3/19/18

P3 Pulser Material Number E10055 Application Notes

Please note: material number E10055 (P3 Pulser) is designed for Legacy Class 1000 ECon and Class 2000 EMon DMon Meters only (serial numbers begin with 1203 third week of January 2012 and earlier.)

Peripheral Jack 6-pin RJ-11-used to interface with P3 Pulser

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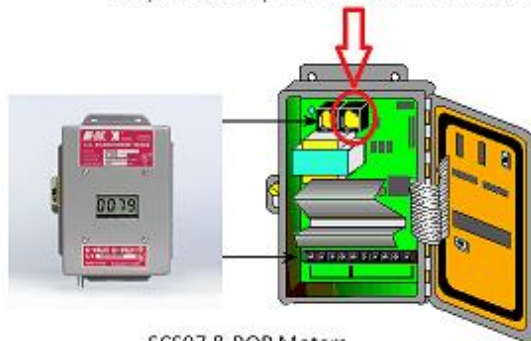
SCS97 & BQP Meters
Mfg 1997 to 2004

SCS7752 Meters
Mfg 2004 to 2012

Calibration Jack Connector J11 is for factory calibration only, and is not a user accessible port. Silicon plug is not to be removed.

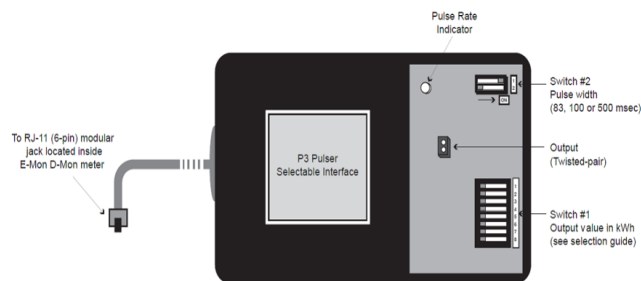Current generation Honeywell EMon Class 1000 & 2000 meter

Table for Switch 1

Pulse values shown in Table 1 below are for the Legacy Class 1000 ECon and Class 2000 EMon DMon Meters. Serial numbers begin with 1203 third week of January 2012 and earlier.

The meter model will determine the amperage in Table # 1 to use corresponding to the DIP switch setting. For example, model number 208200KIT (208-240 volt 200 Amp meter) for 1 pulse is equal to 1 kilowatt hour setting would be switch 4 ON. Another example, a 480100KIT setting would be switch 3 on for the value of one pulse is equal to one kWh.
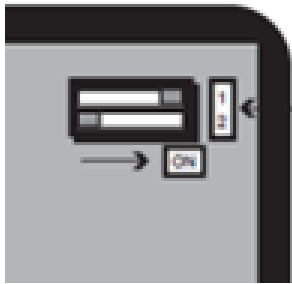
Only one of the eight switches should be in the on position.

Table 1

DIP SWITCH SELECTION GUIDE (pulse value in kilowatt-hours)

Selector ON → Position	25A	50A	100A	200A	400A	800A	1600A	3200A
1	1	2	4	8	16	32	64	128
2	.5	1	2	4	8	16	32	64
3	.25	.5	1	2	4	8	16	32
4	.125	.25	.5	1	2	4	8	16
5	.0625	.125	.25	.5	1	2	4	8
6	.03125	.0625	.125	.25	.5	1	2	4
7	.015625	.03125	.0625	.125	.25	.5	1	2
8	.0078125	.015625	.03125	.0625	.125	.25	.5	1

Switch #2 sets the pulse closure speed.

Switch #2
Pulse width
(83, 100 or 500 msec)

Calculating kWh and kW with Pulse Output

The E-Mon kWh pulse output may be counted for energy consumption and timed for demand. If you count pulses, you are accumulating the total kWh's of energy you have consumed. If you time them, you can derive the instantaneous demand (kW).

To calculate kWh:

Watt hour pulse value multiplied by number of pulses then dived by 4 for Kilowatt hours.
Take the total pulses for example 85,060 and multiply by the meter pulse value in this example we use the 100 amp meter pulse value of 1.95312 watts per pulse equals 166,132.4
Next, take the total and divide by 1000 = 166.1 kilowatt hours used.

To calculate kW over time:

There are 3600 seconds in an hour (60 minutes in an hour X 60 seconds in a minute =3600). Run a timer at a 1 second time base and every time it gets reset by a pulse from the meter move the accumulated value and use it to divide the 3600.
Measure the time between two pulses, "t" in seconds. Then the approximate power at a given time is:
$P = 3600 \text{ Ws} / t$
Example: t=10 s
$P = 3600 \text{ Ws} / 10 \text{ s} = 360 \text{ W}.$

Another example, if one pulse is equivalent to 0.5 kWh, then four pulses per minute signifies you are using 2 kWh per minute. If, a few minutes later, there are only three pulses over the course of a minute, you are only using 1.5 kWh.