	-	
38450	Interruptions Monthly	38	Portal	RO	Y	-	-	-	
38451	Transient Overvoltages Daily	76	Portal	RO	Y	-	-	-	
38452	Transient Overvoltages Weekly	118	Portal	RO	Y	-	-	-	
38453	Transient Overvoltages Monthly	38	Portal	RO	Y	-	-	-	

Alarm Trending

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38471	Alarm Summary Group 1 Count – Daily	76	Portal	RO	Y	-	-	-	
38472	Alarm Summary Group 1 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38473	Alarm Summary Group 1 Duration – Daily	76	Portal	RO	Y	-	-	-	
38474	Alarm Summary Group 1 Count – Weekly	118	Portal	RO	Y	-	-	-	
38475	Alarm Summary Group 1 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38476	Alarm Summary Group 1 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38477	Alarm Summary Group 1 Count – Monthly	38	Portal	RO	Y	-	-	-	
38478	Alarm Summary Group 1 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	

38479	Alarm Summary Group 1 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38480	Alarm Summary Group 2 Count – Daily	76	Portal	RO	Y	-	-	-	
38481	Alarm Summary Group 2 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38482	Alarm Summary Group 2 Duration – Daily	76	Portal	RO	Y	-	-	-	
38483	Alarm Summary Group 2 Count – Weekly	118	Portal	RO	Y	-	-	-	
38484	Alarm Summary Group 2 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38485	Alarm Summary Group 2 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38486	Alarm Summary Group 2 Count – Monthly	38	Portal	RO	Y	-	-	-	
38487	Alarm Summary Group 2 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38488	Alarm Summary Group 2 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38489	Alarm Summary Group 3 Count – Daily	76	Portal	RO	Y	-	-	-	
38490	Alarm Summary Group 3 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38491	Alarm Summary Group 3 Duration – Daily	76	Portal	RO	Y	-	-	-	
38492	Alarm Summary Group 3 Count – Weekly	118	Portal	RO	Y	-	-	-	
38493	Alarm Summary Group 3 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38494	Alarm Summary Group 3 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38495	Alarm Summary Group 3 Count – Monthly	38	Portal	RO	Y	-	-	-	
38496	Alarm Summary Group 3 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38497	Alarm Summary Group 3 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38498	Alarm Summary Group 4 Count – Daily	76	Portal	RO	Y	-	-	-	
38499	Alarm Summary Group 4 Magnitude – Daily	76	Portal	RO	Y	-	-	-	

38500	Alarm Summary Group 4 Duration – Daily	76	Portal	RO	Y	-	-	-	
38501	Alarm Summary Group 4 Count – Weekly	118	Portal	RO	Y	-	-	-	
38502	Alarm Summary Group 4 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38503	Alarm Summary Group 4 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38504	Alarm Summary Group 4 Count – Monthly	38	Portal	RO	Y	-	-	-	
38505	Alarm Summary Group 4 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38506	Alarm Summary Group 4 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38507	Alarm Summary Group 5 Count – Daily	76	Portal	RO	Y	-	-	-	
38508	Alarm Summary Group 5 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38509	Alarm Summary Group 5 Duration – Daily	76	Portal	RO	Y	-	-	-	
38510	Alarm Summary Group 5 Count – Weekly	118	Portal	RO	Y	-	-	-	
38511	Alarm Summary Group 5 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38512	Alarm Summary Group 5 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38513	Alarm Summary Group 5 Count – Monthly	38	Portal	RO	Y	-	-	-	
38514	Alarm Summary Group 5 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38515	Alarm Summary Group 5 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38516	Alarm Summary Group 6 Count – Daily	76	Portal	RO	Y	-	-	-	
38517	Alarm Summary Group 6 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38518	Alarm Summary Group 6 Duration – Daily	76	Portal	RO	Y	-	-	-	
38519	Alarm Summary Group 6 Count – Weekly	118	Portal	RO	Y	-	-	-	
38520	Alarm Summary Group 6 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	

38521	Alarm Summary Group 6 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38522	Alarm Summary Group 6 Count – Monthly	38	Portal	RO	Y	-	-	-	
38523	Alarm Summary Group 6 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38524	Alarm Summary Group 6 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38525	Alarm Summary Group 7 Count – Daily	76	Portal	RO	Y	-	-	-	
38526	Alarm Summary Group 7 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38527	Alarm Summary Group 7 Duration – Daily	76	Portal	RO	Y	-	-	-	
38528	Alarm Summary Group 7 Count – Weekly	118	Portal	RO	Y	-	-	-	
38529	Alarm Summary Group 7 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38530	Alarm Summary Group 7 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38531	Alarm Summary Group 7 Count – Monthly	38	Portal	RO	Y	-	-	-	
38532	Alarm Summary Group 7 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38533	Alarm Summary Group 7 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38534	Alarm Summary Group 8 Count – Daily	76	Portal	RO	Y	-	-	-	
38535	Alarm Summary Group 8 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38536	Alarm Summary Group 8 Duration – Daily	76	Portal	RO	Y	-	-	-	
38537	Alarm Summary Group 8 Count – Weekly	118	Portal	RO	Y	-	-	-	
38538	Alarm Summary Group 8 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38539	Alarm Summary Group 8 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38540	Alarm Summary Group 8 Count – Monthly	38	Portal	RO	Y	-	-	-	
38541	Alarm Summary Group 8 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	

38542	Alarm Summary Group 8 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38543	Alarm Summary Group 9 Count – Daily	76	Portal	RO	Y	-	-	-	
38544	Alarm Summary Group 9 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38545	Alarm Summary Group 9 Duration – Daily	76	Portal	RO	Y	-	-	-	
38546	Alarm Summary Group 9 Count – Weekly	118	Portal	RO	Y	-	-	-	
38547	Alarm Summary Group 9 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38548	Alarm Summary Group 9 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38549	Alarm Summary Group 9 Count – Monthly	38	Portal	RO	Y	-	-	-	
38550	Alarm Summary Group 9 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38551	Alarm Summary Group 9 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38552	Alarm Summary Group 10 Count – Daily	76	Portal	RO	Y	-	-	-	
38553	Alarm Summary Group 10 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38554	Alarm Summary Group 10 Duration – Daily	76	Portal	RO	Y	-	-	-	
38555	Alarm Summary Group 10 Count – Weekly	118	Portal	RO	Y	-	-	-	
38556	Alarm Summary Group 10 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38557	Alarm Summary Group 10 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38558	Alarm Summary Group 10 Count – Monthly	38	Portal	RO	Y	-	-	-	
38559	Alarm Summary Group 10 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38560	Alarm Summary Group 10 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38561	Alarm Summary Group 11 Count – Daily	76	Portal	RO	Y	-	-	-	
38562	Alarm Summary Group 11 Magnitude – Daily	76	Portal	RO	Y	-	-	-	

38563	Alarm Summary Group 11 Duration – Daily	76	Portal	RO	Y	-	-	-	
38564	Alarm Summary Group 11 Count – Weekly	118	Portal	RO	Y	-	-	-	
38565	Alarm Summary Group 11 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38566	Alarm Summary Group 11 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38567	Alarm Summary Group 11 Count – Monthly	38	Portal	RO	Y	-	-	-	
38568	Alarm Summary Group 11 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38569	Alarm Summary Group 11 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38570	Alarm Summary Group 12 Count – Daily	76	Portal	RO	Y	-	-	-	
38571	Alarm Summary Group 12 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38572	Alarm Summary Group 12 Duration – Daily	76	Portal	RO	Y	-	-	-	
38573	Alarm Summary Group 12 Count – Weekly	118	Portal	RO	Y	-	-	-	
38574	Alarm Summary Group 12 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38575	Alarm Summary Group 12 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38576	Alarm Summary Group 12 Count – Monthly	38	Portal	RO	Y	-	-	-	
38577	Alarm Summary Group 12 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38578	Alarm Summary Group 12 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38579	Alarm Summary Group 13 Count – Daily	76	Portal	RO	Y	-	-	-	
38580	Alarm Summary Group 13 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38581	Alarm Summary Group 13 Duration – Daily	76	Portal	RO	Y	-	-	-	
38582	Alarm Summary Group 13 Count – Weekly	118	Portal	RO	Y	-	-	-	
38583	Alarm Summary Group 13 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	

38584	Alarm Summary Group 13 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38585	Alarm Summary Group 13 Count – Monthly	38	Portal	RO	Y	-	-	-	
38586	Alarm Summary Group 13 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38587	Alarm Summary Group 13 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38588	Alarm Summary Group 14 Count – Daily	76	Portal	RO	Y	-	-	-	
38589	Alarm Summary Group 14 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38590	Alarm Summary Group 14 Duration – Daily	76	Portal	RO	Y	-	-	-	
38591	Alarm Summary Group 14 Count – Weekly	118	Portal	RO	Y	-	-	-	
38592	Alarm Summary Group 14 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38593	Alarm Summary Group 14 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38594	Alarm Summary Group 14 Count – Monthly	38	Portal	RO	Y	-	-	-	
38595	Alarm Summary Group 14 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	
38596	Alarm Summary Group 14 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38597	Alarm Summary Group 15 Count – Daily	76	Portal	RO	Y	-	-	-	
38598	Alarm Summary Group 15 Magnitude – Daily	76	Portal	RO	Y	-	-	-	
38599	Alarm Summary Group 15 Duration – Daily	76	Portal	RO	Y	-	-	-	
38600	Alarm Summary Group 15 Count – Weekly	118	Portal	RO	Y	-	-	-	
38601	Alarm Summary Group 15 Magnitude – Weekly	118	Portal	RO	Y	-	-	-	
38602	Alarm Summary Group 15 Duration – Weekly	118	Portal	RO	Y	-	-	-	
38603	Alarm Summary Group 15 Count – Monthly	38	Portal	RO	Y	-	-	-	
38604	Alarm Summary Group 15 Magnitude – Monthly	38	Portal	RO	Y	-	-	-	

38605	Alarm Summary Group 15 Duration – Monthly	38	Portal	RO	Y	-	-	-	
38606	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38607	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38608	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38609	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38610	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38611	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38612	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38613	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.
38614	Reserved		Portal	RO	Y	-	-	-	Reserved for future development.

Energy Trending

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
38615	Real Energy, Total Hourly	62	Portal	RO	Y	-	-	-	
38616	Real Energy, Total Daily	76	Portal	RO	Y	-	-	-	
38617	Real Energy, Total Weekly	118	Portal	RO	Y	-	-	-	
38618	Real Energy, Total Monthly	38	Portal	RO	Y	-	-	-	
38619	Apparent Energy, Total Hourly	62	Portal	RO	Y	-	-	-	
38620	Apparent Energy, Total Daily	76	Portal	RO	Y	-	-	-	
38621	Apparent Energy, Total Weekly	118	Portal	RO	Y	-	-	-	
38622	Apparent Energy, Total Monthly	38	Portal	RO	Y	-	-	-	

38623	Input Metering Channel 1 Hourly	62	Portal	RO	Y	-	-	-	
38624	Input Metering Channel 1 Daily	76	Portal	RO	Y	-	-	-	
38625	Input Metering Channel 1 Weekly	118	Portal	RO	Y	-	-	-	
38626	Input Metering Channel 1 Monthly	38	Portal	RO	Y	-	-	-	
38627	Input Metering Channel 2 Hourly	62	Portal	RO	Y	-	-	-	
38628	Input Metering Channel 2 Daily	76	Portal	RO	Y	-	-	-	
38629	Input Metering Channel 2 Weekly	118	Portal	RO	Y	-	-	-	
38630	Input Metering Channel 2 Monthly	38	Portal	RO	Y	-	-	-	
38631	Input Metering Channel 3 Hourly	62	Portal	RO	Y	-	-	-	
38632	Input Metering Channel 3 Daily	76	Portal	RO	Y	-	-	-	
38633	Input Metering Channel 3 Weekly	118	Portal	RO	Y	-	-	-	
38634	Input Metering Channel 3 Monthly	38	Portal	RO	Y	-	-	-	
38635	Input Metering Channel 4 Hourly	62	Portal	RO	Y	-	-	-	
38636	Input Metering Channel 4 Daily	76	Portal	RO	Y	-	-	-	
38637	Input Metering Channel 4 Weekly	118	Portal	RO	Y	-	-	-	
38638	Input Metering Channel 4 Monthly	38	Portal	RO	Y	-	-	-	

Trending Template – Hourly

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Slope	1	Integer	RO	Y	-	-		Slope of linear trend line for last 48 hours.
Base +1	Intercept	1	Integer	RO	Y	-	-		Intercept of linear trend line for last 48 hours.

Base +2	Average	1	Integer	RO	Y	-	-		Average value for last 48 hours.
Base +3	Trend	1	Integer	RO	Y	-	-		
Base +4	Scale	1	Integer	RO	Y	-	-	-3 – 3	
Base +5	Units	1	Integer	RO	Y	-	Unit Codes	0 – 100	
Base +6	Hourly Values for Today	24	Integer	RO	Y	-	-		
Base +30	Hourly Values for Yesterday	24	Integer	RO	Y	-	-		
Base +54	Date/Time of Last Update	4	DateTime	RO	Y	-	-	-	
Base +58	Date/Time of Last Reset	4	DateTime	RO	Y	-	-	-	

Trending Template – Daily

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Slope	1	Integer	RO	Y	-	-		Slope of linear trend line for last 30 days.
Base +1	Intercept	1	Integer	RO	Y	-	-		Intercept of linear trend line for last 30 days.
Base +2	Average	1	Integer	RO	Y	-	-		Average value for last 30 days.
Base +3	Trend	1	Integer	RO	Y	-	-		
Base +4	Scale	1	Integer	RO	Y	-	-	-3 – 3	
Base +5	Units	1	Integer	RO	Y	-	Unit Codes	0 – 100	
Base +6	Daily Values for Last Month	31	Integer	RO	Y	-	-		
Base +37	Daily Values for This Month	31	Integer	RO	Y	-	-		
Base +68	Date/Time of Last Update	4	DateTime	RO	Y	-	-	-	
Base +72	Date/Time of Last Reset	4	DateTime	RO	Y	-	-	-	

Trending Template – Weekly

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Slope	1	Integer	RO	Y	-	-		Slope of linear trend line for last 52 weeks.
Base +1	Intercept	1	Integer	RO	Y	-	-		Intercept of linear trend line for last 52 weeks.
Base +2	Average	1	Integer	RO	Y	-	-		Average value for last 52 weeks.
Base +3	Trend	1	Integer	RO	Y	-	-		
Base +4	Scale	1	Integer	RO	Y	-	-	-3 – 3	
Base +5	Units	1	Integer	RO	Y	-	Unit Codes	0 – 100	
Base +6	Daily Values for Last Year	52	Integer	RO	Y	-	-		
Base +58	Daily Values for This Year	52	Integer	RO	Y	-	-		
Base +110	Date/Time of Last Update	4	DateTime	RO	Y	-	-	-	
Base +114	Date/Time of Last Reset	4	DateTime	RO	Y	-	-	-	

Trending Template – Monthly

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Slope	1	Integer	RO	Y	-	-		Slope of linear trend line for last 24 months.
Base +1	Intercept	1	Integer	RO	Y	-	-		Intercept of linear trend line for last 24 months.
Base +2	Average	1	Integer	RO	Y	-	-		Average value for last 24 months.
Base +3	Trend	1	Integer	RO	Y	-	-		
Base +4	Scale	1	Integer	RO	Y	-	-	-3 – 3	

Base +5	Units	1	Integer	RO	Y	-	Unit Codes	0 – 100	
Base +6	Daily Values for Last Year	12	Integer	RO	Y	-	-		
Base +18	Daily Values for This Year	12	Integer	RO	Y	-	-		
Base +30	Date/Time of Last Update	4	DateTime	RO	Y	-	-	-	
Base +34	Date/Time of Last Reset	4	DateTime	RO	Y	-	-	-	

Custom User Logic

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
40000	Custom User Logic	4000	Integer	RO	N	-	-	-	Registers for Customer use with CMPL

Flicker Data

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
44000	Instantaneous Flicker (IFL) Update Second	1	Integer	RO	N	1	Second	0 – 59	
44001	Instantaneous Flicker (IFL) Update Minute	1	Integer	RO	N	1	Minute	0 – 59	
44002	Instantaneous Flicker (IFL) Update Hour	1	Integer	RO	N	1	Hour	0 – 23	
44003	Instantaneous Flicker (IFL) Update Day	1	Integer	RO	N	1	Day	1 – 31	
44004	Instantaneous Flicker (IFL) Update Month	1	Integer	RO	N	1	Month	1 – 12	
44005	Instantaneous Flicker (IFL) Update Year	1	Integer	RO	N	1	Year	2002 – 2042	
44006	Instantaneous Flicker (IFL) Data	2700	Float	RO	N	1	-	0.0 – 6400.0	Instantaneous flicker levels for Va, Vb, Vc for the last 15 minutes. Updated every 2 seconds.
46720	Short-Term Flicker (Pst) Update Second	1	Integer	RO	N	1	Second	0 – 59	
46721	Short-Term Flicker (Pst) Update Minute	1	Integer	RO	N	1	Minute	0 – 59	
46722	Short-Term Flicker (Pst) Update Hour	1	Integer	RO	N	1	Hour	0 – 23	
46723	Short-Term Flicker (Pst) Update Day	1	Integer	RO	N	1	Day	1 – 31	
46724	Short-Term Flicker (Pst) Update Month	1	Integer	RO	N	1	Month	1 – 12	
46725	Short-Term Flicker (Pst) Update Year	1	Integer	RO	N	1	Year	2002 – 2042	
46726	Short-Term Flicker (Pst) Data	864	Float	RO	Y	1	-	0.0 – 100.0	Short term flicker levels for Va, Vb, Vc for the last 144 updates. Default = data for 1 day at 10 minute intervals.
47590	Long-Term Flicker (Plt) Update Second	1	Integer	RO	N	1	Second	0 – 59	
47591	Long-Term Flicker (Plt) Update Minute	1	Integer	RO	N	1	Minute	0 – 59	
47592	Long-Term Flicker (Plt) Update Hour	1	Integer	RO	N	1	Hour	0 – 23	
47593	Long-Term Flicker (Plt) Update Day	1	Integer	RO	N	1	Day	1 – 31	
47594	Long-Term Flicker (Plt) Update Month	1	Integer	RO	N	1	Month	1 – 12	

47595	Long-Term Flicker (Plt) Update Year	1	Integer	RO	N	1	Year	2002 – 2042	
47596	Long-Term Flicker (Plt) Data	504	Float	RO	Y	1	-	0.0 – 100.0	Long term flicker levels for Va, Vb, Vc for the last 84 updates. Default = data for 1 week at 2 hour intervals.

EN50160 Meter Data Summary

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
48210	Frequency 10s Average	1	Integer	RO	N	-	0.01Hz	(50/60Hz) 4,500 – 6,700	Metering register 1180. Portal 38271.
48211	Frequency 10s Minimum	1	Integer	RO	N	-	0.01Hz	(50/60Hz) 4,500 – 6,700	
48212	Frequency 10s Maximum	1	Integer	RO	N	-	0.01Hz	(50/60Hz) 4,500 – 6,700	
48213	Va 10m Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Metering register 1120 or 1124. Line-to-line voltages are used for 3-wire systems. By default, line-to-neutral voltages are used for 4-wire systems. However, the user can choose to use 3-wire voltages in 4-wire systems by entering a 1 in register 3902. Portal 38272.
48214	Va 10m Minimum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48215	Va 10m Maximum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48216	Vb 10m Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Metering register 1121 or 1125. Line-to-line voltages are used for 3-wire systems. By default, line-to-neutral voltages are used for 4-wire systems. However, the user can choose to use 3-wire voltages in 4-wire systems by entering a 1 in register 3902. Portal 38273.
48217	Vb 10m Minimum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48218	Vb 10m Maximum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48219	Vc 10m Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Metering register 1122 or 1126. Line-to-line voltages are used for 3-wire systems. By default, line-to-neutral voltages are used for 4-wire systems. However, the user can choose to use 3-wire voltages in 4-wire systems by entering a 1 in register 3902. Portal 38274.
48220	Vc 10m Minimum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48221	Vc 10m Maximum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48222	Flicker Va 10m Average	1	Integer	RO	N	J	-	0 – 32,767	Metering register 2846. CM4000T required with CVMT firmware version 11.010 or later. J31Portal 38275.
48223	Flicker Va 10m Minimum	1	Integer	RO	N	J	-	0 – 32,767	
48224	Flicker Va 10m Maximum	1	Integer	RO	N	J	-	0 – 32,767	
48225	Flicker Vb 10m Average	1	Integer	RO	N	J	-	0 – 32,767	Metering register 2847. CM4000T required with CVMT firmware version 11.010 or later. Portal 38276.

48226	Flicker Vb 10m Minimum	1	Integer	RO	N	J	-	0 – 32,767	
48227	Flicker Vb 10m Maximum	1	Integer	RO	N	J	-	0 – 32,767	
48228	Flicker Vc 10m Average	1	Integer	RO	N	J	-	0 – 32,767	Metering register 2848. CM4000T required with CVMT firmware version 11.010 or later. Portal 38277.
48229	Flicker Vc 10m Minimum	1	Integer	RO	N	J	-	0 – 32,767	
48230	Flicker Vc 10m Maximum	1	Integer	RO	N	J	-	0 – 32,767	
48231	Voltage Unbalance 10m Average	1	Integer	RO	N	-	0.10%	0 – 10,000	Metering register 1299. Negative phase sequence component / positive phase sequence component. Portal 38278.
48232	Voltage Unbalance 10m Minimum	1	Integer	RO	N	-	0.10%	0 – 10,000	
48233	Voltage Unbalance 10m Maximum	1	Integer	RO	N	-	0.10%	0 – 10,000	
48234	THD Va 10m Average	1	Integer	RO	N	-	0.10%	0 – 32,767	Metering register 1211 or 1207. THD includes all harmonics up to the 64th. Portal 38279.
48235	THD Va 10m Minimum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48236	THD Va 10m Maximum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48237	THD Vb 10m Average	1	Integer	RO	N	-	0.10%	0 – 32,767	Metering register 1212 or 1208. THD includes all harmonics up to the 64th. Portal 38280.
48238	THD Vb 10m Minimum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48239	THD Vb 10m Maximum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48240	THD Vc 10m Average	1	Integer	RO	N	-	0.10%	0 – 32,767	Metering register 1213 or 1209. THD includes all harmonics up to the 64th. Portal 38281.
48241	THD Vc 10m Minimum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48242	THD Vc 10m Maximum	1	Integer	RO	N	-	0.10%	0 – 32,767	
48243	Va H2 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28676 or 29060. Portal 38282.
48244	Va H2 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48245	Va H2 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48246	Va H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28678 or 29062. Portal 38283.

48247	Va H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48248	Va H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48249	Va H4 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28680 or 29064. Portal 38284.
48250	Va H4 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48251	Va H4 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48252	Va H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28682 or 29066. Portal 38285.
48253	Va H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48254	Va H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48255	Va H6 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28684 or 29068. Portal 38286.
48256	Va H6 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48257	Va H6 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48258	Va H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28686 or 29070. Portal 38287.
48259	Va H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48260	Va H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48261	Va H8 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28688 or 29072. Portal 38288.
48262	Va H8 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48263	Va H8 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48264	Va H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28690 or 29074. Portal 38289.
48265	Va H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48266	Va H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48267	Va H10 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28692 or 29076. Portal 38290.

48268	Va H10 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48269	Va H10 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48270	Va H11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28694 or 29078. Portal 38291.
48271	Va H11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48272	Va H11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48273	Va H12 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28696 or 29080. Portal 38292.
48274	Va H12 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48275	Va H12 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48276	Va H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28698 or 29082. Portal 38293.
48277	Va H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48278	Va H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48279	Va H14 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28700 or 29084. Portal 38294.
48280	Va H14 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48281	Va H14 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48282	Va H15 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28702 or 29086. Portal 38295.
48283	Va H15 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48284	Va H15 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48285	Va H16 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28704 or 29088. Portal 38296.
48286	Va H16 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48287	Va H16 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48288	Va H17 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28706 or 29090. Portal 38297.

48289	Va H17 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48290	Va H17 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48291	Va H18 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28708 or 29092. Portal 38298.
48292	Va H18 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48293	Va H18 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48294	Va H19 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28710 or 29094. Portal 38299.
48295	Va H19 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48296	Va H19 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48297	Va H20 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28712 or 29096. Portal 38300.
48298	Va H20 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48299	Va H20 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48300	Va H21 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28714 or 29098. Portal 38301.
48301	Va H21 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48302	Va H21 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48303	Va H22 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28716 or 29100. Portal 38302.
48304	Va H22 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48305	Va H22 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48306	Va H23 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28718 or 29102. Portal 38303.
48307	Va H23 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48308	Va H23 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48309	Va H24 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28720 or 29104. Portal 38304.

48310	Va H24 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48311	Va H24 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48312	Va H25 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28722 or 29106. Portal 38305.
48313	Va H25 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48314	Va H25 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48315	Vb H2 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28804 or 29188. Portal 38306.
48316	Vb H2 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48317	Vb H2 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48318	Vb H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28806 or 29190. Portal 38307.
48319	Vb H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48320	Vb H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48321	Vb H4 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28808 or 29192. Portal 38308.
48322	Vb H4 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48323	Vb H4 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48324	Vb H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28810 or 29194. Portal 38309.
48325	Vb H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48326	Vb H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48327	Vb H6 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28812 or 29196. Portal 38310.
48328	Vb H6 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48329	Vb H6 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48330	Vb H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28814 or 29198. Portal 38311.

48331	Vb H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48332	Vb H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48333	Vb H8 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28816 or 29200. Portal 38312.
48334	Vb H8 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48335	Vb H8 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48336	Vb H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28818 or 29202. Portal 38313.
48337	Vb H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48338	Vb H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48339	Vb H10 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28820 or 29204. Portal 38314.
48340	Vb H10 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48341	Vb H10 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48342	Vb H11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28822 or 29206. Portal 38315.
48343	Vb H11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48344	Vb H11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48345	Vb H12 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28824 or 29208. Portal 38316.
48346	Vb H12 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48347	Vb H12 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48348	Vb H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28826 or 29210. Portal 38317.
48349	Vb H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48350	Vb H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48351	Vb H14 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28828 or 29212. Portal 38318.

48352	Vb H14 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48353	Vb H14 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48354	Vb H15 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28830 or 29214. Portal 38319.
48355	Vb H15 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48356	Vb H15 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48357	Vb H16 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28832 or 29216. Portal 38320.
48358	Vb H16 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48359	Vb H16 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48360	Vb H17 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28834 or 29218. Portal 38321.
48361	Vb H17 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48362	Vb H17 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48363	Vb H18 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28836 or 29220. Portal 38322.
48364	Vb H18 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48365	Vb H18 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48366	Vb H19 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28838 or 29222. Portal 38323.
48367	Vb H19 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48368	Vb H19 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48369	Vb H20 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28840 or 29224. Portal 38324.
48370	Vb H20 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48371	Vb H20 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48372	Vb H21 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28842 or 29226. Portal 38325.

48373	Vb H21 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48374	Vb H21 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48375	Vb H22 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28844 or 29228. Portal 38326.
48376	Vb H22 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48377	Vb H22 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48378	Vb H23 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28846 or 29230. Portal 38327.
48379	Vb H23 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48380	Vb H23 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48381	Vb H24 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28848 or 29232. Portal 38328.
48382	Vb H24 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48383	Vb H24 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48384	Vb H25 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28850 or 29234. Portal 38329.
48385	Vb H25 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48386	Vb H25 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48387	Vc H2 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28932 or 29316. Portal 38330.
48388	Vc H2 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48389	Vc H2 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48390	Vc H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28934 or 29318. Portal 38331.
48391	Vc H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48392	Vc H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48393	Vc H4 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28936 or 29320. Portal 38332.

48394	Vc H4 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48395	Vc H4 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48396	Vc H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28938 or 29322. Portal 38333.
48397	Vc H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48398	Vc H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48399	Vc H6 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28940 or 29324. Portal 38334.
48400	Vc H6 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48401	Vc H6 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48402	Vc H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28942 or 29326. Portal 38335.
48403	Vc H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48404	Vc H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48405	Vc H8 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28944 or 29328. Portal 38336.
48406	Vc H8 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48407	Vc H8 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48408	Vc H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28946 or 29330. Portal 38337.
48409	Vc H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48410	Vc H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48411	Vc H10 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28948 or 29332. Portal 38338.
48412	Vc H10 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48413	Vc H10 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48414	Vc H11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28950 or 29334. Portal 38339.

48415	Vc H11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48416	Vc H11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48417	Vc H12 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28952 or 29336. Portal 38340.
48418	Vc H12 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48419	Vc H12 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48420	Vc H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28954 or 29338. Portal 38341.
48421	Vc H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48422	Vc H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48423	Vc H14 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28956 or 29340. Portal 38342.
48424	Vc H14 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48425	Vc H14 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48426	Vc H15 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28958 or 29342. Portal 38343.
48427	Vc H15 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48428	Vc H15 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48429	Vc H16 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28960 or 29344. Portal 38344.
48430	Vc H16 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48431	Vc H16 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48432	Vc H17 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28962 or 29346. Portal 38345.
48433	Vc H17 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48434	Vc H17 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48435	Vc H18 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28964 or 29348. Portal 38346.

48436	Vc H18 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48437	Vc H18 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48438	Vc H19 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28966 or 29350. Portal 38347.
48439	Vc H19 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48440	Vc H19 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48441	Vc H20 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28968 or 29352. Portal 38348.
48442	Vc H20 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48443	Vc H20 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48444	Vc H21 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28970 or 29354. Portal 38349.
48445	Vc H21 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48446	Vc H21 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48447	Vc H22 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28972 or 29356. Portal 38350.
48448	Vc H22 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48449	Vc H22 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48450	Vc H23 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28974 or 29358. Portal 38351.
48451	Vc H23 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48452	Vc H23 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48453	Vc H24 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28976 or 29360. Portal 38352.
48454	Vc H24 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48455	Vc H24 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48456	Vc H25 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 28978 or 29362. Portal 38353.

48457	Vc H25 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48458	Vc H25 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48459	V 3PH 10m Average	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	Metering register 1123. Portal 38354.
48460	V 3PH 10m Minimum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48461	V 3PH 10m Maximum	1	Integer	RO	N	D	Volts/Scale	0 – 32,767	
48462	KW 3PH 10m Average	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	Metering register 1143. Portal 38355.
48463	KW 3PH 10m Minimum	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	
48464	KW 3PH 10m Maximum	1	Integer	RO	N	F	kW/Scale	-32,767 – 32,767	
48465	KVAR 3PH 10m Average	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767	Metering register 1147. Portal 38356.
48466	KVAR 3PH 10m Minimum	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767	
48467	KVAR 3PH 10m Maximum	1	Integer	RO	N	F	kVAr/Scale	-32,767 – 32,767	
48468	Ia 10m Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Metering register 1100. Portal 38357.
48469	Ia 10m Minimum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48470	Ia 10m Maximum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48471	Ib 10m Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Metering register 1101. Portal 38358.
48472	Ib 10m Minimum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48473	Ib 10m Maximum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48474	Ic 10m Average	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	Metering register 1102. Portal 38359.
48475	Ic 10m Minimum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48476	Ic 10m Maximum	1	Integer	RO	N	A	Amps/Scale	0 – 32,767	
48477	Ia H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29574. Portal 38360.

48478	Ia H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48479	Ia H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48480	Ib H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29702. Portal 38361.
48481	Ib H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48482	Ib H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48483	Ic H3 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29830. Portal 38362.
48484	Ic H3 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48485	Ic H3 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48486	Ia H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29578. Portal 38363.
48487	Ia H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48488	Ia H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48489	Ib H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29706. Portal 38364.
48490	Ib H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48491	Ib H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48492	Ic H5 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29834. Portal 38365.
48493	Ic H5 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48494	Ic H5 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48495	Ia H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29582. Portal 38366.
48496	Ia H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48497	Ia H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48498	Ib H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29710. Portal 38367.

48499	Ib H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48500	Ib H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48501	Ic H7 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29838. Portal 38368.
48502	Ic H7 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48503	Ic H7 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48504	Ia H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29586. Portal 38369.
48505	Ia H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48506	Ia H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48507	Ib H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29714. Portal 38370.
48508	Ib H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48509	Ib H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48510	Ic H9 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29842. Portal 38371.
48511	Ic H9 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48512	Ic H9 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48513	Ia H11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29590. Portal 38372.
48514	Ia H11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48515	Ia H11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48516	Ib H 11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29718. Portal 38373.
48517	Ib H 11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48518	Ib H 11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48519	Ic H 11 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29846. Portal 38374.

48520	Ic H 11 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48521	Ic H 11 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48522	Ia H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29594. Portal 38375.
48523	Ia H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48524	Ia H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48525	Ib H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29722. Portal 38376.
48526	Ib H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48527	Ib H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48528	Ic H13 10m Average	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	Metering register 29850. Portal 38377.
48529	Ic H13 10m Minimum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	
48530	Ic H13 10m Maximum	1	Integer	RO	N	-	0.01%	0 – 32,767 (-32,768 if N/A)	

Power Quality Summary

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
48570	Power Quality Index Overall Today	1	Integer	RO	N	-	-	0 – 100	
48571	Power Quality Index Overall Yesterday	1	Integer	RO	N	-	-	0 – 100	
48572	Power Quality Index Overall This Week	1	Integer	RO	N	-	-	0 – 100	
48573	Power Quality Index Overall Last Week	1	Integer	RO	N	-	-	0 – 100	
48574	Power Quality Index Overall This Month	1	Integer	RO	N	-	-	0 – 100	
48575	Power Quality Index Overall Last Month	1	Integer	RO	N	-	-	0 – 100	
48576	Power Quality Index Overall This Year	1	Integer	RO	N	-	-	0 – 100	
48577	Power Quality Index Overall Last Year	1	Integer	RO	N	-	-	0 – 100	
48578	Power Quality Index Overall Trend (30 days)	1	Integer	RO	N	-	-		
48579	Power Quality Index Overall Trend (52 weeks)	1	Integer	RO	N	-	-		
48580	Power Quality Index Over Voltage Today	1	Integer	RO	N	-	-	0 – 100	
48581	Power Quality Index Over Voltage Yesterday	1	Integer	RO	N	-	-	0 – 100	

48582	Power Quality Index Over Voltage This Week	1	Integer	RO	N	-	-	0 – 100	
48583	Power Quality Index Over Voltage Last Week	1	Integer	RO	N	-	-	0 – 100	
48584	Power Quality Index Over Voltage This Month	1	Integer	RO	N	-	-	0 – 100	
48585	Power Quality Index Over Voltage Last Month	1	Integer	RO	N	-	-	0 – 100	
48586	Power Quality Index Over Voltage This Year	1	Integer	RO	N	-	-	0 – 100	
48587	Power Quality Index Over Voltage Last Year	1	Integer	RO	N	-	-	0 – 100	
48588	Power Quality Index Over Voltage Trend (30 days)	1	Integer	RO	N	-	-		
48589	Power Quality Index Over Voltage Trend (52 weeks)	1	Integer	RO	N	-	-		
48590	Power Quality Index Under Voltage Today	1	Integer	RO	N	-	-	0 – 100	
48591	Power Quality Index Under Voltage Yesterday	1	Integer	RO	N	-	-	0 – 100	
48592	Power Quality Index Under Voltage This Week	1	Integer	RO	N	-	-	0 – 100	
48593	Power Quality Index Under Voltage Last Week	1	Integer	RO	N	-	-	0 – 100	
48594	Power Quality Index Under Voltage This Month	1	Integer	RO	N	-	-	0 – 100	
48595	Power Quality Index Under Voltage Last Month	1	Integer	RO	N	-	-	0 – 100	

48596	Power Quality Index Under Voltage This Year	1	Integer	RO	N	-	-	0 – 100	
48597	Power Quality Index Under Voltage Last Year	1	Integer	RO	N	-	-	0 – 100	
48598	Power Quality Index Under Voltage Trend (30 days)	1	Integer	RO	N	-	-		
48599	Power Quality Index Under Voltage Trend (52 weeks)	1	Integer	RO	N	-	-		
48600	Power Quality Index Voltage Imbalance Today	1	Integer	RO	N	-	-	0 – 100	
48601	Power Quality Index Voltage Imbalance Yesterday	1	Integer	RO	N	-	-	0 – 100	
48602	Power Quality Index Voltage Imbalance This Week	1	Integer	RO	N	-	-	0 – 100	
48603	Power Quality Index Voltage Imbalance Last Week	1	Integer	RO	N	-	-	0 – 100	
48604	Power Quality Index Voltage Imbalance This Month	1	Integer	RO	N	-	-	0 – 100	
48605	Power Quality Index Voltage Imbalance Last Month	1	Integer	RO	N	-	-	0 – 100	
48606	Power Quality Index Voltage Imbalance This Year	1	Integer	RO	N	-	-	0 – 100	
48607	Power Quality Index Voltage Imbalance Last Year	1	Integer	RO	N	-	-	0 – 100	
48608	Power Quality Index Voltage Imbalance Trend (30 days)	1	Integer	RO	N	-	-		
48609	Power Quality Index Voltage Imbalance Trend (52 weeks)	1	Integer	RO	N	-	-		

48610	Power Quality Index Waveform Distortion Today	1	Integer	RO	N	-	-	0 – 100	
48611	Power Quality Index Waveform Distortion Yesterday	1	Integer	RO	N	-	-	0 – 100	
48612	Power Quality Index Waveform Distortion This Week	1	Integer	RO	N	-	-	0 – 100	
48613	Power Quality Index Waveform Distortion Last Week	1	Integer	RO	N	-	-	0 – 100	
48614	Power Quality Index Waveform Distortion This Month	1	Integer	RO	N	-	-	0 – 100	
48615	Power Quality Index Waveform Distortion Last Month	1	Integer	RO	N	-	-	0 – 100	
48616	Power Quality Index Waveform Distortion This Year	1	Integer	RO	N	-	-	0 – 100	
48617	Power Quality Index Waveform Distortion Last Year	1	Integer	RO	N	-	-	0 – 100	
48618	Power Quality Index Waveform Distortion Trend (30 days)	1	Integer	RO	N	-	-		
48619	Power Quality Index Waveform Distortion Trend (52 weeks)	1	Integer	RO	N	-	-		
48620	Power Quality Index Frequency Variations Today	1	Integer	RO	N	-	-	0 – 100	
48621	Power Quality Index Frequency Variations Yesterday	1	Integer	RO	N	-	-	0 – 100	
48622	Power Quality Index Frequency Variations This Week	1	Integer	RO	N	-	-	0 – 100	
48623	Power Quality Index Frequency Variations Last Week	1	Integer	RO	N	-	-	0 – 100	

48624	Power Quality Index Frequency Variations This Month	1	Integer	RO	N	-	-	0 – 100	
48625	Power Quality Index Frequency Variations Last Month	1	Integer	RO	N	-	-	0 – 100	
48626	Power Quality Index Frequency Variations This Year	1	Integer	RO	N	-	-	0 – 100	
48627	Power Quality Index Frequency Variations Last Year	1	Integer	RO	N	-	-	0 – 100	
48628	Power Quality Index Frequency Variations Trend (30 days)	1	Integer	RO	N	-	-		
48629	Power Quality Index Frequency Variations Trend (52 weeks)	1	Integer	RO	N	-	-		
48630	Power Quality Index Interruptions Today	1	Integer	RO	N	-	-	0 – 100	
48631	Power Quality Index Interruptions Yesterday	1	Integer	RO	N	-	-	0 – 100	
48632	Power Quality Index Interruptions This Week	1	Integer	RO	N	-	-	0 – 100	
48633	Power Quality Index Interruptions Last Week	1	Integer	RO	N	-	-	0 – 100	
48634	Power Quality Index Interruptions This Month	1	Integer	RO	N	-	-	0 – 100	
48635	Power Quality Index Interruptions Last Month	1	Integer	RO	N	-	-	0 – 100	
48636	Power Quality Index Interruptions This Year	1	Integer	RO	N	-	-	0 – 100	
48637	Power Quality Index Interruptions Last Year	1	Integer	RO	N	-	-	0 – 100	

48638	Power Quality Index Interruptions Trend (30 days)	1	Integer	RO	N	-	-		
48639	Power Quality Index Interruptions Trend (52 weeks)	1	Integer	RO	N	-	-		
48640	Power Quality Index Voltage Sags Today	1	Integer	RO	N	-	-	0 – 100	
48641	Power Quality Index Voltage Sags Yesterday	1	Integer	RO	N	-	-	0 – 100	
48642	Power Quality Index Voltage Sags This Week	1	Integer	RO	N	-	-	0 – 100	
48643	Power Quality Index Voltage Sags Last Week	1	Integer	RO	N	-	-	0 – 100	
48644	Power Quality Index Voltage Sags This Month	1	Integer	RO	N	-	-	0 – 100	
48645	Power Quality Index Voltage Sags Last Month	1	Integer	RO	N	-	-	0 – 100	
48646	Power Quality Index Voltage Sags This Year	1	Integer	RO	N	-	-	0 – 100	
48647	Power Quality Index Voltage Sags Last Year	1	Integer	RO	N	-	-	0 – 100	
48648	Power Quality Index Voltage Sags Trend (30 days)	1	Integer	RO	N	-	-		
48649	Power Quality Index Voltage Sags Trend (52 weeks)	1	Integer	RO	N	-	-		
48650	Power Quality Index Voltage Swells Today	1	Integer	RO	N	-	-	0 – 100	
48651	Power Quality Index Voltage Swells Yesterday	1	Integer	RO	N	-	-	0 – 100	

48652	Power Quality Index Voltage Swells This Week	1	Integer	RO	N	-	-	0 – 100	
48653	Power Quality Index Voltage Swells Last Week	1	Integer	RO	N	-	-	0 – 100	
48654	Power Quality Index Voltage Swells This Month	1	Integer	RO	N	-	-	0 – 100	
48655	Power Quality Index Voltage Swells Last Month	1	Integer	RO	N	-	-	0 – 100	
48656	Power Quality Index Voltage Swells This Year	1	Integer	RO	N	-	-	0 – 100	
48657	Power Quality Index Voltage Swells Last Year	1	Integer	RO	N	-	-	0 – 100	
48658	Power Quality Index Voltage Swells Trend (30 days)	1	Integer	RO	N	-	-		
48659	Power Quality Index Voltage Swells Trend (52 weeks)	1	Integer	RO	N	-	-		
48660	Power Quality Index Flicker Today	1	Integer	RO	N	-	-	0 – 100	
48661	Power Quality Index Flicker Yesterday	1	Integer	RO	N	-	-	0 – 100	
48662	Power Quality Index Flicker This Week	1	Integer	RO	N	-	-	0 – 100	
48663	Power Quality Index Flicker Last Week	1	Integer	RO	N	-	-	0 – 100	
48664	Power Quality Index Flicker This Month	1	Integer	RO	N	-	-	0 – 100	
48665	Power Quality Index Flicker Last Month	1	Integer	RO	N	-	-	0 – 100	

48666	Power Quality Index Flicker This Year	1	Integer	RO	N	-	-	0 – 100	
48667	Power Quality Index Flicker Last Year	1	Integer	RO	N	-	-	0 – 100	
48668	Power Quality Index Flicker Trend (30 days)	1	Integer	RO	N	-	-		
48669	Power Quality Index Flicker Trend (52 weeks)	1	Integer	RO	N	-	-		
48670	Power Quality Index Transient Overvoltages Today	1	Integer	RO	N	-	-	0 – 100	
48671	Power Quality Index Transient Overvoltages Yesterday	1	Integer	RO	N	-	-	0 – 100	
48672	Power Quality Index Transient Overvoltages This Week	1	Integer	RO	N	-	-	0 – 100	
48673	Power Quality Index Transient Overvoltages Last Week	1	Integer	RO	N	-	-	0 – 100	
48674	Power Quality Index Transient Overvoltages This Month	1	Integer	RO	N	-	-	0 – 100	
48675	Power Quality Index Transient Overvoltages Last Month	1	Integer	RO	N	-	-	0 – 100	
48676	Power Quality Index Transient Overvoltages This Year	1	Integer	RO	N	-	-	0 – 100	
48677	Power Quality Index Transient Overvoltages Last Year	1	Integer	RO	N	-	-	0 – 100	
48678	Power Quality Index Transient Overvoltages Trend (30 days)	1	Integer	RO	N	-	-		
48679	Power Quality Index Transient Overvoltages Trend (52 weeks)	1	Integer	RO	N	-	-		

48680	Reserved	50	Integer	RO	N	-	-		

Alarm Summary

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
48810	Over Current Alarm Count Summary	10							See Alarm Summary Template
48820	Over Current Alarm Magnitude Summary	10							See Alarm Summary Template
48830	Over Current Alarm Duration Summary	10							See Alarm Summary Template
48840	Over Voltage Alarm Count Summary	10							See Alarm Summary Template
48850	Over Voltage Alarm Magnitude Summary	10							See Alarm Summary Template
48860	Over Voltage Alarm Duration Summary	10							See Alarm Summary Template
48870	Under Voltage Alarm Count Summary	10							See Alarm Summary Template
48880	Under Voltage Alarm Magnitude Summary	10							See Alarm Summary Template
48890	Under Voltage Alarm Duration Summary	10							See Alarm Summary Template
48900	Voltage Unbalance Alarm Count Summary	10							See Alarm Summary Template
48910	Voltage Unbalance Alarm Magnitude Summary	10							See Alarm Summary Template
48920	Voltage Unbalance Alarm Duration Summary	10							See Alarm Summary Template
48930	Over Voltage THD Alarm Count Summary	10							See Alarm Summary Template
48940	Over Voltage THD Alarm Magnitude Summary	10							See Alarm Summary Template
48950	Over Voltage THD Alarm Duration Summary	10							See Alarm Summary Template
48960	Under Power Factor Alarm Count Summary	10							See Alarm Summary Template
48970	Under Power Factor Alarm Magnitude Summary	10							See Alarm Summary Template
48980	Under Power Factor Alarm Duration Summary	10							See Alarm Summary Template
48990	Over KVA Demand Alarm Count Summary	10							See Alarm Summary Template

49000	Over KVA Demand Alarm Magnitude Summary	10							See Alarm Summary Template
49010	Over KVA Demand Alarm Duration Summary	10							See Alarm Summary Template
49020	Over KW Demand Alarm Count Summary	10							See Alarm Summary Template
49030	Over KW Demand Alarm Magnitude Summary	10							See Alarm Summary Template
49040	Over KW Demand Alarm Duration Summary	10							See Alarm Summary Template
49050	Voltage Sag Alarm Count Summary	10							See Alarm Summary Template
49060	Voltage Sag Alarm Magnitude Summary	10							See Alarm Summary Template
49070	Voltage Sag Alarm Duration Summary	10							See Alarm Summary Template
49080	Voltage Swell Alarm Count Summary	10							See Alarm Summary Template
49090	Voltage Swell Alarm Magnitude Summary	10							See Alarm Summary Template
49100	Voltage Swell Alarm Duration Summary	10							See Alarm Summary Template
49110	Alarm Summary Group 11 Count Summary	10							See Alarm Summary Template
49120	Alarm Summary Group 11 Magnitude Summary	10							See Alarm Summary Template
49130	Alarm Summary Group 11 Duration Summary	10							See Alarm Summary Template
49140	Alarm Summary Group 12 Count Summary	10							See Alarm Summary Template
49150	Alarm Summary Group 12 Magnitude Summary	10							See Alarm Summary Template
49160	Alarm Summary Group 12 Duration Summary	10							See Alarm Summary Template
49170	Alarm Summary Group 13 Count Summary	10							See Alarm Summary Template
49180	Alarm Summary Group 13 Magnitude Summary	10							See Alarm Summary Template
49190	Alarm Summary Group 13 Duration Summary	10							See Alarm Summary Template
49200	Alarm Summary Group 14 Count Summary	10							See Alarm Summary Template

49210	Alarm Summary Group 14 Magnitude Summary	10							See Alarm Summary Template
49220	Alarm Summary Group 14 Duration Summary	10							See Alarm Summary Template
49230	Alarm Summary Group 15 Count Summary	10							See Alarm Summary Template
49240	Alarm Summary Group 15 Magnitude Summary	10							See Alarm Summary Template
49250	Alarm Summary Group 15 Duration Summary	10							See Alarm Summary Template
49260	Alarm Summary Number of Alarms in Each Group	15	Integer	RO	Y	-	-	-	

Alarm Summary Template

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
Base	Today	1	Integer	RO	Y	-	-	-	
Base +1	Yesterday	1	Integer	RO	Y	-	-	-	
Base +2	This Week	1	Integer	RO	Y	-	-	-	
Base +3	Last Week	1	Integer	RO	Y	-	-	-	
Base +4	This Month	1	Integer	RO	Y	-	-	-	
Base +5	Last Month	1	Integer	RO	Y	-	-	-	
Base +6	This Year	1	Integer	RO	Y	-	-	-	
Base +7	Last Year	1	Integer	RO	Y	-	-	-	
Base +8	Trend (30 days)	1	Integer	RO	Y	-	0.01%	-10000 – 10000	
Base +9	Trend (52 weeks)	1	Integer	RO	Y	-	0.01%	-10000 – 10000	

1s Metering – Current

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57600	Current, Phase A	2	Float	RO	N	-	Amps		RMS
57602	Current, Phase B	2	Float	RO	N	-	Amps		RMS
57604	Current, Phase C	2	Float	RO	N	-	Amps		RMS
57606	Current, Neutral	2	Float	RO	N	-	Amps		RMS 4-wire system only
57608	Current, Ground	2	Float	RO	N	-	Amps		RMS 4-wire system only
57610	Current, 3-Phase Average	2	Float	RO	N	-	Amps		Calculated mean of Phases A, B & C

1s Metering – Voltage

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57612	Voltage, A-B	2	Float	RO	N	-	Volts		RMS Voltage measured between A & B
57614	Voltage, B-C	2	Float	RO	N	-	Volts		RMS Voltage measured between B & C
57616	Voltage, C-A	2	Float	RO	N	-	Volts		RMS Voltage measured between C & A
57618	Voltage, L-L Average	2	Float	RO	N	-	Volts		RMS 3 Phase Average L-L Voltage
57620	Voltage, A-N	2	Float	RO	N	-	Volts		RMS Voltage measured between A & N 4-wire system only
57622	Voltage, B-N	2	Float	RO	N	-	Volts		RMS Voltage measured between B & N 4-wire system only
57624	Voltage, C-N	2	Float	RO	N	-	Volts		RMS Voltage measured between C & N 4-wire system only
57626	Voltage, N-G	2	Float	RO	N	-	Volts		RMS Voltage measured between N & G 4-wire system with 4 element metering only
57628	Voltage, L-N Average	2	Float	RO	N	-	Volts		RMS 3-Phase Average L-N Voltage

1s Metering – Power

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57630	Real Power, Phase A	2	Float	RO	N	-	W		Real Power (PA) 4-wire system only
57632	Real Power, Phase B	2	Float	RO	N	-	W		Real Power (PB) 4-wire system only
57634	Real Power, Phase C	2	Float	RO	N	-	W		Real Power (PC) 4-wire system only
57636	Real Power, Total	2	Float	RO	N	-	W		4-wire system = PA+PB+PC 3-wire system = 3-Phase real power
57638	Reactive Power, Phase A	2	Float	RO	N	-	VAr		Reactive Power (QA) 4-wire system only
57640	Reactive Power, Phase B	2	Float	RO	N	-	VAr		Reactive Power (QB) 4-wire system only
57642	Reactive Power, Phase C	2	Float	RO	N	-	VAr		Reactive Power (QC) 4-wire system only
57644	Reactive Power, Total	2	Float	RO	N	-	VAr		4-wire system = QA+QB+QC 3 wire system = 3-Phase reactive power
57646	Apparent Power, Phase A	2	Float	RO	N	-	VA		Apparent Power (SA) 4-wire system only
57648	Apparent Power, Phase B	2	Float	RO	N	-	VA		Apparent Power (SB) 4-wire system only
57650	Apparent Power, Phase C	2	Float	RO	N	-	VA		Apparent Power (SC) 4-wire system only
57652	Apparent Power, Total	2	Float	RO	N	-	VA		4-wire system = SA+SB+SC 3-wire system = 3-Phase apparent power

1s Metering – Power Factor

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57654	True Power Factor, Phase A	2	Float	RO	N	-			Derived using the complete harmonic content of real and apparent power. 4-wire system only
57656	True Power Factor, Phase B	2	Float	RO	N	-			Derived using the complete harmonic content of real and apparent power. 4-wire system only

57658	True Power Factor, Phase C	2	Float	RO	N	-			Derived using the complete harmonic content of real and apparent power. 4-wire system only
57660	True Power Factor, Total	2	Float	RO	N	-			Derived using the complete harmonic content of real and apparent power

1s Metering – Frequency

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57662	Frequency	2	Float	RO	N	-	Hz		

Energy

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57700	Energy, Real In	2	Float	RO	N	-	WH		
57702	Energy, Reactive In	2	Float	RO	N	-	VArH		
57704	Energy, Real Out	2	Float	RO	N	-	WH		
57706	Energy, Reactive Out	2	Float	RO	N	-	VArH		
57708	Energy, Real Total (signed/absolute)	2	Float	RO	N	-	WH		
57710	Energy, Reactive Total (signed/absolute)	2	Float	RO	N	-	VArH		
57712	Energy, Apparent	2	Float	RO	N	-	VAH		
57714	Energy, Conditional Real In	2	Float	RO	N	-	WH		
57716	Energy, Conditional Reactive In	2	Float	RO	N	-	VArH		
57718	Energy, Conditional Real Out	2	Float	RO	N	-	WH		
57720	Energy, Conditional Reactive Out	2	Float	RO	N	-	VArH		

57722	Energy, Conditional Apparent	2	Float	RO	N	-	VAH		
57724	Energy, Incremental Real In, Last Complete Interval	2	Float	RO	N	-	WH		
57726	Energy. Incremental Reactive In, Last Complete Interval	2	Float	RO	N	-	VArH		
57728	Energy, Incremental Real Out, Last Complete Interval	2	Float	RO	N	-	WH		
57730	Energy, Incremental Reactive Out, Last Complete Interval	2	Float	RO	N	-	VArH		
57732	Energy, Incremental Apparent, Last Complete Interval	2	Float	RO	N	-	VAH		
57734	Reserved	2	Float	RO	N	-	-		
57736	Energy, Incremental Real In, Present Interval	2	Float	RO	N	-	WH		
57738	Energy. Incremental Reactive In, Present Interval	2	Float	RO	N	-	VArH		
57740	Energy, Incremental Real Out, Present Interval	2	Float	RO	N	-	WH		
57742	Energy, Incremental Reactive Out, Present Interval	2	Float	RO	N	-	VArH		
57744	Energy, Incremental Apparent, Present Interval	2	Float	RO	N	-	VAH		
57746	Energy, Reactive, Quadrant 1	2	Float	RO	N	-	VArH		
57748	Energy, Reactive, Quadrant 2	2	Float	RO	N	-	VArH		
57750	Energy, Reactive, Quadrant 3	2	Float	RO	N	-	VArH		
57752	Energy, Reactive, Quadrant 4	2	Float	RO	N	-	VArH		
57754	Cumulative Usage Input Channel #1	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57756	Cumulative Usage Input Channel #2	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57758	Cumulative Usage Input Channel #3	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57760	Cumulative Usage Input Channel #4	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57762	Cumulative Usage Input Channel #5	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.

57764	Cumulative Usage Input Channel #6	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57766	Cumulative Usage Input Channel #7	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57768	Cumulative Usage Input Channel #8	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57770	Cumulative Usage Input Channel #9	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57772	Cumulative Usage Input Channel #10	2	Float	RO	N	-	(2)		The user must identify the units to be used in the accumulation.
57774	Energy, Real 3-Phase Total Usage This Hour	2	Float	RO	N	-	WH		
57776	Energy, Real 3-Phase Total Usage Last Hour	2	Float	RO	N	-	WH		
57778	Energy, Real 3-Phase Total Usage Today	2	Float	RO	N	-	WH		
57780	Energy, Real 3-Phase Total Usage Yesterday	2	Float	RO	N	-	WH		
57782	Energy, Real 3-Phase Total Usage This Week	2	Float	RO	N	-	WH		
57784	Energy, Real 3-Phase Total Usage Last Week	2	Float	RO	N	-	WH		
57786	Energy, Real 3-Phase Total Usage This Month	2	Float	RO	N	-	WH		
57788	Energy, Real 3-Phase Total Usage Last Month	2	Float	RO	N	-	WH		
57790	Energy, Apparent 3-Phase Total Usage This Hour	2	Float	RO	N	-	VAH		
57792	Energy, Apparent 3-Phase Total Usage Last Hour	2	Float	RO	N	-	VAH		
57794	Energy, Apparent 3-Phase Total Usage Today	2	Float	RO	N	-	VAH		
57796	Energy, Apparent 3-Phase Total Usage Yesterday	2	Float	RO	N	-	VAH		
57798	Energy, Apparent 3-Phase Total Usage This Week	2	Float	RO	N	-	VAH		
57800	Energy, Apparent 3-Phase Total Usage Last Week	2	Float	RO	N	-	VAH		
57802	Energy, Apparent 3-Phase Total Usage This Month	2	Float	RO	N	-	VAH		
57804	Energy, Apparent 3-Phase Total Usage Last Month	2	Float	RO	N	-	VAH		

57806	Input Metering Channel 1 Usage This Hour	2	Float	RO	N	-	(2)		
57808	Input Metering Channel 1 Usage Last Hour	2	Float	RO	N	-	(2)		
57810	Input Metering Channel 1 Usage Today	2	Float	RO	N	-	(2)		
57812	Input Metering Channel 1 Usage Yesterday	2	Float	RO	N	-	(2)		
57814	Input Metering Channel 1 Usage This Week	2	Float	RO	N	-	(2)		
57816	Input Metering Channel 1 Usage Last Week	2	Float	RO	N	-	(2)		
57818	Input Metering Channel 1 Usage This Month	2	Float	RO	N	-	(2)		
57820	Input Metering Channel 1 Usage Last Month	2	Float	RO	N	-	(2)		
57822	Input Metering Channel 2 Usage This Hour	2	Float	RO	N	-	(2)		
57824	Input Metering Channel 2 Usage Last Hour	2	Float	RO	N	-	(2)		
57826	Input Metering Channel 2 Usage Today	2	Float	RO	N	-	(2)		
57828	Input Metering Channel 2 Usage Yesterday	2	Float	RO	N	-	(2)		
57830	Input Metering Channel 2 Usage This Week	2	Float	RO	N	-	(2)		
57832	Input Metering Channel 2 Usage Last Week	2	Float	RO	N	-	(2)		
57834	Input Metering Channel 2 Usage This Month	2	Float	RO	N	-	(2)		
57836	Input Metering Channel 2 Usage Last Month	2	Float	RO	N	-	(2)		
57838	Input Metering Channel 3 Usage This Hour	2	Float	RO	N	-	(2)		
57840	Input Metering Channel 3 Usage Last Hour	2	Float	RO	N	-	(2)		
57842	Input Metering Channel 3 Usage Today	2	Float	RO	N	-	(2)		
57844	Input Metering Channel 3 Usage Yesterday	2	Float	RO	N	-	(2)		
57846	Input Metering Channel 3 Usage This Week	2	Float	RO	N	-	(2)		

57848	Input Metering Channel 3 Usage Last Week	2	Float	RO	N	-	(2)		
57850	Input Metering Channel 3 Usage This Month	2	Float	RO	N	-	(2)		
57852	Input Metering Channel 3 Usage Last Month	2	Float	RO	N	-	(2)		
57854	Input Metering Channel 4 Usage This Hour	2	Float	RO	N	-	(2)		
57856	Input Metering Channel 4 Usage Last Hour	2	Float	RO	N	-	(2)		
57858	Input Metering Channel 4 Usage Today	2	Float	RO	N	-	(2)		
57860	Input Metering Channel 4 Usage Yesterday	2	Float	RO	N	-	(2)		
57862	Input Metering Channel 4 Usage This Week	2	Float	RO	N	-	(2)		
57864	Input Metering Channel 4 Usage Last Week	2	Float	RO	N	-	(2)		
57866	Input Metering Channel 4 Usage This Month	2	Float	RO	N	-	(2)		
57868	Input Metering Channel 4 Usage Last Month	2	Float	RO	N	-	(2)		
57870	Energy, Real 3-Phase Total Usage – First Shift – Today	2	Float	RO	N	-	WH		
57872	Energy, Real 3-Phase Total Usage – Second Shift – Today	2	Float	RO	N	-	WH		
57874	Energy, Real 3-Phase Total Usage – Third Shift – Today	2	Float	RO	N	-	WH		
57876	Energy, Real 3-Phase Total Usage – First Shift – Yesterday	2	Float	RO	N	-	WH		
57878	Energy, Real 3-Phase Total Usage – Second Shift – Yesterday	2	Float	RO	N	-	WH		
57880	Energy, Real 3-Phase Total Usage – Third Shift – Yesterday	2	Float	RO	N	-	WH		
57882	Energy, Real 3-Phase Total Usage – First Shift – This Week	2	Float	RO	N	-	WH		
57884	Energy, Real 3-Phase Total Usage – Second Shift – This Week	2	Float	RO	N	-	WH		
57886	Energy, Real 3-Phase Total Usage – Third Shift – This Week	2	Float	RO	N	-	WH		
57888	Energy, Real 3-Phase Total Usage – First Shift – Last Week	2	Float	RO	N	-	WH		

57890	Energy, Real 3-Phase Total Usage – Second Shift – Last Week	2	Float	RO	N	-	WH		
57892	Energy, Real 3-Phase Total Usage – Third Shift – Last Week	2	Float	RO	N	-	WH		
57894	Energy, Real 3-Phase Total Usage – First Shift – This Month	2	Float	RO	N	-	WH		
57896	Energy, Real 3-Phase Total Usage – Second Shift – This Month	2	Float	RO	N	-	WH		
57898	Energy, Real 3-Phase Total Usage – Third Shift – This Month	2	Float	RO	N	-	WH		
57900	Energy, Real 3-Phase Total Usage – First Shift – Last Month	2	Float	RO	N	-	WH		
57902	Energy, Real 3-Phase Total Usage – Second Shift – Last Month	2	Float	RO	N	-	WH		
57904	Energy, Real 3-Phase Total Usage – Third Shift – Last Month	2	Float	RO	N	-	WH		
57906	Energy, Apparent 3-Phase Total Usage – First Shift – Today	2	Float	RO	N	-	VAH		
57908	Energy, Apparent 3-Phase Total Usage – Second Shift – Today	2	Float	RO	N	-	VAH		
57910	Energy, Apparent 3-Phase Total Usage – Third Shift – Today	2	Float	RO	N	-	VAH		
57912	Energy, Apparent 3-Phase Total Usage – First Shift – Yesterday	2	Float	RO	N	-	VAH		
57914	Energy, Apparent 3-Phase Total Usage – Second Shift – Yesterday	2	Float	RO	N	-	VAH		
57916	Energy, Apparent 3-Phase Total Usage – Third Shift – Yesterday	2	Float	RO	N	-	VAH		
57918	Energy, Apparent 3-Phase Total Usage – First Shift – This Week	2	Float	RO	N	-	VAH		
57920	Energy, Apparent 3-Phase Total Usage – Second Shift – This Week	2	Float	RO	N	-	VAH		
57922	Energy, Apparent 3-Phase Total Usage – Third Shift – This Week	2	Float	RO	N	-	VAH		
57924	Energy, Apparent 3-Phase Total Usage – First Shift – Last Week	2	Float	RO	N	-	VAH		
57926	Energy, Apparent 3-Phase Total Usage – Second Shift – Last Week	2	Float	RO	N	-	VAH		
57928	Energy, Apparent 3-Phase Total Usage – Third Shift – Last Week	2	Float	RO	N	-	VAH		
57930	Energy, Apparent 3-Phase Total Usage – First Shift – This Month	2	Float	RO	N	-	VAH		

57932	Energy, Apparent 3-Phase Total Usage – Second Shift – This Month	2	Float	RO	N	-	VAH		
57934	Energy, Apparent 3-Phase Total Usage – Third Shift – This Month	2	Float	RO	N	-	VAH		
57936	Energy, Apparent 3-Phase Total Usage – First Shift – Last Month	2	Float	RO	N	-	VAH		
57938	Energy, Apparent 3-Phase Total Usage – Second Shift – Last Month	2	Float	RO	N	-	VAH		
57940	Energy, Apparent 3-Phase Total Usage – Third Shift – Last Month	2	Float	RO	N	-	VAH		

THD

Reg	Name	Size	Type	Access	NV	Scale	Units	Range	Notes
57942	THD/thd Current, Phase A	2	Integer	RO	N	-	-	-	
57944	THD/thd Current, Phase B	2	Integer	RO	N	-	-	-	
57946	THD/thd Current, Phase C	2	Integer	RO	N	-	-	-	
57948	THD/thd Current, Phase N	2	Integer	RO	N	-	-	-	
57950	THD/thd Voltage, Phase A-N	2	Integer	RO	N	-	-	-	
57952	THD/thd Voltage, Phase B-N	2	Integer	RO	N	-	-	-	
57954	THD/thd Voltage, Phase C-N	2	Integer	RO	N	-	-	-	
57956	THD/thd Voltage, Phase A-B	2	Integer	RO	N	-	-	-	
57958	THD/thd Voltage, Phase B-C	2	Integer	RO	N	-	-	-	
57960	THD/thd Voltage, Phase C-A	2	Integer	RO	N	-	-	-	
57962	THD/thd Voltage, 3-Phase Average L-N	2	Integer	RO	N	-	-	-	
57964	THD/thd Voltage, 3-Phase Average L-L	2	Integer	RO	N	-	-	-	
57966	Reserved	34	Integer	RO	N	-	-	-	Reserved for future development

(2) As defined by the user in base register (register 2200 for Input Channel #1).

Commands

Command	Parameters	Notes
1110	None	Restart System – Soft
1115	None	Restart System – Hard Reset
1120	(8001) Bitmap of systems to reset	Restart System – Hard Reset with Memory Clear Bitmap of systems to reset: Bit 00 = Utility Registers Bit 01 = Reserved Bit 02 = CMPL Bit 03 = Config Display Bit 04 = Commands Bit 05 = Files Bit 06 = Alarms Bit 07 = I/O Points Bit 08 = Config Meter Bit 09 = Administrative Ctl Parameter value of 9999 causes meter to reset all registers to meter defaults and format the disk-on-chip.
1130	None	Set factory default configuration for logs and alarms
1210	None	Reset Communication Channel Counters
1211	None	Reset Email System Status Counters
1310	(8001) Month (8002) Day (8003) Year (8004) Hour (8005) Minute (8006) Second	Set System Time and Date, 6 Register Format (milliseconds = 0)
1311	(8001) Month (Upper)/Day(Lower) (8002) Year (Upper)/Hour(Lower) (8003) Minute (Upper)/Sec(Lower)	Set System Time and Date, 3 Register format (milliseconds = 0)
1410	None	Disable revenue security switch
1411	None	Enable revenue security switch

1510	None	Clear Alarm Queue
1515	None	Clear all Alarm Counters
1520	None	Acknowledge All Alarms in Queue
2801	None	Check Wiring Connection
3210	None	Disable All Alarms
3220	(8001 – 8012) Bitmap of Alarm Positions	Disable Specified Alarms Alarm 1 is least significant bit in 12th register.
3230	(8001) Test Register (8002) Type/Level (8019) Data Buffer Location	Return Alarm Configuration Data Template In Registers Returns alarm position number followed by 20-register template data.
3231	(8001) Test Register (8002) Type/Level (8019) Data Buffer Location	Return Alarm Configuration Data Template In Use Returns alarm position number followed by 20-register template data.
3240	(8001) IO Point Number (8019) Data Buffer Location	Display IO Point Configuration
3310	(8001) Discrete Output Point	Configure Relay for External Control
3311	(8001) Discrete Output Point	Configure Relay for Internal Control
3320	(8001) Discrete Output Point	De-Energize Designated Relay
3321	(8001) Discrete Output Point	Energize Designated Relay
3330	(8001) Discrete Output Point	Release Specified Relay from Latched Condition
3331	(8001) 9999	Release All Relays from Latched Condition
3340	(8001) Discrete Output Point	Release Specified Relay from Override Control
3341	(8001) Discrete Output Point	Place Specified Relay under Override Control
3350	(8001) 9999	De-Energize All Relays
3351	(8001) 9999	Energize All Relays
3361	(8001) Discrete Output Point	Reset Operation Counter for Specified Relay

3362	(8001) Discrete Output Point	Reset On-Time for Specified Relay
3363	None	Reset Operation Counter For All Relays
3364	None	Reset On-Time For All Relays
3365	(8001) Discrete Input Point	Reset Operation Counter for Specified Input
3366	(8001) Discrete Input Point	Reset On-Time for Specified Input
3367	None	Reset Operation Counter for All Inputs
3368	None	Reset On-Time for All Inputs
3369	None	Reset All Counters and On-Time for All I/O
3370	(8001) Analog Output Point	Disable Specified Analog Output
3371	(8001) Analog Output Point	Enable Specified Analog Output
3380	(8001) 9999	Disable All Analog Outputs
3381	(8001) 9999	Enable All Analog Outputs
4110	None	Reset Min/Max Metered Values
4210	(8001) Log to reset 1 = Voltage 2 = Current 3 = Both	Reset Register-Based Disturbance Event Logs
4220	(8001) Items to reset 1 = Transient event log 2 = Sorted transient counters 3 = Both	Reset Register-Based Transient Event Log
4230	None	Reset Register-Based Event log
4310	None	Reset Uptime Statistics
5110	None	Reset All Demands

5111	None	Reset Current Demand
5112	None	Reset Voltage Demand
5113	None	Reset Power Demand
5114	None	Reset Input Demand
5115	None	Reset Generic1 Demand
5116	None	Reset Generic2 Demands
5210	None	Reset All Min/Max Demand
5211	None	Reset Current Min/Max Demand
5212	None	Reset Voltage Min/Max Demand
5213	None	Reset Power Min/Max Demand
5214	None	Reset Input Min/Max Demand
5215	None	Reset Generic1 Min/Max Demand
5216	None	Reset Generic2 Min/Max Demand
5217	None	Reset Cumulative Power Demand
5310	None	Reset Average/Min/Max System
5910	(8001) Bitmap of demand systems	Start New Demand Interval
6209	(8019) IO Data Pointer	Preset Accumulated Energies Command requires the IO Data Pointer to point to registers where energy preset values are entered. All Accumulated energy values must be entered in the order in which they occur in registers 1700 – 1727.
6210	None	Clear All Energies
6211	None	Clear Accumulated Energies
6212	None	Clear Conditional Energies

6213	None	Clear Incremental Energies
6214	(8001) Channel to reset 9999 = all channels	Clear Input Metering Accumulation
6215	(8001) Bitmap of channels to reset	Clear Energy/Input Metering Summaries
6216	None	Clear Shift Energies
6320	None	Disable Conditional Energy Accumulation
6321	None	Enable Conditional Energy Accumulation
6910	None	Start New Incremental Energy Interval
7510	(8001) File Bit Map # 1-16	Trigger Data Log Entry per bitmap
7511	(8001) File Number	Trigger Single Data Log Entry
9020	None	Open Setup Session
9021	(8001) Save/Discard (1 = save)	Close Setup Session
9030	(8001) Email Buffer (8002) Status	ECC Report of Email Status
9031	(8001) Email Address Bitmap	Send Test Email
9032	(8001) Register number whre email begins (8002) Number of lines in body of Email (8003) Email Address bitmap	Send CUL Email
9033	(8001) Email buffer to clear	Clear Email Buffer
9034	None	Save Email Configuration and Reset Email System
9035	None	Reset Email Configuration and Reset Email System
10000	(8001) Trending channel to reset	Reset Trending Data Parameter of 9999 resets all trending channels.
10030	(8001) 9999	Master Meter Initialization Resets all energy, demand, min/max, average/min/max, data logs, waveform capture files, alarms, trending & forecasting, and alarm setpoint learning.
10100	(8001) Bitmap of channels to reset	Reset Energy Trending Data

10200	(8001) Bitmap of channels to reset	Reset Alarm Trending Data
10201	None	Reset Alarm Trending Configuration to Default
10202	None	Reset Disturbance Direction Detection registers including event counters
10300	(8001) Bitmap of channels to reset	Reset Power Quality Summary Data
10301	None	Reset Power Quality Summary Setpoints to Defaults
10400	None	Reset Worst Harmonic/Interharmonic Values in IEC61000 Data
10401	None	Reset Min/Max Values in IEC61000 Data
11100	(8001) 9999	Reset EN50160 Evaluation

Templates
Date/Time

*Note: Date format is a 4 (6-byte) register compressed format. (Year 2001 is represented as 101 in the year byte.)

Register 0:Hi Byte = Month (1 – 12) ; Register 0:Lo Byte = Day (1 – 31)
Register 1:Hi Byte = Year (0 – 199) ; Register 1:Lo Byte = Hour (0 – 23)
Register 2:Hi Byte = Minute (0 – 59) ; Register 2:Lo Byte = Second (0 – 59)
Register 3 = Millisecond

ASCII Characters

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	SOH	STX	ETX	EOT	ENQ	ACK	BEL	BS	HT	LF	VT	FF	CR	SO	SI
1	DLE	DC1	DC2	DC3	DC4	NAK	SYN	ETB	CAN	EM	SUB	ESC	FS	GS	RS	US
2	SP	!	"	#	$	%	&	'	(	)	*	+	,	–	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{	|	}	~	DEL

Units Codes

Code	Abbreviation	Description	Code	Abbreviation	Description	Code	Abbreviation	Description
0		No Units	32	Bytes (RAM)	Bytes	65	lb/hr	pound/hour
1	%	Percentage	33	kBytes (RAM)	Kilobytes	66	ton/hr	ton/hour
2	°C	Degrees Celsius	34	$	Dollars	67	kg/hr	Kilogram/hour
3	°F	Degrees Fahrenheit	35	gal	gallons	68	in. Hg	inch of Mercury
4	Deg	Degrees Angular	36	gal/hr	gallons/hour	69	kPa	kiloPascals
5	Hz	Hertz	37	gal/min	gallons/minute	70	%RH	percentage of relative humidity
6	A	amperes	38	cfm	cubic feet/min	71	MPH	miles per hour
7	kA	Kilo Amperes	39	PSI	PSI	72	m/sec	meters/sec
8	V	Volts	40	BTU	BTU	73	mV/cal/(cm²/min)	milliVolts/calorie/(square centimeters/min)
9	kV	Kilo Volts	41	L	liters	74	in	inches
10	MV	Mega Volts	42	ton-hours	ton-hours	75	mm	millimeter
11	W	Watts	43	l/hr	liters/hour	76	GWH	GigaWatt-Hour
12	kW	Kilowatts	44	l/min	liters/min	77	GVARH	Reactive Giga Volt-Ampere Hour
13	MW	Megawatts	45	€	Euros	78	GVAH	Giga Volt-Ampere Hours
14	VAR	Volt-Ampere Reactive	46	ms	Milliseconds	79	AH	Ampere-Hours

15	kVAR	Kilo Volt-Ampere Reactive	47	m^3	cubic-meters	80	kAH	Kiloamp-Hours
16	MVAR	Mega Volt-Ampere Reactive	48	m^3/sec	cubic-meters/sec	81	Therm/hr	Therm/hour
17	VA	Volt-Amperes	49	m^3/min	cubic-meters/min			
18	kVA	Kilo Volt-Amperes	50	m^3/hr	cubic-meters/hour			
19	MVA	Mega Volt-Amperes	51	Pa	pascals			
20	WH	Watt-Hour	52	Bars	bar			
21	kWH	Kilowatt-Hour	53	RPM	Revolutions/min			
22	MWH	Megawatt-Hour	55	BTU/hr	BTU/hour			
23	VARH	Reactive Volt-Ampere Hour	56	PSIG	Pounds/square inch gauge			
24	kVARH	Reactive Kilo Volt-Ampere Hour	57	SCFM	Standard cubic feet/min			
25	MVARH	Reactive Mega Volt-Ampere Hour	58	MCF	Thousand cubic feet			
26	VAH	Volt-Ampere Hours	59	Therm	Therm			
27	kVAH	Kilo Volt-Ampere Hours	60	SCFH	Standard cubic feet/hour			
28	MVAH	Mega Volt-Ampere Hours	61	PSIA	pounds/square inch absolute			
29	Seconds	Seconds	62	lbs	pounds			
30	Minutes	Minutes	63	kg	Kilogram			
31	Hours	Hours	64	klbs	Kilopounds			

Data Types

Bit Numbering - 16-bit register
MSB 15 14 13 12 11 10 09 08 | 07 06 05 04 03 02 01 00 LSB

Integer	Standard 16-bit integer representation
Char	8-bit data format, data value starts with LSB (data value 1 -> bits 0-7, data value 2 -> bits 8-15)
Bitmap	Each bit represents a data value, starts with least significant bit (bit 0)
Long	then convert to a 32-bit integer value (eg. *16-bit hex value -> Register1 = 0x0A56, Register2 = 0x0010; 32-bit integer value = 0x00100A56 = 1,051,222*)
Mod10	Each register represents a value from 0-9999, these register values are then appended to one another (number of registers is dependent on size of the Mod10 value) to form a data value (first register is least significant). Mod10 Value = (Register4 * 1000000000000) + (Register3 * 100000000) + (Register2 * 10000) + (Register1)
size 2	Range from -99,999,999 - 99,999,999 -> (eg. *Register 1 = 2842, Register 2 = 826; Mod10 value = 8,262,842*)
size 3	Range from -999,999,999,999 - 999,999,999,999 -> (eg. *Register 1 = 2842, Register 2 = 826, Register 3 = 5341; Mod10 value = 534,108,262,842*)
size 4	Range from -9,999,999,999,999,999 - 9,999999,999,999,999 -> (eg. *Register 1 = 2842, Register 2 = 826, Register 3 = 5341, Register 4 = 7621; Mod10 value = 7,621,534,108,262,842*)
Float	32-bit floating point representation. Uses 2 registers, first register is least significant. Must combine the 16-bit hex (or binary) values of the registers then convert to a 32-bit floating point value (easiest to use a floating point converter utility) (eg. *16-bit hex value -> Register1 = 0xA419 (hex), Register2 = 0x4374 (hex); 32-bit integer value = 0x4374A419 (hex) = 244.641 (float)*)