



## SPECIALTY DEVICES

# MPG-1 WIRELESS PULSE GENERATOR

## DESCRIPTION

The MPG-1 wireless meter pulse generator integrates AMI smart meters with legacy KYZ pulse metering. Using Zigbee<sup>®</sup> radio technology, the MPG-1 receives streaming usage data from the meter, interprets power usage, and converts it into KYZ pulses. With the MPG-1, pulses are synthesized without having an actual KYZ output at the meter. By doing this, the utility can implement the new advanced meters and still provide pulses to customers that may need them.



The MPG-1 features a USB input to host the Zigbee radio module “dongle” (sold separately) and two KYZ pulse outputs. As the MPG-1 receives streaming data from utility’s meter, the data is read and parsed to obtain the current demand information. The accumulated energy is computed and pulses are outputted according to a selected pulse value.

A 6-position dip switch provides for output mode, timing, and pulse value selection. The output is selectable as either Form A (2-Wire) or Form C (3-Wire) and operates in either the momentary or toggle mode. The momentary mode has four pulse width time settings 50mS, 100mS, 200mS or 500mS. 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 output status.

Pulse output values are selectable to one of eight values: 10, 25, 50, 100, 200, 500, 1000 or 2000 watt-hours per pulse. In addition, the MPG-1 incorporates a serial port for programming certain functions. The serial port can be used to set the meter multiplier for instrument-rated metering applications in the event that the utility does not send the correct meter multiplier as part of the Zigbee transmission. Bidirectional energy flow is supported with the selection of “normal” or “signed” energy mode. The serial port may also be used for diagnostics for troubleshooting Zigbee HAN applications.

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

The Zigbee dongle must first be paired with the meter, a process that is performed by the participating utility or on the utility’s website. Once paired with the meter, the dongle is inserted into the MPG-1’s USB port and hosted by the MPG-1.

### FUNCTIONAL SUMMARY

	IN	OUT
#	1	2
TYPE	USB Zigbee <sup>®</sup> Radio Module	2 Wire or 3Wire
FORM	---	A or C

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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
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:	50, 100, 200, 500 mS
Output Pulse Values:	10, 25, 50, 100, 200, 500, 1000, 2000 Wh

### MECHANICAL

Mounting:	Any position
Size:	3.1" wide, 7.2" high, 1.5" deep
Weight:	1 pound

### TEMPERATURE

Temperature Range:	-38° C to +70° C, -36.4° F to +158° F
Humidity:	0 to 98% non-condensing

### AVAILABLE OPTIONS

Input Voltages:	Contact factory
Enclosures:	NEMA 4X fiberglass raintight and dustproof enclosure available. 12.0" high, 10.0" wide, 6.0" deep, includes mounting plate

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