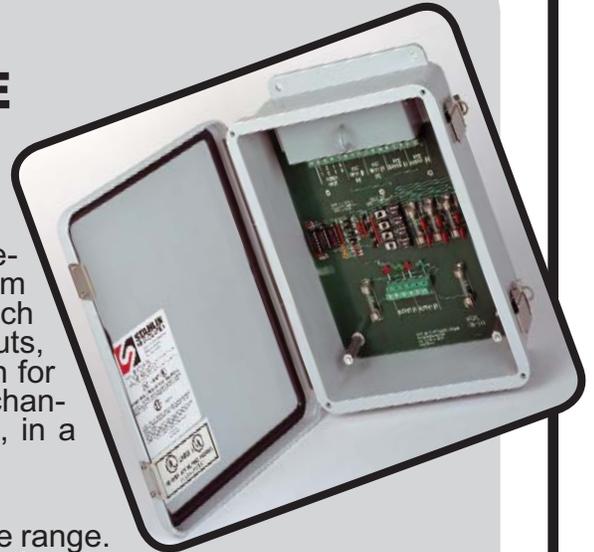




CIR-24S

DUAL SOLID STATE ISOLATION RELAY



The CIR-24S dual repeating pulse isolation relay is designed to provide four isolated dry-contact, solid-state Form C (K, Y, & Z) outputs from two Form A or C inputs. Each output is mappable (assignable) to either of the two inputs, allowing a flexible configuration. The primary application for the CIR-24S is where two independent isolation relay channels are desired with multiple outputs on each channel, in a weather-tight package.

The CIR-24S operates over the standard SSI wide voltage range. The CIR-24S has a built-in low voltage transformer-isolated power supply generating a +13VDC sense voltage. The sense voltage is sent to each electric meter's Y and Z pulse initiator output terminals from the CIR-24S' Y1in/Z1in and Y2in/Z2in input terminals. It returns to the K1in and K2in terminals, the common return for both meters. Each output relay is switch selectable to follow (echo) one of the two inputs, thus allowing each input to control one, two, three or even four relays. Flexible configurations for the two input channels are possible: 0/4, 1/3, 2/2, 3/1, and 4/0 such that one CIR-24S may be used in lieu of two or more relays to accomplish the same task.

The CIR-24S may be used with electric meters having electro-mechanical or semiconductor output contacts, either high or low voltage. Typical applications include interfaces between utility metering devices and customer-owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces. The CIR-24S relay is designed for high-speed pulses and can switch up to 72,000 pulses/hour in 3-Wire mode and 36,000 pulses/hour in 2-Wire mode. The outputs are non-latching. Each input may be configured for either a "long" or "short" output pulse. In the "long" output mode, the output pulse width exactly follows (or mirrors) the input pulse width. In the "short" output mode, the output pulse is fixed at 100 milliseconds (mS). The "short" mode is normally used for end-of-interval pulses or where a fixed pulse width is needed.

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 CIR-24S's 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, allowing the user maximum protection from accidental electrical shock. Each "K" lead of the CIR-24S' four outputs is fused to prevent damage to the relays under almost any conditions a user might cause such as excessive current, incorrect wiring, etc. Redundant coordinate fuses are used on the customer compartment outputs.

The CIR-24S has built-in MOV transient protection for the solid-state relay contacts that eliminates the need for external or off-the-board transient suppressors. All component parts that have power applied to them are located behind the utility compartment cover, with the exception of the dry contact/output terminal strip in the customer compartment.

The CIR-24S is housed in a NEMA 4X raintight and dustproof fiberglass enclosure.

SOLID STATE INSTRUMENTS

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CIR-24S SPECIFICATIONS

ELECTRICAL

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

Signal Input: Two switch-selectable Form A or Form C inputs. "Y-in" and "Z-in" terminals wetted with +13VDC. "K-in" terminals are common return. Each input has "K-in," "Y-in" and "Z-in" input terminals for connection to each meter. Use "Y-in" terminal for 2-Wire mode. Use "Y-in" and "Z-in" terminals for 3-Wire.

Output: Four sets of "dry" form "C" contacts (K, Y, & Z) for energy pulses. The contacts are solid state rated at 250VAC/VDC at 100milliamps. The maximum rating of the contacts is 800mW. Each output is factory fused at 1/10 amp. (3AG)

Contact Resistance: 25 ohms maximum, 18 typical

Turn on Time: 2 mS typical; 3 mS MAX

Turn off Time: 1 mS typical; 2 mS MAX

Input/Output Isolation Voltage: 2500V

MECHANICAL

Mounting: Any position

Size: 8.0 inches wide, 10.0 inches high, 4.50 inches deep

Weight: 9 pounds

TEMPERATURE

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

Humidity: 0 to 98% non-condensing

OPTIONS

Input Voltages: 125 VDC input using the DSC-1 Power Supply. Contact the factory for other input voltages.



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