



SSI STANDARD

PCR-4 PULSE CONVERSION RELAY

DESCRIPTION

The PCR-4 Quad Pulse Conversion Relay is designed to provide four isolated channels of true Form A to Form C pulse conversion. The primary application for the PCR-4 is where four independent isolation relay channel outputs from “sending” meters must be converted from Form A to Form C for compatibility with the “receiving” meters or devices, in one compact package.

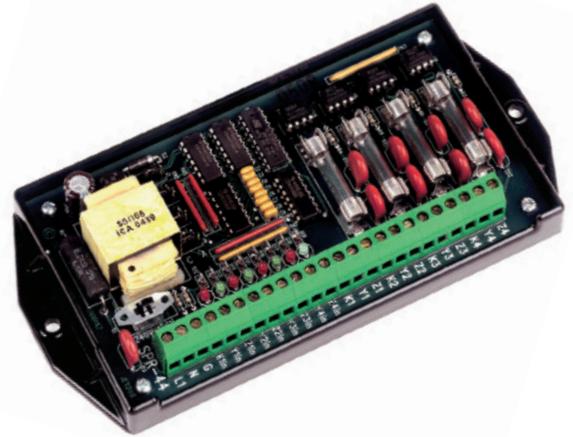
The PCR-4 quad pulse conversion relay is designed to provide four isolated dry-contact, solid-state Form C (“K”, “Y”, & “Z”) outputs from four Form A inputs with true conversion of the pulse value.

The PCR-4 operates over the standard SSI wide voltage range. The PCR-4 has a built-in low voltage transformer-isolated power supply generating a +13VDC sense or “wetting” voltage. The sense voltage is sent to each meter’s “Y” terminals from the PCR-4’s “Yin” input terminal, returning to the “Kin” terminal, the common return for all meters. All meters supplying pulses to the PCR-4 must have isolated outputs or a common reference.

The PCR-4 may be used with electric meters having electro-mechanical or semiconductor output contacts, either high or low voltage. The PCR-4’s inputs are configured to accept open-collector transistor or open-drain FET solid state pulse initiator switches. Typical applications include interfaces between utility metering devices and customer-owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces.

The PCR-4 relay is designed for high speed pulses and can switch up to 36,000 pulses/hour. The outputs are non-latching. The PCR-4 outputs’ pulse timing follows the inputs’ timing such that output pulses have the exact same pulse width as the input. A bright red LED indicator, one of each input, indicates each channel’s relay status at all times thus allowing a rapid check of the system’s performance without requiring any additional test equipment. The PCR-4’s input and output terminal strip is a “Euro” type connector. When the stripped wire has been correctly installed in the terminal’s “slot”, no conductive parts are exposed on the surface of the terminal strip, thus allowing the user maximum protection from accidental electrical shock. Each “K” lead of the PCR-4’s four outputs is fused to prevent damage to the relays under almost any condition a user might cause such as excessive current, incorrect wiring, etc. The PCR-4 has built-in MOV transient protection for the solid state relay contacts which eliminates the need for external or off-board transient suppressors.

All component parts which have power applied to them, with the exception of the input/output terminal strip are enclosed in a polycarbonate cover for maximum protection. The mounting base plate is also made of polycarbonate and offers excellent electrical insulation between the circuits and the mounting surface.



FUNCTIONAL SUMMARY

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

TYPE
FORM

PCR-4



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SPECIFICATIONS

ELECTRICAL

Power Input:	120 VAC to 277 VAC. Burden: 10 mA at 120 VAC
Signal Input:	Four independent field-selectable, Form A inputs. Each input has a wetted "pulled-up" "Yin" terminal with +13VDC. The "Kin" terminal is the common return.
Output:	Four sets of Form C ("K", "Y", & "Z") dry-contact outputs for energy pulses. The relay contacts are solid-state outputs rated at 125VAC/VDC 1/10th Amp(100 milliamps) with 800mW maximum power. Factory fused at 1/10 amp @ 250VAC. (3AG)
Contact On-State Resistance:	25 ohms maximum, 18 typical
Operate and Release Time:	2 to 3 milliseconds typical
Input/Output Isolation Voltage:	3750Vrms

MECHANICAL

Mounting:	Any position
Size:	3.50" wide, 7.20" high, 1.50" deep
Weight:	12 ounces

TEMPERATURE

Temperature Range:	-38° C to +70° C, -38.4° F to +158° F
Humidity:	0 to 98% non-condensing

AVAILABLE OPTIONS

Input Voltages:	125 VDC input using the DCS-1 Power Supply. Contact factory for other input voltages and special orders.
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All specifications are subject to change without notice.

PCR-4