USING INTEGER DATA TYPES

Unlike the floating point data type, integer data can only represent whole numbers between 0 to 65535. To convert the number into the actual value it represents, it must be multiplied by a constant. These multipliers are typically small numbers. Many data points require a different multiplier for each product with a different amperage range, but some data types (volts, power factor) require the same multiplier regardless of the product's amperage range.

This table shows the multipliers for all point and amperage ranges:

Addr	Units	100A	300/400A	800A	1600A	2400A
40001	KWH	7.8125e-3	0.03125	0.0625	.125	0.25
40002	KWH	512	2048	4096	8192	16384
40003	KW	0.004	0.016	0.032	0.064	0.128
40004	VAR	0.004	0.016	0.032	0.064	0.128
40005	VA	0.004	0.016	0.032	0.064	0.128
40006	---	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5
40007	VOLTS	0.03125	0.03125	0.03125	0.03125	0.03125
40008	VOLTS	0.015625	0.015625	0.015625	0.015625	0.015625
40009	AMPS	3.9063e-3	0.015625	0.03125	0.0625	0.125
40010	KW	0.001	0.004	0.008	0.016	0.032
40011	KW	0.001	0.004	0.008	0.016	0.032
40012	KW	0.001	0.004	0.008	0.016	0.032
40013	---	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5
40014	---	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5
40015	---	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5	3.0518e-5
40016	VOLTS	0.03125	0.03125	0.03125	0.03125	0.03125
40017	VOLTS	0.03125	0.03125	0.03125	0.03125	0.03125
40018	VOLTS	0.03125	0.03125	0.03125	0.03125	0.03125
40019	VOLTS	0.015625	0.015625	0.015625	0.015625	0.015625
40020	VOLTS	0.015625	0.015625	0.015625	0.015625	0.015625
40021	VOLTS	0.015625	0.015625	0.015625	0.015625	0.015625
40022	AMPS	3.9063e-3	0.015625	0.03125	0.0625	0.125
40023	AMPS	3.9063e-3	0.015625	0.03125	0.0625	0.125
40024	AMPS	3.9063e-3	0.015625	0.03125	0.0625	0.125
40025	KW	0.004	0.016	0.032	0.064	0.128
40026	KW	0.004	0.016	0.032	0.064	0.128
40027	KW	0.004	0.016	0.032	0.064	0.128

It can be helpful in some cases to use "multipliers" as divisors, where the integer value returned by the meter is divided by a number. In many cases, the divisors are a more concise number.

Addr	Units	100A	300/400A	800A	1600A	2400A
40001	KWH	128	32	16	8	4
40002	KWH	1.953e-3	4.8828e-4	2.4414e-4	1.2207e-4	6.1035e-5
40003	KW	250	62.5	31.25	15.625	7.8125
40004	VAR	250	62.5	31.25	15.625	7.8125
40005	VA	250	62.5	31.25	15.625	7.8125
40006	---	32768	32768	32768	32768	32768
40007	VOLTS	32	32	32	32	32
40008	VOLTS	64	64	64	64	64
40009	AMPS	256	64	32	16	8

40010	KW	1000	250	125	62.5	31.25
40011	KW	1000	250	125	62.5	31.25
40012	KW	1000	250	125	62.5	31.25
40013	---	32768	32768	32768	32768	32768
40014	---	32768	32768	32768	32768	32768
40015	---	32768	32768	32768	32768	32768
40016	VOLTS	32	32	32	32	32
40017	VOLTS	32	32	32	32	32
40018	VOLTS	32	32	32	32	32
40019	VOLTS	64	64	64	64	64
40020	VOLTS	64	64	64	64	64
40021	VOLTS	64	64	64	64	64
40022	AMPS	256	64	32	16	8
40023	AMPS	256	64	32	16	8
40024	AMPS	256	64	32	16	8
40025	KW	250	62.5	31.25	15.625	7.8125
40026	KW	250	62.5	31.25	15.625	7.8125
40027	KW	250	62.5	31.25	15.625	7.8125