



IPR-1

ISOLATION PULSE RELAY

The IPR-1 isolation pulse relay is designed to provide a single isolated "dry", mercury wetted form "C" (K, Y, & Z) output contact from a single form "C" energy pulse input and a single isolated "dry" mercury wetted form "A" or form "B" output contact for end of interval demand timing. Typical applications include interfaces between utility metering devices and customer owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces. The IPR-1 relay is designed to retain the last valid energy pulse input status upon loss of the system's power thereby preventing false outputs from occurring. An incorrect sequence of input energy form "C" pulses will be detected and only the first valid pulse will result in an output. The timing pulse output closure for end-of-demand interval status may be field set, by means of a small switch, to either reproduce the original input timing pulse duration length or a short pulse closure (approximately 100 milliseconds) beginning at the start of the "end-of-demand-interval" input pulse.



High output red, yellow and green LED lamps indicate the systems status at all times thus allowing a rapid visual check of the system's performance without requiring any additional test equipment. The IPR-1's input and output circuit's terminal strip is color coded for error free wiring in the field. Each "K" lead of the IPR-1's 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 IPR-1 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 user protection. The mounting base plate is also made of polycarbonate and offers excellent electrical insulation between the circuit and the mounting surface. The input "K, Y, & Z" leads may be paralleled with other IPR-1, RPR-2P, RPR-3P, RPR-23 and MPT-4 relays to increase the number of available isolated outputs and functions.

SOLID STATE INSTRUMENTS

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IPR-1 SPECIFICATIONS

ELECTRICAL

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

Output: One set of "dry" Form "C" contacts (K, Y, & Z) for energy and one set of "dry" Form "A" (or Form "B") contacts (K & Y) for end- of- interval time 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: 2.5 milliseconds typical operate; 3.0 milliseconds typical release

MECHANICAL

Mounting: Within 30 degrees of vertical

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

Weight: 15 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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