



SPECIALTY DEVICES

MPG-3SC-R22 WIRELESS METER

DESCRIPTION

The MPG-3SC-R22 is a combination of SSI's Wireless MPG-3SC Zigbee Meter Pulse Generator and a 2 channel Isolation Relay when both are needed for unique applications. It integrates AMI smart meters with legacy KYZ pulse metering for kWh Energy pulses. Using Zigbee® radio technology, the MPG-3SC-R22 receives usage data from the meter's HAN network, interprets power usage, and converts it into KYZ pulses. With the MPG-3SC-R22, pulses are synthesized without having an actual KYZ output in the meter.

By using the MPG-3SC, utilities can implement the new advanced AMI meters and still provide pulses to customers that may need them. In addition if kVarh pulses or kVAh pulses are required, they can be isolated from the meter using the 2-channel hardwired isolation relay integrated into the MPG-3SC-R22.



The MPG-3SC-R22 features integral Zigbee radio module and two KYZ pulse outputs, in a fiberglass NEMA 4X enclosure for kWh pulses. As the MPG-3SC-R22 receives periodic data from utility's meter, the data is read and interpreted to obtain the current demand information. Accumulated energy is computed, and pulses are outputted according to a selected pulse value. For kVarh or kVAh pulses, inputs are connected to hardwired outputs of the electric meter's KYZ outputs. These isolated pulse channels are available in the customer compartment, along with the Zigbee-generated pulse outputs.

All system settings are accomplished through a USB programming port that provides access for programming the pulse value, meter multiplier, output mode, and pulse timing. 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.

The output pulse value is selectable from 1 to 99999 watt-hours per pulse. A meter multiplier of 1 to 99999 may be programmed into the MPG-3SC using the SSI Universal Programmer software.

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 module must be paired or "provisioned" with the AMI meter with a HAN network radio, a process that is performed by the participating utility or on the utility's website. Once paired with the meter, the MPG-3SC-R22 will begin receiving information from the meter and generating pulses.

The MPG-3SC-R22 is compatible with Self-Contained or Instrument-rated electric meters. The MPG-3SC-R22's USB programming port is used to enter the specific site's meter multiplier from 1 to 99999. In addition, the MPG-3SC-R22 can be configured for Normal mode (kWh delivered only) for unidirectional energy flow, or for Signed mode (kWh delivered and received) for bi-directional energy flow. The MPG-3SC-R22 also supports End-Of-Interval capability with a Form A (2-wire) output for intervals over a wide range.

FUNCTIONAL SUMMARY

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

MPG-3SC-R22

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SPECIFICATIONS

ELECTRICAL

Power Input:	Autoranging 120-277 VAC. Burden: 10 VA
Input:	Zigbee HAN Network with AMI meter Two Form A or C dry-contact compatible pulse inputs
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 Two Form C (3-Wire Solid State dry-contact outputs rated at 500mA at 120V, 800mW maximum, fused at .5A
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
End of Interval Output:	1 Form A (2-wire) output for EOI
Interval Lengths:	1, 5, 10, 15, 30, 60 minutes
Interval Pulse Widths:	50, 100, 250, 500, 1000, 2000, 5000, 10000mS

MECHANICAL

Mounting:	Any position
Size:	9.5' wide, 11.5' high, 4 3/8" deep
Weight:	7 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 raintight and dustproof enclosure available. 10.0" high, 8.0" wide, 4.0" deep, includes mounting plate