

Power Meter Register Listing

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<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
<u>REAL TIME METERED VALUES</u>							
1000	Update Interval	R			Thousandths of a second	0 – 10,000	The amount of time between the last update of metered values and the update previous to that
1001	Frequency	R		F	Hertz/Scale F	4500 – 6600	Frequency of circuit being monitored. If the frequency is out of range, this register will have a value of -32,768.
1002	Reserved						
1003	Phase A Current	R		A	Amps/Scale A	0 – 32,767	Measured RMS Phase A Current
1004	Phase B Current	R		A	Amps/Scale A	0 – 32,767	Measured RMS Phase B Current
1005	Phase C Current	R		A	Amps/Scale A	0 – 32,767	Measured RMS Phase C Current
1006	Neutral Current, Calculated	R	√	A	Amps/Scale A	0 – 32,767	One-cycle RMS Neutral Current, Calculated (Type 40 system only) (PM-620 and PM-650 only)
1007-1009	Reserved						
1010	Current Unbalance, Phase A	R			Tenths of Percent	0 - +/-1000	Percent Current Unbalance, Phase A (PM-650 only)
1011	Current Unbalance, Phase B	R			Tenths of Percent	0 - +/-1000	Percent Current Unbalance, Phase B (PM-650 only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1012	Current Unbalance, Phase C	R			Tenths of Percent	0 - +/-1000	Percent Current Unbalance, Phase C (PM-650 only)
1013	Current Unbalance, Worst	R			Tenths of Percent	0 - +/-1000	Percent Current Unbalance, Worst (PM-650 only)
1014	Phase A-B Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases A and B (3-wire system only)
1015	Phase B-C Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases C and B (3-wire system only)
1016	Phase C-A Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases C and A (3-wire system only)
1017	Reserved						
1018	Phase A-N Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases A and Neutral (4-wire system only)
1019	Phase B-N Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases B and Neutral (4-wire system only)
1020	Phase C-N Voltage	R		D	Volts/Scale D	0 – 32,767	Fundamental RMS Voltage between Phases C and Neutral (4-wire system only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1021	Reserved						
1022	Voltage Unbalance, Phase A-B	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase A-B (PM-650 only)
1023	Voltage Unbalance, Phase B-C	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase B-C (PM-650 only)
1024	Voltage Unbalance, Phase C-A	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase C-A (PM-650 only)
1025	Voltage Unbalance, Worst L-L	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Worst Line to Line Depends on absolute value (PM-650 only)
1026	Voltage Unbalance, Phase A-N	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase A-N (4-wire only) (PM-650 only)
1027	Voltage Unbalance, Phase B-N	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase B-N (4-wire only) (PM-650 only)
1028	Voltage Unbalance, Phase C-N	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Phase C-N (4-wire only) (PM-650 only)
1029	Voltage Unbalance, Worst L-N	R			Tenths of Percent	0 - +/-1000	Percent Voltage Unbalance, Worst L-N Depends on absolute value (4-wire only) (PM-650 only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1030	Reserved						
1031	True Power Factor, Phase A	R			Thousands	-100 to +1000 to +100	“True” Power Factor for Phase A, derived using the complete harmonic content of real and apparent power (4-wire system only)
1032	True Power Factor, Phase B	R			Thousands	-100 to +1000 to +100	“True” Power Factor for Phase B, derived using the complete harmonic content of real and apparent power (4-wire system only)
1033	True Power Factor, Phase C	R			Thousands	-100 to +1000 to +100	“True” Power Factor for Phase C, derived using the complete harmonic content of real and apparent power (4-wire system only)
1034	True Power Factor, Total	R			Thousands	-100 to +1000 to +100	“True” Total Power Factor for all 3 Phases, derived using the complete harmonic content of the total real and apparent power (4-wire system only)
1035 - 1038	Reserved						
1039	Real Power, Phase A	R	E		kW/Scale E	0 – +/-32,767	Real Power on Phase A (PA) (4-wire system only)
1040	Real Power, Phase B	R	E		kW/Scale E	0 – +/-32,767	Real Power on Phase B (PB) (4-wire system only)
1041	Real Power, Phase C	R	E		kW/Scale E	0 – +/-32,767	Real Power on Phase C (PC) (4-wire system only)
1042	Real Power, Total	R	E		kW/Scale E	0 – +/-32,767	Real Power Total (PA+PB+PC) (4-wire system) (3-wire system = 3-phase real power)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1043	Reactive Power, Phase A	R		E	kVar/Scale E	0 – +/-32,767	Reactive Power on Phase A (QA) (4-wire system only)
1044	Reactive Power, Phase B	R		E	kVar/Scale E	0 – +/-32,767	Reactive Power on Phase B (QB) (4-wire system only)
1045	Reactive Power, Phase C	R		E	kVar/Scale E	0 – +/-32,767	Reactive Power on Phase C (QC) (4-wire system only)
1046	Reactive Power, Total	R		E	kVar/Scale E	0 – +/-32,767	Reactive Power Total (QA+QB+QC) (4-wire system) (3-wire system = 3-phase reactive power)
1047	Apparent Power, Phase A	R		E	kVA/Scale E	0 – +/-32,767	Apparent Power on Phase A (SA) (4-wire system only)
1048	Apparent Power, Phase B	R		E	kVA /Scale E	0 – +/-32,767	Apparent Power on Phase B (SB) (4-wire system only)
1049	Apparent Power, Phase C	R		E	kVA /Scale E	0 – +/-32,767	Apparent Power on Phase C (SC) (4-wire system only)
1050	Apparent Power, Total	R		E	kVA /Scale E	0 – +/-32,767	Apparent Power Total (SA+SB+SC) (4-wire system) (3-wire system = 3-phase apparent power)
1051	THD/thd Current, Phase A	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion, Phase A Current (PM-620 and PM-650 only)
1052	THD/thd Current, Phase B	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion, Phase B Current (PM-620 and PM-650 only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1053	THD/thd Current, Phase C	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion, Phase C Current (PM-620 and PM-650 only)
1054	Reserved						
1055	THD/thd Voltage, Phase A	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion (4-wire = Phase A-N) (3-wire = Phase A-B) (PM-620 and PM-650 only)
1056	THD/thd Voltage, Phase B	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion (4-wire = Phase B-N) (3-wire = Phase C-B) (PM-620 and PM-650 only)
1057	THD/thd Voltage, Phase C	R			Tenths of Percent	0 – 10,000	Total Harmonic Distortion (4-wire = Phase C-N) (3-wire = Phase C-A) (PM-620 and PM-650 only)
1058-1077	Reserved						
1078	Current Fundamental RMS Magnitude, Phase A	R		A	Amps/Scale A	0 – 32,767	Phase A Current Fundamental RMS Magnitude
1079	Current Fundamental Coincident Angle, Phase A	R			Tenths of Degrees	0 – 3599	Phase A Current Fundamental Angle Referenced to A-N/A-B Voltage Angle
1080	Current Fundamental RMS Magnitude, Phase B	R		A	Amps/Scale A	0 – 32,767	Phase B Current Fundamental RMS Magnitude
1081	Current Fundamental Coincident Angle, Phase B	R			Tenths of Degrees	0 – 3599	Phase B Current Fundamental Angle Referenced to A-N/A-B Voltage Angle

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1082	Current Fundamental RMS Magnitude, Phase C	R		A	Amps/Scale A	0 – 32,767	Phase C Current Fundamental RMS Magnitude
1083	Current Fundamental Coincident Angle, Phase C	R			Tenths of Degrees	0 – 3599	Phase C Current Fundamental Angle Referenced to A-N/A-B Voltage Angle
1084-1087	Reserved						
1088	Voltage Fundamental RMS Magnitude, Phase A	R		D	Volts/Scale D	0 – 32,767	Phase A Voltage Fundamental RMS Magnitude (4-wire only)
1089	Voltage Fundamental Coincident Angle, Phase A	R			Tenths of Degrees	0 – 3599	Phase A Voltage Fundamental Angle Referenced to itself (4-wire only)
1090	Voltage Fundamental RMS Magnitude, Phase B	R		D	Amps/Scale D	0 – 32,767	Phase B Voltage Fundamental RMS Magnitude (4-wire only)
1091	Voltage Fundamental Coincident Angle, Phase B	R			Tenths of Degrees	0 – 3599	Phase B Voltage Fundamental Angle Referenced to A-N Voltage Angle (4-wire only)
1092	Voltage Fundamental RMS Magnitude, Phase C	R		D	Amps/Scale D	0 – 32,767	Phase C Voltage Fundamental RMS Magnitude (4-wire only)
1093	Voltage Fundamental Coincident Angle, Phase C	R			Tenths of Degrees	0 – 3599	Phase C Voltage Fundamental Angle Referenced to A-N Voltage Angle(4-wire only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1094	Voltage Fundamental RMS Magnitude, Phase A-B	R		D	Volts/Scale D	0 – 32,767	Phase A-B Voltage Fundamental RMS Magnitude
1095	Voltage Fundamental Coincident Angle, Phase A-B	R			Tenths of Degrees	0 – 3599	Phase A-B Voltage Fundamental Angle Referenced to A-N(4-wire) or A-B (3-wire)
1096	Voltage Fundamental RMS Magnitude, Phase B-C	R		D	Amps/Scale D	0 – 32,767	Phase B-C Voltage Fundamental RMS Magnitude
1097	Voltage Fundamental Coincident Angle, Phase B-C	R			Tenths of Degrees	0 – 3599	Phase B-C Voltage Fundamental Angle Referenced to A-N(4-wire) or A-B (3-wire)
1098	Voltage Fundamental RMS Magnitude, Phase C-A	R		D	Amps/Scale D	0 – 32,767	Phase C-A Voltage Fundamental RMS Magnitude
1099	Voltage Fundamental Coincident Angle, Phase C-A	R			Tenths of Degrees	0 – 3599	Phase C-A Voltage Fundamental Angle Referenced to A-N(4-wire) or A-B (3-wire)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
<u>REAL TIME METERED VALUES – MINIMUMS (PM-650 only)</u>							
1200	Minimum Update Interval	R	√		Thousandths of a second	0 – 10,000	The minimum amount of time between the last update of metered values and the update previous to that
1201	Minimum Frequency	R	√	F	Hertz/Scale F	4500 – 6600	Minimum frequency of circuits being monitored. -32,768 = value out of range
1202	Reserved						
1203	Minimum Phase A Current	R	√	A	Amps/Scale A	0 – 32,767	Minimum RMS Phase A Current
1204	Minimum Phase B Current	R	√	A	Amps/Scale A	0 – 32,767	Minimum RMS Phase B Current
1205	Minimum Phase C Current	R	√	A	Amps/Scale A	0 – 32,767	Minimum RMS Phase C Current
1206	Minimum Neutral Current, calculated	R	√	A	Amps/Scale A	0 – 32,767	One-cycle RMS Neutral Current, Calculated (Type 40 system only)
1207-1209	Reserved						
1210	Minimum Current Unbalance, Phase A	R			Tenths of Percent	0 - +/-1000	Minimum PercentCurrent Unbalance, Phase A
1211	Minimum Current Unbalance, Phase B	R			Tenths of Percent	0 - +/-1000	Minimum Percent Current Unbalance, Phase B

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1212	Minimum Current Unbalance, Phase C	R			Tenths of Percent	0 - +/-1000	Minimum Percent Current Unbalance, Phase C
1213	Minimum Current Unbalance, Worst	R			Tenths of Percent	0 - +/-1000	Minimum Percent Current Unbalance, Worst
1214	Minimum Phase A-B Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage A-B (3-wire system only)
1215	Minimum Phase B-C Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage C-B (3-wire system only)
1216	Minimum Phase C-A Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage C-A (3-wire system only)
1217	Reserved						
1218	Minimum Phase A-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage A-N (4-wire system only)
1219	Minimum Phase B-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage B-N (4-wire system only)
1220	Minimum Phase C-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Minimum fundamental RMS Voltage C-N (4-wire system only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1221	Reserved						
1222	Minimum Voltage Unbalance, Phase A-B	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase A-B
1223	Minimum Voltage Unbalance, Phase B-C	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase B-C
1224	Minimum Voltage Unbalance, Phase C-A	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase C-A
1225	Minimum Voltage Unbalance, Worst L-L	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Worst L-L Depends on absolute value
1226	Minimum Voltage Unbalance, Phase A-N	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase A-N (4-wire only)
1227	Minimum Voltage Unbalance, Phase B-N	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase B-N (4-wire only)
1228	Minimum Voltage Unbalance, Phase C-N	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Phase C-N (4-wire only)
1229	Minimum Voltage Unbalance, Worst L-N	R			Tenths of Percent	0 - +/-1000	Minimum Percent Voltage Unbalance, Worst L-N Depends on absolute value (4-wire only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1230	Reserved						
1231	Minimum True Power Factor, Phase A	R	√		Thousands	-100 to +1000 to +100	Minimum "True" Power Factor for Phase A, derived using the complete harmonic content of real and apparent power (4-wire system only)
1232	Minimum True Power Factor, Phase B	R	√		Thousands	-100 to +1000 to +100	Minimum "True" Power Factor for Phase B, derived using the complete harmonic content of real and apparent power (4-wire system only)
1233	Minimum True Power Factor, Phase C	R	√		Thousands	-100 to +1000 to +100	Minimum "True" Power Factor for Phase C, derived using the complete harmonic content of real and apparent power (4-wire system only)
1234	Minimum True Power Factor, Total	R	√		Thousands	-100 to +1000 to +100	Minimum "True" Total Power Factor for all 3 Phases, derived using the complete harmonic content of real and apparent power (4-wire system only)
1235 - 1238	Reserved						
1239	Minimum Real Power, Phase A	R	√	E	kW/Scale E	0 – +/-32,767	Minimum Real Power on Phase A (PA) (4-wire system only)
1240	Minimum Real Power, Phase B	R	√	E	kW/Scale E	0 – +/-32,767	Minimum Real Power on Phase B (PB) (4-wire system only)
1241	Minimum Real Power, Phase C	R	√	E	kW/Scale E	0 – +/-32,767	Minimum Real Power on Phase C (PC) (4-wire system only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1242	Minimum Real Power, Total	R	√	E	kW/Scale E	0 – +/-32,767	Minimum Real Power Total (PA+PB+PC) (4-wire system) (3 wire system = 3 Phase real power)
1243	Minimum Reactive Power, Phase A	R	√	E	kVar/Scale E	0 – +/-32,767	Minimum Reactive Power on Phase A (QA) (4-wire system only)
1244	Minimum Reactive Power, Phase B	R	√	E	kVar/Scale E	0 – +/-32,767	Minimum Reactive Power on Phase B (QB) (4-wire system only)
1245	Minimum Reactive Power, Phase C	R	√	E	kVar/Scale E	0 – +/-32,767	Minimum Reactive Power on Phase C (QC) (4-wire system only)
1246	Minimum Reactive Power, Total	R	√	E	kVar/Scale E	0 – +/-32,767	Minimum Reactive Power Total (QA+QB+QC) (4-wire system) (3-wire system = 3-phase reactive power)
1247	Minimum Apparent Power, Phase A	R	√	E	kVA/Scale E	0 – +/-32,767	Minimum Apparent Power on Phase A (SA) (4-wire system only)
1248	Minimum Apparent Power, Phase B	R	√	E	kVA /Scale E	0 – +/-32,767	Minimum Apparent Power on Phase B (SB) (4-wire system only)
1249	Minimum Apparent Power, Phase C	R	√	E	kVA /Scale E	0 – +/-32,767	Minimum Apparent Power on Phase C (SC) (4-wire system only)
1250	Minimum Apparent Power, Total	R	√	E	kVA /Scale E	0 – +/-32,767	Minimum Apparent Power Total (SA+SB+SC) (4-wire system) (3-wire system = 3-phase apparent power)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1251	Minimum THD/thd Current, Phase A	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion, Phase A Current
1252	Minimum THD/thd Current, Phase B	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion, Phase B Current
1253	Minimum THD/thd Current, Phase C	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion, Phase C Current
1254	Reserved						
1255	Minimum THD/thd Voltage, Phase A	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion (4-wire = Phase A-N) (3-wire = Phase A-B)
1256	Minimum THD/thd Voltage, Phase B	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion (4-wire = Phase B-N) (3-wire = Phase C-B)
1257	Minimum THD/thd Voltage, Phase C	R	√		Tenths of Percent	0 – 10,000	Minimum Total Harmonic Distortion (4-wire = Phase C-N) (3-wire = Phase C-A)
1258-1259	Reserved						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
<u>REAL TIME METERED VALUES – MAXIMUMS (PM-650 only)</u>							
1400	Maximum Update Interval	R	√		Thousandths of a second	0 – 10,000	The maximum amount of time between last update of metered values and the update previous to that
1401	Maximum Frequency	R	√	F	Hertz/Scale F	4500 – 6600	Maximum frequency of circuits being monitored. -32768 = value out of range
1402	Reserved						
1403	Maximum Phase A Current	R	√	A	Amps/Scale A	0 – 32,767	Maximum RMS Phase A Current
1404	Maximum Phase B Current	R	√	A	Amps/Scale A	0 – 32,767	Maximum RMS Phase B Current
1405	Maximum Phase C Current	R	√	A	Amps/Scale A	0 – 32,767	Maximum RMS Phase C Current
1406	Maximum Neutral Current, calculated	R	√	A	Amps/Scale A	0 – 32,767	One-cycle RMS Neutral current, Calculated (Type 40 system only)
1407-1409	Reserved						
1410	Maximum Current Unbalance, Phase A	R			Tenths of Percent	0 - +/-1000	Maximum Percent Current Unbalance, Phase A
1411	Maximum Current Unbalance, Phase B	R			Tenths of Percent	0 - +/-1000	Maximum Percent Current Unbalance, Phase B

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1412	Maximum Current Unbalance, Phase C	R			Tenths of Percent	0 - +/-1000	Maximum Percent Current Unbalance, Phase C
1413	Maximum Current Unbalance, Worst	R			Tenths of Percent	0 - +/-1000	Maximum Percent Current Unbalance, Worst
1414	Maximum Phase A-B Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage A-B (3-wire system only)
1415	Maximum Phase B-C Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage C-B (3-wire system only)
1416	Maximum Phase C-A Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage C-A (3-wire system only)
1417	Reserved						
1418	Maximum Phase A-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage A-N (4-wire system only)
1419	Maximum Phase B-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage B-N (4-wire system only)
1420	Maximum Phase C-N Voltage	R	√	D	Volts/Scale D	0 – 32,767	Maximum fundamental RMS Voltage C-N (4-wire system only)
1421	Reserved						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1422	Maximum Voltage Unbalance, Phase A-B	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase A-B
1423	Maximum Voltage Unbalance, Phase B-C	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase B-C
1424	Maximum Voltage Unbalance, Phase C-A	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase C-A
1425	Maximum Voltage Unbalance, Worst L-L	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Worst L-L Depends on absolute value
1426	Maximum Voltage Unbalance, Phase A-N	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase A-N (4-wire only)
1427	Maximum Voltage Unbalance, Phase B-N	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase B-N (4-wire only)
1428	Maximum Voltage Unbalance, Phase C-N	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Phase C-N (4-wire only)
1429	Maximum Voltage Unbalance, Worst L-N	R			Tenths of Percent	0 - +/-1000	Maximum Percent Voltage Unbalance, Worst L-N Depends on absolute value (4-wire only)
1430	Reserved						
1431	Maximum True Power Factor, Phase A	R	√		Thousands	-100 to +1000 to +100	Maximum "True" Power Factor for Phase A, derived using the complete harmonic content of real and apparent power (4-wire system only)
1432	Maximum True Power Factor, Phase B	R	√		Thousands	-100 to +1000 to +100	Maximum "True" Power Factor for Phase B, derived using the complete harmonic content of real and apparent power (4-wire system only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1433	Maximum True Power Factor, Phase C	R	√		Thousands	-100 to +1000 to +100	Maximum “True” Power Factor for Phase C, derived using the complete harmonic content of real and apparent power (4-wire system only)
1434	Maximum True Power Factor, Total	R	√		Thousands	-100 to +1000 to +100	Maximum “True” Total Power Factor for all 3 Phases, derived using the complete harmonic content of real and apparent power (4-wire system only)
1435 - 1438	Reserved						
1439	Maximum Real Power, Phase A	R	√	E	kW/Scale E	0 – +/-32,767	Maximum Real Power on Phase A (PA) (4-wire system only)
1440	Maximum Real Power, Phase B	R	√	E	kW/Scale E	0 – +/-32,767	Maximum Real Power on Phase B (PB) (4-wire system only)
1441	Maximum Real Power, Phase C	R	√	E	kW/Scale E	0 – +/-32,767	Maximum Real Power on Phase C (PC) (4-wire system only)
1442	Maximum Real Power, Total	R	√	E	kW/Scale E	0 – +/-32,767	Maximum Real Power Total (PA+PB+PC) (4-wire system) (3-wire system = 3 Phase real power)
1443	Maximum Reactive Power, Phase A	R	√	E	kVar/Scale E	0 – +/-32,767	Maximum Reactive Power on Phase A (QA) (4-wire system only)
1444	Maximum Reactive Power, Phase B	R	√	E	kVar/Scale E	0 – +/-32,767	Maximum Reactive Power on Phase B (QB) (4-wire system only)

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1445	Maximum Reactive Power, Phase C	R	√	E	kVar/Scale E	0 – +/-32,767	Maximum Reactive Power on Phase C (QC) (4-wire system only)
1446	Maximum Reactive Power, Total	R	√	E	kVar/Scale E	0 – +/-32,767	Maximum Reactive Power Total (QA+QB+QC) (4-wire system) (3-wire system = 3 Phase reactive power)
1447	Maximum Apparent Power, Phase A	R	√	E	kVA/Scale E	0 – +/-32,767	Maximum Apparent Power on Phase A (SA) (4-wire system only)
1448	Maximum Apparent Power, Phase B	R	√	E	kVA /Scale E	0 – +/-32,767	Maximum Apparent Power on Phase B (SB) (4-wire system only)
1449	Maximum Apparent Power, Phase C	R	√	E	kVA /Scale E	0 – +/-32,767	Maximum Apparent Power on Phase C (SC) (4-wire system only)
1450	Maximum Apparent Power, Total	R	√	E	kVA /Scale E	0 – +/-32,767	Maximum Apparent Power Total (SA+SB+SC) (4-wire system) (3-wire system = 3 Phase apparent power)
1451	Maximum THD/thd Current, Phase A	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion, Phase A Current
1452	Maximum THD/thd Current, Phase B	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion, Phase B Current
1453	Maximum THD/thd Current, Phase C	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion, Phase C Current
1454	Reserved						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1455	Maximum THD/thd Voltage, Phase A	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion (4-wire = Phase A-N) (3-wire = Phase A-B)
1456	Maximum THD/thd Voltage, Phase B	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion (4-wire = Phase B-N) (3-wire = Phase C-B)
1457	Maximum THD/thd Voltage, Phase C	R	√		Tenths of Percent	0 – 10,000	Maximum Total Harmonic Distortion (4-wire = Phase C-N) (3-wire = Phase C-A)
1458-1459	Reserved						

Register No.	Register Name	Type	Saved	Scaled	Units	Range	Register Description
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ENERGY VALUES

Each energy value is kept in 4 registers, modulo 10,000 per register

ACCUMULATED ENERGY

1600-1616	Unused						
1617-1620	Apparent Energy 3-Phase Total	R	YB	N	VAH	0 to 9,999,999,999,999,999	Sum of the three apparent phase energies
1621-1624	Real Energy Signed/Absolute 3-Phase Total	R	YB	N	WH	0 to +/-9,999,999,999,999,999	4 - Modes: 0. Real Energy into the load +Real Energy Out of the Load 1. Real Energy into the load - Real Energy Out of the Load 2. Real Energy into the load only 3. Real Energy out of the load only
1625-1628	Reactive Energy 3-Phase Total	R	YB	N	VArH	0 to +/-9,999,999,999,999,999	4 - Modes with choice of total or fundamental: 0. Reactive E. into the load +Reactive E. out of the load 1. Reactive E. into the load - Reactive E. out of the load 2. Reactive Energy into load only 3. Reactive Energy out of load only <i>accounting for either fundamental reactive only, or reactive = square root (KVA*KVA + KWrms*KWrms) set by register 2081 bit 1</i>
1629-1663	Unused						

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<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
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DEMAND VALUES (PM-620 and PM-650 only)

CURRENT DEMAND

1700	Unused						
1701	Present Current Demand Phase A	R	N	A	Amps/Scale Factor A	0 to 32,767	Present current demand, thermal, Phase A
1702	Present Current Demand Phase B	R	N	A	Amps/Scale Factor A	0 to 32,767	Present current demand, thermal, Phase B
1703	Present Current Demand Phase C	R	N	A	Amps/Scale Factor A	0 to 32,767	Present current demand, thermal, Phase C
1704	Present Demand Neutral Current	R	N	A	Amps/Scale Factor A	0 to 32,767	Present current demand, thermal, Neutral (Based on Calculated one-cycle values)
1705- 1708	Unused						
1709	Peak Current Demand Phase A	R	YB	A	Amps/Scale Factor A	0 to 32,767	Peak current demand, Phase A
1710	Peak Current Demand Phase B	R	YB	A	Amps/Scale Factor A	0 to 32,767	Peak current demand, Phase B

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
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1711	Peak Current Demand Phase C	R	YB	A	Amps/Scale Factor A	0 to 32,767	Peak current demand, Phase C
1712-	Peak Current Neutral Current	R	YB	A	Amps/Scale Factor A	0 to 32,767	Peak current demand, Neutral
1730	Unused						

Register No.	Register Name	Type	Saved	Scaled	Units	Range	Register Description
POWER DEMAND							
**Reactive Demand may be calculated either using the fundamental only (default) or using total harmonics, user selectable.							
1731	Present Real Power, Demand, 3-Phase Total	R	N	E	kW/Scale Factor E	0 to +/-32,767	Present Real Power Demand, 3-phase total for the last completed demand interval. Updated every sub-interval
1732	Present Reactive Power, Demand, 3-Phase Total	R	N	E	kVAr/Scale Factor E	0 to +/-32,767	Present Reactive Power Demand, 3-phase totals for the last completed demand interval, using either the fundamental or total energy. Updated every sub-interval.
1733	Present Apparent Power Demand, 3-Phase Total	R	N	E	kVA/Scale Factor E	0 to 32,767	Present Apparent Power Demand, 3-phase total for the last completed demand interval. Updated every sub-interval.
1734	Peak Real Power Demand 3-Phase Total	R	YB	E	kW/Scale Factor E	0 to +/-32,767	Peak Real Power Demand, 3 phase total
1735	Average Power Factor, @ Peak Real	R	YB	Y	Percent in 1000ths	-100 to 1000 to +100	Power Demand/Apparent Power Demand at time of Peak Real Demand
1736-1737	Unused						
1738	Peak Reactive Power Demand 3-Phase Total	R	YB	E	kVar/Scale Factor E	0 to +/-32,767	Peak Reactive Demand, 3-phase total
1739	Average Power Factor @ Peak Reactive	R	YB	Y	Percent in 1000ths	-100 to 1000 to +100	Power Demand/Apparent Power Demand at time of Peak Reactive Demand
1740-1741	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1742	Peak Apparent Power Demand, 3-Phase Total	R	YB	E	kVA/Scale Factor E	0 to 32,767	Peak Apparent Power Demand, 3-phase total
1743	Average Power Factor, @ Peak Apparent	R	YB	Y	Percent in 1000ths	-100 to 1000 to +100	Power Demand/Apparent Power Demand at time of Peak Apparent Demand
1744 - 1745	Unused						
1746	Predicted Real Power Demand, 3-Phase Total	R	N	E	kW/Scale E	0 to +/-32767	Predicted Real Power Demand, 3 Phase total Based on a one-minute sliding block calculation (PM-650 only)
1747	Predicted Reactive Power Demand, 3-Phase Total	R	N	E	kW/Scale E	0 to 32,767	Predicted Reactive Power Demand, 3 Phase total Based on a one-minute sliding block calculation (PM-650 only)
1748	Predicted Apparent Power Demand, 3-Phase Total	R	N	E	kW/Scale E	0 to 32,767	Predicted Apparent Power Demand, 3 Phase total Based on a one-minute sliding block calculation (PM-650 only)
1749 - 1752	Unused						

Register No.	Register Name	Type	Saved	Scaled	Units	Range	Register Description
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DATE/TIME (PM-620 and PM-650 only)

* Compressed Form (3 registers)

* Register 1800, Month (byte 1) = 1-12, Day (byte) = 1-31, Register 1801, Year (byte) = 0-199, Hour (byte) = 0-23, Register 1802, Minutes (byte) = 0-59, Seconds (byte) = 0-59. The year is zero based on the year 1900 in anticipation of the 21st century, (e.g.1989 would be represented as 89 and 2009 would be represented as 109).

1800-1802	Last Restart Date/Time	R	N	N	Month,Day,Yr, Hr,Min,Sec	*See below	Date and Time of Last Restart compressed form
1803-1805	Date/Time Demand of Peak Current Phase A	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Demand Current, Phase A, compressed form
1806-1808	Date/Time Demand of Peak Current Phase B	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Demand Current, Phase B, compressed form
1809-1811	Date/Time Demand of Peak Current Phase C	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Demand Current, Phase C, compressed form
1812-1814	Date/Time of Peak Demand (Average Real Power)	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Real Demand Power, 3-phase total, compressed form
1815-1817	Date/Time of Last Reset of Peak Demand Current	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of last reset of Peak Demand Current compressed form

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1818-1820	Date/Time of Last Reset of Min/Max Values	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of last reset of Min/Max Values in compressed form (PM-650 only)
1824-1826	Date/Time when Peak Power Demands were last cleared	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time when Peak Power Demands was last cleared, compressed form
1827-1829	Date/Time when Accumulated Energy Last Cleared	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time when Accumulated Energy Last cleared compressed form
1830-1832	Date/Time when Control Power Failed Last	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time when the Control Power failed last compressed form
1833-1841	Unused						
1842-1844	Present/Set Date/Time	R/W	Y	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Present/Set Date/Time in compressed form
1845-1847	Calibration	R	YA	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date and Time of Calibration compressed form
1848-1856	Unused						
1857-1859	Date/Time of Peak Reactive Demand (Reactive Power)	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Reactive Demand Power, 3-phase total, compressed form

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
1860-1862	Date/Time of Peak Apparent Demand Power	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Apparent Demand Power, 3-phase total, compressed form
1863-1874	Unused						
1875-1877	Date/Time Demand of Peak Current Calculated Neutral	R	YB	N	Month,Day,Yr, Hr,Min,Sec	Same as Regs # 1800-1802	Date/Time of Peak Demand Neutral Current, compressed form
1878-1895	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2000	Unused						
2001	System Conn.	R	YB	N	None	30,31,40	System Connection 3-wire, 4-wire with subordinate (e.g. 30, 40)
2002	CT Rat. 3-phase primary ratio term	R	YB	N	None	1 to 32,767	CT rating, 3 phase primary ratio term
2003	CT Rat. 3-phase secondary ratio term	R	YB	N	None	1 or 5	CT rating, 3 phase secondary ratio term
2004-2005	Unused						
2006	PT Rat. 3-phase primary ratio term	R	YB	Y	None/ Scale Factor	1 to 32,767	PT Rating 3-phase primary ratio term used in conjunction with register 2007 PT Rat. 3-phase scale factor
2007	PT Rat. 3-phase primary scale factor	R	YB	N	None	0 to 2	PT Rating 3-phase primary scale factor. Default value: 0.
2008*	PT Rat. 3-phase secondary ratio term	R	YB	N	None	100,115,120	PT Rating 3-phase secondary ratio term 120 default
2009	Phase A Current Correction Factors	R	YB	N	10,000 ths	5,000 - 20,000	CT Ratio and Correction Factors, Phase A
2010	Phase B Current Correction Factors	R	YB	N	10,000 ths	5,000 - 20,000	CT Ratio and Correction Factors, Phase B
2011	Phase C Current Correction Factors	R	YB	N	10,000 ths	5,000 - 20,000	CT Ratio and Correction Factors, Phase C
2012	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2013	Phase A Voltage R Correction Factors		YB	N	10,000 ths	5,000 - 20,000	PT Ratio and Correction Factors, Phase A For range in use at time of User Cal
2014	Phase B Voltage R Correction Factors		YB	N	10,000 ths	5,000 - 20,000	PT Ratio and Correction Factors, Phase B For range in use at time of User Cal
2015	Phase C Voltage R Correction Factors		YB	N	10,000 ths	5,000 - 20,000	PT Ratio and Correction Factors, Phase C For range in use at time of User Cal
2016	Nominal System R Frequency		YB	N		50,60	Nominal System Frequency
2017	Device R Address		YB	N	None	0 to 199 1 to 247 1 to 255	SY/Max Device Address Modbus Device Address Jbus Device Address
2018	Device R Baud Rate		YB	N	Baud	1200,2400 4800,9600 19,200	Device Baud Rate
2019	Reserved						
2020	Scale Group A: R Ammeter Per Phase		YB	N	None	-2 to 0	Scale Group A: Ammeter Per -2 = scale by 0.01 -1 = scale by 0.10 0 = scale by 1.00 (default)
2021- 2022	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2023	Scale Group D: Voltmeter	R	YB	N	None	-1 to 2	Scale Group D: Voltmeter -1 = scale by 0.10 0 = scale by 1.00 (default) 1 = scale by 10.0 2 = scale by 100.
2024	Scale Group E: kwattmeter, kVarmeter, kVa	R	YB	N	None	-3 to 3	Scale Group E: kWattmeter, kVarmeter, kVA -3 = scale by 0.001 -2 = scale by 0.01 -1 = scale by 0.1 0 = scale by 1. (default) 1 = scale by 10. 2 = scale by 100. 3 = scale by 1000.
2025	Unused						
2026	Scaling Error	R	Y	N	None	1 to 1F	Possible Scaling Error: selected scale err may result in over-range. Bit 0 set if any other bits are set Bit 1 is set for possible phase current scale error Bit 2 Unused Bit 3 is set for possible phase voltage scale error Bit 4 is set for possible power scale error
2027	Unused						
2028	Command Password	R	N	N	None	0 to +/-32,767	Command Password (computed by the PM)
2029	Master Password	R	YB	N	None	0 to 9998	Full Access Display Setup Password
2030	Unused						
2031	Reset Access Password	R	YB	N	None	0 to 9998	Limited Display Reset Password.
<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>

2032	Limited Access Disable Bit Mask	R	YB	N	None	0 to F (Hex)	Limited Display Reset Disable Bit Mask. A 1 = Disable. Bit 0 = Disable Demand Amps Reset Capability Bit 1 = Disable Demand Power Reset Capability Bit 2 = Disable Energy Reset Capability
2033-2039	Unused						
2040-2041	PM Label	R/W	YB	N	None	Any Valid Alpha-Numeric	PM Label
2042-2049	PM Nameplate	R/W	YB	N	None	Any Valid Alpha-Numeric	PM Nameplate
2050	Voltage Gain A-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, A-N 120V Range
2051	Voltage Gain B-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, B-N 120V Range
2052	Voltage Gain C-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, C-N 120V Range
2053	Voltage Gain A-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, A-N 277V Range
2054	Voltage Gain B-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, B-N 277V Range
2055	Voltage Gain C-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, C-N 277V Range
2056	Voltage Gain A-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, A-N 347V Range

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2057	Voltage Gain B-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, B-N 347V Range
2058	Voltage Gain C-N	R	YA	N	in 10,000ths	8,000 to 12,000	Voltage Gain, C-N 347V Range
2059	Unused						
2060	Current Gain Phase A	R	YA	N	in 10,000ths	8,000 to 12,000	Current Gain, Phase A
2061	Current Gain Phase B	R	YA	N	in 10,000ths	8,000 to 12,000	Current Gain, Phase B
2062	Current Gain, Phase C	R	YA	N	in 10,000ths	8,000 to 12,000	Current Gain, Phase C
2063	Reserved						
2064	Voltage Range Select	R	YB	N		0 to 2	0 = L 120/208V 1 = M 277/480V 2 = H 347/600V
2065	Reserved						
2066- 2068	Unused						
2069- 2075	Reserved						
2076	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2077	Power Demand	R	YB	N	Minutes	1-60min @1min. Multiples	Power Demand Interval Default value: 15 min Interval
2078	Power Demand Sub-Interval	R	YB	N	Minutes	1-60 min @1 min.	Power Demand Sub-Interval Default value: 0 (PM-650 only)
2080	Unused			.			

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2081	Operating Mode Selections Bit map	R	YB	N	None	0 to FFFF	Power Meter Operating Mode Selections Bit map
*bit 0	indicates VAr sign convention a 0 indicates CM1 convention (default) a 1 indicates alternate convention						*bit 1 indicates Reactive Energy and Demand calculation a 0 specifies fundamental only (default) a 1 specifies to include harmonic cross products - (displacement & distortion)
*bit 2	Unused						*bit3 Unused
*bit 4	Indicates whether display setup is enabled a 0 indicates display setup is enabled (default) a 1 indicates display setup is disabled						*bit5 Unused
bit 6	Indicates SYMAX UART parity selection 0 =Even 1 = None						bit 7 Protocol Selection 0 = PowerLogic 1 = Alternate
bit 8	Protocol Selection 0 = Modbus 1 = Jbus						bit 9 Unused
bit 10	Unused						bit 11 Unused
bit 12	0 = THD 1 = thd						All other bits are unused
Note:	* not from OPIF (Display) OPIF - high byte Sy-Max - low byte						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2082	Energy Accumulation Method	R	YB	N	None	0-3	Energy Accumulation Method 0 Absolute (default) 1 Signed 2 In only 3 Out only
2083	Number of Configuration Changes	R	YB	N	None	0 to 32,767	Number of Configuration Saves
2084	Number of PMOS R system restarts	R	YB	N	None	0 to 32,767	Number of PMOS system restarts
2085	Square-D Product ID Number equal to 481 Model 600 PM 482 Model 620 PM 483 Model 650 PM	R	YA	N	None	0 to 3000	Square-D Product ID Number equal to 481-485 for PM
2086	Installed Real Time Clock	R	Y	N	None	0 to 1	Installed RTC: 0 = 1687(242 bytes ram) 1 = 17487(4K bytes ram)
2087	Reserved						
2088	Total memory For logging	R	Y	N	Bytes	992	Available memory for logging; fixed at 992 bytes
2089	Remaining mem For logging	R	Y	N	Bytes	0 to 992	Remaining memory for logging; 16 bytes of buffer space will always be used by the event log and data log
2090	Reserved for Production Test	R	YA	N			
2091	PMOS-M Revision Level	R	Y	N	None	0 to 32,767	
<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>

2092	PMOS-D Revision Level	R	Y	N	None	0 to 32,767	
2093	PMRS Revision Level	R	Y	N	None	0 to 32,767	
2094	Reserved for DL						
2095	Unit Revision	R	YA	N	None	0 to FFFF	Unit Revision
2096- 2097	PM Serial Number	R	YA	N	None	0 to 2147352577	Power Meter Serial Number - 2 registers signed long integer format. Reg 2096 is Least Significant Register
2098	Display F/W Revision	R			None		Revision # of Display Code
2099-	Unused						
2100	Number of Messages sent to this unit	R	YB	N	None	0 to 32,767	Number of Messages sent to this unit
2101	Number of Messages sent to other units	R	YB	N	None	0 to 32,767	Number of Messages sent to other units
2102	Number of Messages with invalid address	R	N	N	None	0 to 32,767	Number of Messages with invalid address
2103	Number of Messages with bad checksum	R	N	N	None	0 to 32,767	Number of Messages with bad checksum
<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>

2104	Number of Messages with error	R	YB	N	None	0 to 32,767	Number of Messages with error
2105	Number of Messages with illegal opcode	R	N	N	None	0 to 32,767	Number of Messages with illegal opcode
2106	Number of Messages with illegal registers	R	N	N	None	0 to 32,767	Number of Messages with illegal registers
2107	Number of Invalid write responses	R	N	N	None	0 to 32,767	Number of invalid write responses
2108	Number of Messages with illegal counts	R	N	N	None	0 to 32,767	Number of Messages with illegal counts
2109	Number of Messages with frame error	R	N	N	None	0 to 32,767	Number of Messages with frame error
2110	Number of Control Power Failures	R	N	N	None	0 to 32,767	Number of Control Power Failures
2111	Reserved						
2112	Reserved						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2113	Reserved						
2114	Reserved						
2115-2119	Unused						
2120	Bitmap for Self-Test results	R	N	N	None	0 to FFFF	Bitmap for Self test results Bit 0 = Is set to "1" if any error occurs Bit 1 = BBRam Meter group invalid Bit 2 = BBRam Config group invalid Bit 3 = BBRam Status group invalid Bit 4 = A/D Status failure Bit 5 = UART 2691 failure Bit 6 = Display absent or failed Bit 7 = Processed a memory clear Bit 8 = PMOS-M Module invalid Bit 9 = PMOS-D Module invalid Bit 10 = EEPROM coefficients invalid Bit 11 = RTC Battery low Bit 12 = BBRam restore error Bit 13 = Download incomplete Bit 14 = Unit is in download alarm state 990 or 991 Bit 15 = Unit is in download alarm state 992
2121	Unused						

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
2122	Voltage/Current Phase Loss Bit Map	R	N	N	None	0 to 7F	Bit Map specifying Phase loss Bit 0 = set to 1 if any other bits are set Bit 1 = set to 1 if phase A voltage is lost Bit 2 = set to 1 if phase B voltage is lost Bit 3 = set to 1 if phase C voltage is lost Bit 4 = set to 1 if phase A current is lost Bit 5 = set to 1 if phase B current is lost Bit 6 = set to 1 if phase C current is lost
2123- 2124	Unused						

KYZ OUTPUT

2125	KYZ Mode Reg	R	YB	N	None	0, 3 to 5	Output 0 Mode Register: 0 = Alarm Mode (PM650), 3 = kWH pulse, 4 = kVARH pulse, 5 = kVAH pulse, 1,2,6 = Unused
2126	KYZ Pulse Register	R	YB	N	kWH/Pulse or kVARH/Pulse or kVAH/Pulse	0 to 32,767	This register specifies the kWH, kVARH or kVAH per pulse in 100ths.
2127- 2128	KYZ Relay Status	R	N	N	None	0 to 1	Relay State

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
<u>EVENT/ALARM CONFIGURATION (PM-650 only)</u>							
5750-5759	Alarm Log	R	√		None	0 – 42	Queue of last ten active priority 0 to 3 alarms 5750 = most recent alarm
5760	Acknowledge Status	R	√		None	0 – 1023	Acknowledge status of alarm log 0 = Acknowledged 1 = Unacknowledged Bit 0 = Position 1 in alarm log, etc.
5761-5764	Reserved						
5765	Event Counter	R	√		None	0 – 32,767	Total of all event counters
5766-5770	Reserved						
5771-5773	Active Alarm bitmap	R			None	0 – FFFF	Each bit corresponds to an event number Bit 0 = Alarm 1, etc.
5774-5778	Reserved						
5779	Latched Bitmap Alarm Indication	R			None	0 – 0001	Bit 0 = 1, if any alarm has occurred
5780	Event Counter 1	R	√		None	0 – 32,767	
5781	Event Counter 2	R	√		None	0 – 32,767	

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
5782	Event Counter 3	R	√		None	0 – 32,767	
5783	Event Counter 4	R	√		None	0 – 32,767	
5784	Reserved						
5785	Event Counter 6	R	√		None	0 – 32,767	
5786	Event Counter 7	R	√		None	0 – 32,767	
5787	Event Counter 8	R	√		None	0 – 32,767	
5788	Event Counter 9	R	√		None	0 – 32,767	
5789	Event Counter 10	R	√		None	0 – 32,767	
5790	Event Counter 11	R	√		None	0 – 32,767	
5791	Reserved						
5792	Event Counter 13	R	√		None	0 – 32,767	
5793	Event Counter 14	R	√		None	0 – 32,767	
<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>

5794	Event Counter 15	R	√	None	0 – 32,767
5795	Event Counter 16	R	√	None	0 – 32,767
5796	Event Counter 17	R	√	None	0 – 32,767
5797	Event Counter 18	R	√	None	0 – 32,767
5798	Event Counter 19	R	√	None	0 – 32,767
5799	Event Counter 20	R	√	None	0 – 32,767
5800	Event Counter 21	R	√	None	0 – 32,767
5801	Event Counter 22	R	√	None	0 – 32,767
5802	Event Counter 23	R	√	None	0 – 32,767
5803	Event Counter 24	R	√	None	0 – 32,767
5804	Event Counter 25	R	√	None	0 – 32,767
5805	Event Counter 26	R	√	None	0 – 32,767

Register No. Register Name Type Saved Scaled Units Range Register Description

5806	Event Counter 27	R	√	None	0 – 32,767
5807	Event Counter 28	R	√	None	0 – 32,767
5808	Event Counter 29	R	√	None	0 – 32,767
5809	Event Counter 30	R	√	None	0 – 32,767
5810-5819	Reserved				
5820	Event Counter 41	R	√	None	0 – 32,767
5821	Event Counter 42	R	√	None	0 – 32,767
5822-5899	Reserved				
5900-6109	Pre-defined events				Refer to Table Event 1.0 Pre-Defined Event Setup Block Table Event 2.0
6110-6179	Reserved				
6180-6193	Pre-defined events				Refer to Table Event 1.0 Pre-Defined Event Setup Block Table Event 2.0

<i>Register No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
6194-6799	Reserved						

<i>Event No.</i>	<i>Description</i>	<i>Type</i>	<i>Sub-Type</i>	<i>Compare Reg.</i>	<i>Register Block</i>
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EVENT TABLE 1: EVENT/ALARM NUMBERS AND DESCRIPTIONS

1	Over Current Phase A Configuration Block	1	0	1003	5900-5906
2	Over Current Phase B Configuration Block	1	0	1004	5907-5913
3	Over Current Phase C Configuration Block	1	0	1005	5914-5920
4	Over Current Neutral Configuration Block	1	0	1006	5921-5927
5	Reserved				5928-5934
6	Under Current Phase A Configuration Block	2	0	1003	5935-5941
7	Under Current Phase B Configuration Block	2	0	1004	5942-5948
8	Under Current Phase C Configuration Block	2	0	1005	5949-5955
9	Current Unbalance Phase A Configuration Block	1	1	1010	5956-5962
10	Current Unbalance Phase B Configuration Block	1	1	1011	5963-5969
11	Current Unbalance Phase C Configuration Block	1	1	1012	5970-5976

<i>Event No.</i>	<i>Description</i>	<i>Type</i>	<i>Sub-Type</i>	<i>Compare Reg.</i>	<i>Register Block</i>
12	Reserved				5977-5983
13	Over Voltage Phase A Configuration Block	1	0	1018	5984-5990
14	Over Voltage Phase B Configuration Block	1	0	1019	5991-5997
15	Over Voltage Phase C Configuration Block	1	0	1020	5998-6004
16	Over Voltage Phase A-B Configuration Block	1	0	1014	6005-6011
17	Over Voltage Phase B-C Configuration Block	1	0	1015	6012-6018
18	Over Voltage Phase C-A Configuration Block	1	0	1016	6019-6025
19	Under Voltage Phase A Configuration Block	2	0	1018	6026-6032
20	Under Voltage Phase B Configuration Block	2	0	1019	6033-6039
21	Under Voltage Phase C Configuration Block	2	0	1020	6040-6046
22	Under Voltage Phase A-B Configuration Block	2	0	1014	6047-6053

<i>Event No.</i>	<i>Description</i>	<i>Type</i>	<i>Sub-Type</i>	<i>Compare Reg.</i>	<i>Register Block</i>
23	Under Voltage Phase B-C Configuration Block	2	0	1015	6054-6060
24	Under Voltage Phase C-A Configuration Block	2	0	1016	6061-6067
25	Voltage Unbalance Phase A Configuration Block	1	1	1026	6068-6074
26	Voltage Unbalance Phase B Configuration Block	1	1	1027	6075-6081
27	Voltage Unbalance Phase C Configuration Block	1	1	1028	6082-6088
28	Voltage Unbalance Phase A-B Configuration Block	1	1	1022	6089-6095
29	Voltage Unbalance Phase B-C Configuration Block	1	1	1023	6096-6102
30	Voltage Unbalance Phase C-A Configuration Block	1	1	1024	6103-6109
31-40	Reserved				6110-6179
41	Over Frequency Configuration Block	1	0	1001	6180-6186
42	Under Frequency Configuration Block	2	0	1001	6187-6193

<i>Event No.</i>	<i>Register Name</i>	<i>Type</i>	<i>Saved</i>	<i>Scaled</i>	<i>Units</i>	<i>Range</i>	<i>Register Description</i>
00	High Byte: Enable/Disable Low Byte: Priority	R/W	√		None	0 or FF 0 to 03	High Byte: Enable = 0xFF, Disable = 0x00 Low Byte: Priority 0 to 3 = 0x00 to 0x03
01	Pickup Limit	R/W	√	√	Units/ Scale Factor	Varies according to alarm type	Pickup Limit Setpoint Ranges: Alarms 1-4, 6-8, 13-24: 0 to 32767 Alarms 9-11, 25-30: -1000 to 1000 Alarms 41-42: 4500 to 6600
02	Pickup Limit Delay	R/W	√		Seconds	0 – 32767	Pickup Time Delay
03	Dropout Limit	R/W	√	√	Units/ Scale Factor	Varies according to alarm type	Dropout Limit Setpoint Ranges: Alarms 1-4, 6-8, 13-24: 0 to 32767 Alarms 9-11, 25-30: -1000 to 1000 Alarms 41-42: 4500 to 6600
04	Dropout Limit Delay	R/W	√		Seconds	0 – 32767	Dropout Time Delay
05	Relay Action	R/W	√		None	0 or FF	Turn on solid state relay; Enable = FF, Disable = 0; operate on alarm entry and release on alarm exit. (normal mode only)
06	Trigger Event Log	R/W	√		None	0 or 1	Enable = 1, Disable = 0; Priority 1 to 3 only

File # (Type) Register Block

Log Description

FILE CONFIGURATION AND SETUP (PM-650 only)

File #1	7000 – 7019	Power Meter Event Log
File #2	7020 – 7039	Data Log 1