



## SELF-CONTAINED RELAYS (OUTDOOR)

# CIR-1PS+ CUSTOMER INTERFACE RELAY

FORMERLY THE CIR-1A and CIR-1PS

## 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 A or C input. The typical application is the utility's 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 NEMA 4X enclosure.

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, (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 thereby doubling the pulse value automatically for Form A applications. The red LED lights 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 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+'s 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.



### FUNCTIONAL SUMMARY

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

# CIR-1PS+



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## SPECIFICATIONS

### ELECTRICAL

Power Input:	120, 208-277 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 contact (K & Y or K, Y, & Z) 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:	+15 to +48VDC, +125VDC
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