



# CIR-1A

## CUSTOMER INTERFACE RELAY

The CIR-1A customer interface relay is designed to provide a single isolated “dry”, mercury-wetted Form “A” (K & Y) contact or a Form “C” (K, Y, & Z) contact from a single Form “C” input. The typical application is the utilities’ interface between the KWH meter and a customer’s energy control system. The CIR-1A provides everything necessary to provide a customer with energy control pulses in one compact ready-to-use weather resistant mounting case.

The CIR-1A is internally divided into two compartments. The upper compartment is normally locked and only accessible to utility metering personnel. It contains all of the electronics along with fusing which is coordinated with the fusing contained within the customer’s compartment. The lower compartment, the customer’s compartment, contains a terminal strip, fusing, status indication LEDs, and a switch which allows the customer to choose either a 2-wire or 3-wire output. With the switch in the two-wire mode of operation a relay contact closure of approximately 100 milliseconds will occur for each change of the 3-wire input status at the K & Y terminals on the terminal strip. The red LED will only light each time there is a contact closure. With the switch in the 3-wire mode, the terminal strip contacts K & Y, and K & Z will follow the input 3-wire status. In the 3-wire mode both the red and green LEDs are lighted sequentially depending upon input status.

The use of the LED in the customer’s compartment 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 utilities and customer’s compartments, the meter shop service coordinator can usually determine the location of the service problem as to either utility responsibility or customer responsibility by the simple question “are the LEDs flashing”. The double “K” lead coordinated fusing of the CIR-1A’s output will prevent damage to the relay under almost any conditions a user might cause such as that caused by excessive current, incorrect wiring, etc. The CIR-1A has built-in transient protection for the mercury-wetted relay’s contacts which eliminates the need for external or off-the-board transient suppressors.



### SOLID STATE INSTRUMENTS

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# CIR-1A SPECIFICATIONS

## ELECTRICAL

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

Output: One set of “dry” Form “A” or Form “C” contacts (K & Y or K, Y, & Z) for selected by a user changeable switch located in the customer’s compartment, 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 is 100 VA. Factory fused at 1/2 amp. (3AG)

Sense Voltage: +13VDC

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: 9.00 inches wide, 11.00 inches high, 4.50 inches deep

Type/Material: NEMA 4X Fiberglass case

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: Contact Factory



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