



## SELF-CONTAINED RELAYS (OUTDOOR) - SOLID STATE

# CIR-24PS CUSTOMER INTERFACE RELAY

FORMERLY THE CIR-24S

## DESCRIPTION

The CIR-24PS Customer Interface Relay provides four isolated solid state dry Form C contacts from two Form A or C inputs. Each set of output contacts may be used as either a Form A (K & Y) or a Form C (K, Y, & Z) contact. The typical application is the utility's interface between the KWH meter and a customer-owned energy control system where two types of pulses are used. For example, one input channel might be for watt-hour pulses and the second input channel for var-hour pulses. The CIR-22 provides two independent isolation relay channels in one ready-to-use weather-resistant package.

The CIR-24PS is internally divided into two compartments. Once installed, the upper compartment is normally locked and only accessible to utility metering personnel. It contains all of the electronics along with fusing that is coordinated with the fuse contained within the customer compartment. The lower compartment (customer compartment) contains a terminal strip, fusing, and output status LEDs. Using jumper selector, the inputs can be configured as 2-Wire or 3-Wire inputs and the outputs can be configured in the "Long" or "Short" pulse output mode. With the output selector in the long mode, the relays' contact closure is the same duration as the input's closure duration. In the short mode, the output is closed for a approximately 100 milliseconds regardless of the input's closure duration. Red and green LEDs, one for each channel, are located in the customer's compartment and light alternately depending upon input's status.

Each output is assigned to one of the two inputs by means of a switch, thereby allowing flexibility in directing pulses to the appropriate output.

The use of LEDs allows a rapid visual check of the system's performance by inexperienced personnel without requiring any additional test equipment. Because of the redundant, coordinated fusing in both the utility's and customer's compartments, the meter shop service coordinator can usually determine the location of the service problem as to either utility or customer responsibility by the simple question "are the LEDs flashing". The double "K" lead coordinated fusing of the CIR-24PS's output will prevent damage to the relay under almost any condition a user might cause such as that caused by excessive current, incorrect wiring, etc. The CIR-24PS' robust solid state switching device is rated at 800V and 750mA giving maximum protection from lightning or transient voltage damage. The CIR-24PS has built-in transient protection for the solid state switching devices that eliminates the need for external or off-the-board transient suppressors.



### FUNCTIONAL SUMMARY

	IN	OUT
#	2	4
TYPE	2 or 3 Wire	3 Wire
FORM	A or C	C

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## SPECIFICATIONS

### ELECTRICAL

Power Input:	90 to 300 VAC. Burden: 10 mA at 120 VAC
Pulse Inputs:	Two Form A (2-Wire) or C (3-Wire) input with +13VDC wetting voltage on the "Y" and "Z" terminals.
Pulse Outputs:	Four sets of dry contact solid state outputs – two located in the customer's compartment and two in the utility compartment. The contacts are solid state "no bounce" relays rated at 250VACVDC at 1/2 Amp. The maximum rating of the contacts is 100 VA. Factory fused at 1/4 amp. (3AG)
Contact On-State Resistance:	2.3 ohms maximum, 1.7 ohms typical
Insulation Resistance:	50 megohms typical
Operate and Release Time:	Turn on-time - 8 mS typical; 20 mS MAX Turn off-time - 1 mS typical; 5 mS MAX
Input/Output Isolation Voltage:	2500Vrms

### MECHANICAL

Mounting:	Any position
Size:	9.0" wide, 11.0" high, 4.50" deep
Weight:	9 pounds
Type/Material:	NEMA 4X Fiberglass Case

### TEMPERATURE

Temperature Range:	-38° C to +85° C, -36.4° F to +185° F
Humidity:	0 to 98% non-condensing

### OPTIONS

Input Voltages:	24 VAC/24VDC, 125VDC
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