

# RPR-23S

## TRIPLE PULSE ISOLATION RELAY

The RPR-23S triple repeating pulse isolation relay is designed to provide three isolated “dry”, mercury-wetted form “C” (K, Y, & Z) contact outputs from two form “A” or “C” inputs. Each output is mappable to either input, allowing a flexible configuration. The primary application for the RPR-23S is where two independent isolation relay channels are desired with multiple outputs on each channel, in one package.

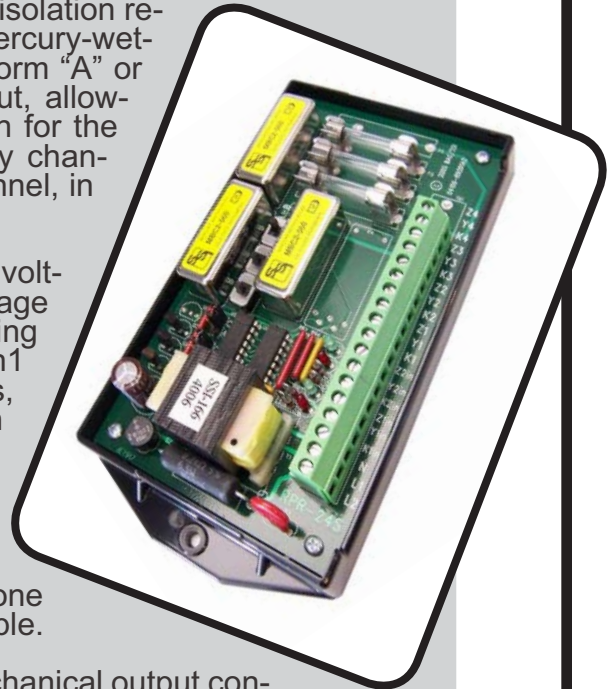
The RPR-23S operates over the standard SSI wide voltage range. The RPR-23S has a built-in low voltage transformer-isolated powered power supply generating a +13VDC sense voltage. The sense voltage (Kin1 and Kin2) is connected to pulse sending devices, typically electric meters’ KYZ pulse initiators. Each output relay is switch selectable to either of the two inputs, A or B, thus allowing each input to control one, two, or three relays. Flexible configurations for the two input channels are possible: 0/3, 1/2, 2/1, and 3/0, such that the RPR-23S may be used to provide two energy pulse (Form C) outputs and one end-of-the-interval pulse (Form A) output, for example.

The RPR-23S may be used with meters having mechanical output contacts (relays), or high or low voltage semiconductor outputs. Typical applications include interfaces between utility metering devices and customer-owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces. The RPR-23S relay is designed to retain the last valid input status on each channel upon loss of the system’s power thereby preventing false outputs from occurring. An incorrect sequence of input pulses is detected and only the first valid pulse will result in an output.

Bright red and green LED lamps, one on each input, indicates each channel’s relay status at all times thus allowing a rapid check of the system’s performance without requiring any additional test equipment. The RPR-23S’ input and output circuit’s terminal strip is a “EURO” type connector strip. When the stripped wire has been correctly installed in the terminals “slot” no conductive parts are exposed on the surface of the terminal strip, thus allowing the user maximum protection from accidental electrical shock. Each “K” lead of the RPR-23S’ three outputs is fused to prevent damage to the relays under almost any conditions a user might cause such as excessive current, incorrect wiring, etc.

The RPR-23S has built-in transient protection for the mercury-wetted relays contacts which eliminates the need for external or off-the-board transient suppressors. All component parts which have power applied to them, with the exception of the input/output terminal strip are enclosed in a polycarbonate cover for maximum protection.

The mounting base plate is also made of polycarbonate and offers excellent electrical insulation between the circuits and the mounting surface.



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# RPR-23S SPECIFICATIONS

## ELECTRICAL

Power Input: 90 to 325 VAC. Burden: 10 MA. at 120 VAC

Signal Inputs: Two independent Form A or C inputs, field programmable. Each input provides a "Yin" and "Zin" terminal wetted with +13VDC, with a common return on the "Kin" terminal.

Output: Three sets of "dry" Form "C" contacts (K, Y, & Z) for energy pulses. The contacts are mercury wetted "no bounce" relays rated at 500 VDC or 350 VAC 2 Amps break, 5 Amps carry. The maximum rating of the contacts is 100 VA. Factory fused at 1/2 amp. (3AG)

Contact Resistance: 50 milliohms maximum, 12 to 14 typical

Insulation Resistance: 50 megohms typical

Operate and Release Time: 4 to 8 milliseconds typical

## MECHANICAL

Mounting: Within 30 degrees of vertical

Size: 3.50 inches wide, 7.20 inches high, 1.50 inches deep

Weight: 12 ounces

## TEMPERATURE

Temperature Range: -38° C to +70° C, -36.4° F to +158° F

Humidity: 0 to 98% non-condensing

## OPTIONS

Input Voltages: Contact Factory



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