

SPECIALTY DEVICES

MPG-2 WIRELESS METER PULSE GENERATOR

DESCRIPTION

The MPG-2 wireless Meter Pulse Generator integrates AMI smart meters with legacy KYZ pulse metering. Using Zigbee® radio technology, the MPG-2 receives streaming usage data from the meter's HAN network, interprets power usage, and generates KYZ pulses that accurately represent energy usage by the customer. With the MPG-2, pulses are synthesized without having an actual physical KYZ output at the meter. By doing this, the utility can implement the AMI (advanced meter infrastructure) meters and still provide pulses to customers that need them.



The MPG-2 features a USB input to host the Zigbee radio module “dongle” (included) and two KYZ pulse outputs. As the MPG-2 receives periodic usage data from utility's meter, the data is read and interpreted to obtain the current demand information. The accumulated energy is computed and pulses are outputted according to a selected pulse value.

In addition to the two KYZ pulse outputs, the MPG-2 features an end-of-interval (EOI) output that provides a pulse to mark the end of one interval and the start of the next interval.

All system settings are accomplished through a USB programming port using the Solid State Instruments Universal Programmer software. This allows the pulse value, multiplier, output mode, and pulse timing to be set to customer requirements. The output is selectable as either Form A (2-Wire) or Form C (3-Wire) and operates in either the momentary or toggle mode, respectively. The momentary mode has six pulse width time settings: 25mS, 50mS, 100mS, 200mS or 500mS and 1000mS. The toggle mode toggles back and forth to the opposite state upon each new pulse being generated. There are two LED's, one red and one green, which show pulse output status. An amber LED is provided to display the EOI pulse.

The output pulse value is selectable from 1 to 99,999 watt-hours per pulse.

A 30mS fixed minimum-off time delay prevents pulses from occurring too rapidly. Bright red, yellow and green COM LEDs monitor the system communications status and provide an easy and immediate visual system check without test equipment.

The Zigbee transceiver dongle must be paired with the utilities AMI meter equipment with a Zigbee transceiver. The pairing process is usually performed by the participating utility or on the utility's website. Once paired with the meter, the HAN network is automatically created and the MPG-2 begins generating pulses.

The MPG-2 is compatible with Self-Contained or Instrument-rated electric meters. The MPG-2's USB programming port is also used to enter the specific site's meter multiplier from 1 to 99999. In addition, the MPG-2 can be configured for Normal mode (delivered only) for unidirectional energy flow, or for Signed mode (delivered and received) for bi-directional energy flow.

FUNCTIONAL SUMMARY

	IN	OUT
#	1, 1	2, 1 kWh, EOI
TYPE	USB Zigbee® Radio Module	2 Wire or 3Wire, 2 Wire
FORM	---	A or C, A

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SPECIFICATIONS

ELECTRICAL

Power Input:	120, 208-277 VAC. Burden: 10 VA
Input:	USB Port (host) for Zigbee Dongle
Output:	Two Form A (2-Wire) or Form C (3-wire) Solid State dry-contact outputs rated at 100mA at 120V, 800mW maximum, fused at .1A One Form A (2-Wire) Solid State dry- output rated at 100mA at 120V, 800mW contact maximum
Maximum Pulse Output Rate:	≈15 Pulses per second (Form C) ≈10 pulses per second (Form A)
Minimum Time between Output Pulses:	30ms
Form A Pulse Width:	25, 50, 100, 200, 500, 1000 mS
Output Pulse Values:	1-99999 Wh/pulse
Meter Multiplier:	1-99999

MECHANICAL

Mounting:	Any position
Size:	8" wide, 10" high, 4.5" deep
Weight:	4 pounds

TEMPERATURE

Temperature Range:	-38° C to +70° C, -38.4° F to +158° F
Humidity:	0 to 98% non-condensing

AVAILABLE OPTIONS

Input Voltages:	Contact factory
Enclosures:	NEMA 4X Fiberglass 10" x 8" x 4" with hinged cover, lockable hasps

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