



SSI STANDARD

# SPR-36B TRIPLE PULSE ISOLATION RELAY

## DESCRIPTION

The SPR-36B triple pulse isolation relay is designed to provide six isolated dry contact, solid state Form C (K, Y, & Z) outputs from three Form A or C inputs. The primary application for the SPR-36B is where three independent 2-output pulse isolation relays, OR two independent 3-output pulse isolation relays are desired in one ultra-compact package. Inputs may be paralleled for a variety of flexible applications.



The SPR-36B operates over the standard SSI wide voltage range. The SPR-36B has a built-in low voltage transformer-isolated power supply generating a +13VDC sense voltage. The sense voltage is sent to each meter's Y and Z terminals from the SPR-36's Yin and Zin input terminals, returning to the Kin terminal, the common return for all meters. Since all meters supplying pulses to the SPR-36B have a common reference, a number of flexible input configurations can be wired.

The SPR-36B may be used with electric meters having electro-mechanical or semiconductor output contacts, either high or low voltage. The SPR-36B'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 SPR-36B relay is designed for high speed pulses and can switch up to 72,000 pulses/hour in 3-Wire mode and 36,000 pulses/hour in 2-Wire mode. The outputs are non-latching. The SPR-36B outputs' pulse timing follows the inputs' timing such that output pulses have the exact same pulse width as the input.

Bright red and green LED indicators, one of each on every input AND output, display 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 SPR-36B's input and output terminal strip is a "Euro" type. When the stripped wire has been correctly installed in the terminals "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 SPR-36B's six outputs is fused to prevent damage to the relays under almost any condition a user might cause such as excessive current, incorrect wiring, etc. Fuses are standard-sized 3AG or AGC 1/10th Amp fuses.

The SPR-36B 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    |
|------|------------------------|--------|
| #    | 3                      | 6      |
| TYPE | 2 Wire<br>or 3<br>Wire | 3 Wire |
| FORM | A or C                 | C      |

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## SPECIFICATIONS

### ELECTRICAL

|                                 |  |
|---------------------------------|--|
| Power Input:                    | 120 to 277 VAC. Burden: 10 mA at 120 VAC   |
| Pulse Input:                    | Three independent field-selectable, Form A or Form C inputs. Each input has "Yin" and "Zin" input terminals wetted, pulled up with +13VDC. "Kin" is common return". Form A input uses the "Yin" terminal and Form C uses the "Yin" and "Zin" terminals for the input from the meter. |
| Pulse Output:                   | Six (6) dry Form C contacts (K, Y, & Z) for energy pulses. The relay contacts are solid state with "no bounce" circuitry. Outputs are rated at 125VAC/VDC 1/10th Amp(100 milliamps). Factory fused at 1/10 amp @ 250VAC using standard AGC or 3AG fuses.                             |
| Contact On-State Resistance:    | 25 ohms maximum, 18 typical  |
| Operate and Release Time:       | 2 to 3 milliseconds typical  |
| Input/Output Isolation Voltage: | 2500Vrms   |

### MECHANICAL

|           |                                    |
|-----------|------------------------------------|
| Mounting: | Any position                       |
| Size:     | 3.50" wide, 7.20" high, 1.50" deep |
| Weight:   | 17 ounces                          |

### TEMPERATURE

|                    |                                       |
|--------------------|---------------------------------------|
| Temperature Range: | -38° C to +70° C, -36.4° F to +158° F |
| Humidity:          | 0 to 98% non-condensing               |

### AVAILABLE OPTIONS

|                 |   |
|-----------------|---|
| Input Voltages: | 125 VDC input using the DSC-1 Power Supply. Contact factory for other input voltages. |
|-----------------|---|

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