



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

# CIR-13PS CUSTOMER INTERFACE RELAY

FORMERLY THE CIR-13S

## DESCRIPTION

The CIR-13PS Customer Interface Relay provides three isolated solidstate dry Form C contacts from a single Form A or C input. 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. The CIR-13PS includes everything necessary to provide a customer with energy pulses in one compact ready-to-use weather-resistant enclosure.



The CIR-13PS 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 a jumper selector, the outputs can be configured in the "Long" or "Short" pulse output mode. With the 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 located in the customer's compartment light alternately depending upon input's status. 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-13PS'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-13PS' robust solid state switching device is rated at 800V and 750mA giving maximum protection from lightning or transient voltage damage. The CIR-13PS has built-in transient protection for the solid state switching devices that eliminates the need for external or off-the-board transient suppressors.

# CIR-13PS

### FUNCTIONAL SUMMARY

|      | IN          | OUT    |
|------|-------------|--------|
| #    | 1           | 3      |
| TYPE | 2 or 3 Wire | 3 Wire |
| FORM | A or C      | C      |



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## SPECIFICATIONS

### ELECTRICAL

|                                 |  |
|---------------------------------|--|
| Power Input:                    | 120, 208-277 VAC. Burden: 10 mA at 120 VAC   |
| Pulse Input:                    | One Form A (2-Wire) or C (3-Wire) input with +13VDC wetting voltage on the Y and Z terminals   |
| Pulse Output:                   | Three sets of dry contact solid state outputs. <u>Output 1</u> : one set of Form C contacts (K, Y, & Z) located in the customer's compartment. <u>Output 2 &amp; 3</u> : two sets of Form C contacts located in the utility compartment. The contacts are solid state "no bounce" relays rated at 250 VACVDC 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<br>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 +70° C, -36.4° F to +158° F |
| Humidity:          | 0 to 98% non-condensing               |

### OPTIONS

|                 |                      |
|-----------------|----------------------|
| Input Voltages: | 24 VAC/24VDC, 125VDC |
|-----------------|----------------------|

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