



SELF-CONTAINED RELAYS (OUTDOOR)

CIR-1PS CUSTOMER INTERFACE RELAY

FORMERLY THE CIR-1A

DESCRIPTION

The CIR-1PS Customer Interface Relay provides a single isolated solid state dry Form A (K & Y) or 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-owned energy control system. The CIR-1PS includes everything necessary to provide a customer with energy pulses in one compact ready-to-use weather-resistant enclosure.



FUNCTIONAL SUMMARY		
	IN	OUT
#	1	1
TYPE	3 Wire	2 or 3 Wire
FORM	C	*A or C
* Switchable		

The CIR-1PS 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 fusing contained within the customer compartment. The lower compartment, the customer compartment, contains a terminal strip, fusing, status indication LEDs, and a switch that allows the customer to choose either a 2-Wire or 3-Wire output. With the switch in the two-wire mode, each relay contact closure is approximately 100 milliseconds long and occurs each time the 3-Wire input changes state. 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" and "Y", and "K" and "Z" will directly follow the input's status. In this mode, both the red and green LEDs are lit alternately depending upon input's status. The use of LEDs 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 or customer responsibility by the simple question "are the LEDs flashing". The double "K" lead coordinated fusing of the CIR-1PS'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-1PS' robust solid state switching device is rated at 800V and 750mA giving maximum protection from lightning or transient voltage damage. The CIR-1PS has built-in transient protection for the solid state switching devices that eliminates the need for external or off-the-board transient suppressors.

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SPECIFICATIONS

ELECTRICAL

Power Input:	90 to 300 VAC. Burden: 10 mA at 120 VAC
Pulse Input:	One Form C (3-wire) input with +13VDC wetting voltage on the K terminal
Pulse Output:	One field-selectable 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 solid state "no bounce" relays rated at 250VACVDC at 1/2 Amp. The maximum rating of the contacts is 100 VA. Factory fused at 1/2 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 - .15 mS typical, 5 mS MAX
Input/Output Isolation Voltage:	2500Vrms

MECHANICAL

Mounting:	Any position
Size:	8.0" wide, 10.0" 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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