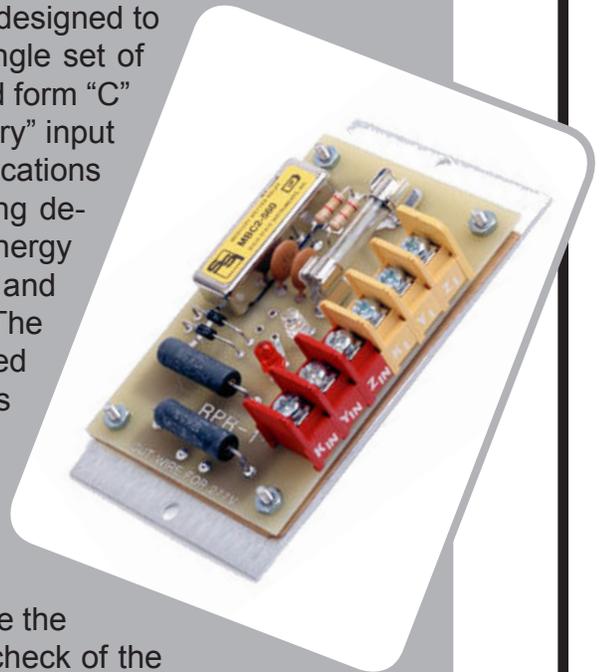


# RPR-1

## REPEATING PULSE RELAY

The RPR-1 repeating pulse relay is designed to provide isolation in the form of a single set of isolated “dry” (no voltage present), mercury wetted form “C” (K, Y, & Z) relay contacts from a single form “C” “dry” input over a wide voltage operating range. Typical applications include isolation interfaces between utility metering devices (KWH, KVAR, etc.) and customer owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces. The RPR-1 relay is designed to retain the last received valid input status upon the loss of the system’s power thereby preventing false outputs from occurring. An incorrect sequence of received input pulses is detected and only the first valid pulse will result in an output.



High light output red and green LED lamps indicate the systems status at all times thus allowing a rapid check of the metering system’s pulse pick-up and relay’s performance without requiring any additional test equipment. The LEDs indicate the sending meter’s status up to and including the RPR-1 relay’s coils. The RPR-1’s input and output circuit’s thermoplastic terminal strip is color coded to reduce wiring errors in the field. The terminal strip will accept stripped wires in the range of 16 to 24 gage and lugged wires of a similar size. The “K” lead of the RPR-1’s output is fused to prevent damage to the relay under almost any conditions a user might encounter such as excessive current, incorrect wiring, etc.

The RPR-1 has built-in resistor-capacitor relay contact arc protection for the mercury wetted relays contacts. This eliminates the need for external or off-the-board transient suppressors. The design intent of the RPR-1 is to provide a fully functional pulse isolation relay in the minimal space practical. The RPR-1’s mounting base plate is made of .085 inch aluminum that offers excellent mechanical support while occupying a minimal space. No cover over the component parts is provided with the RPR-1 relay. By cutting a small jumper wire the RPR-1 may be operated from AC or DC power supplies over a voltage range of 85 to 325 volts. The input “K, Y, & Z” leads of the RPR-1 relay may be paralleled with other IPR and RPR relays to increase the number of available isolated outputs and or functions, if the input voltage phasing is observed.

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# RPR-1 SPECIFICATIONS

## ELECTRICAL

Power Input: 85 to 325 VAC or VDC. Burden: 10 MA. at 120 VAC

Output: One set 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 are 100 VA. Factory fused at 1/2 amp. (3AG) Output Contact Resistance: 18 ohms typical, 25 ohms maximum

Contact Resistance: 50 milliohms maximum, 12 to 14 typical

Operate and Release Time: 1 to 2 milliseconds typical

## MECHANICAL

Mounting: Within 30 degrees of vertical

Size: 2.50 inches wide, 4.50 inches high, 1.10 inches deep

Weight: 6 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

Outputs: Non-latching “make-before-break” relays



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