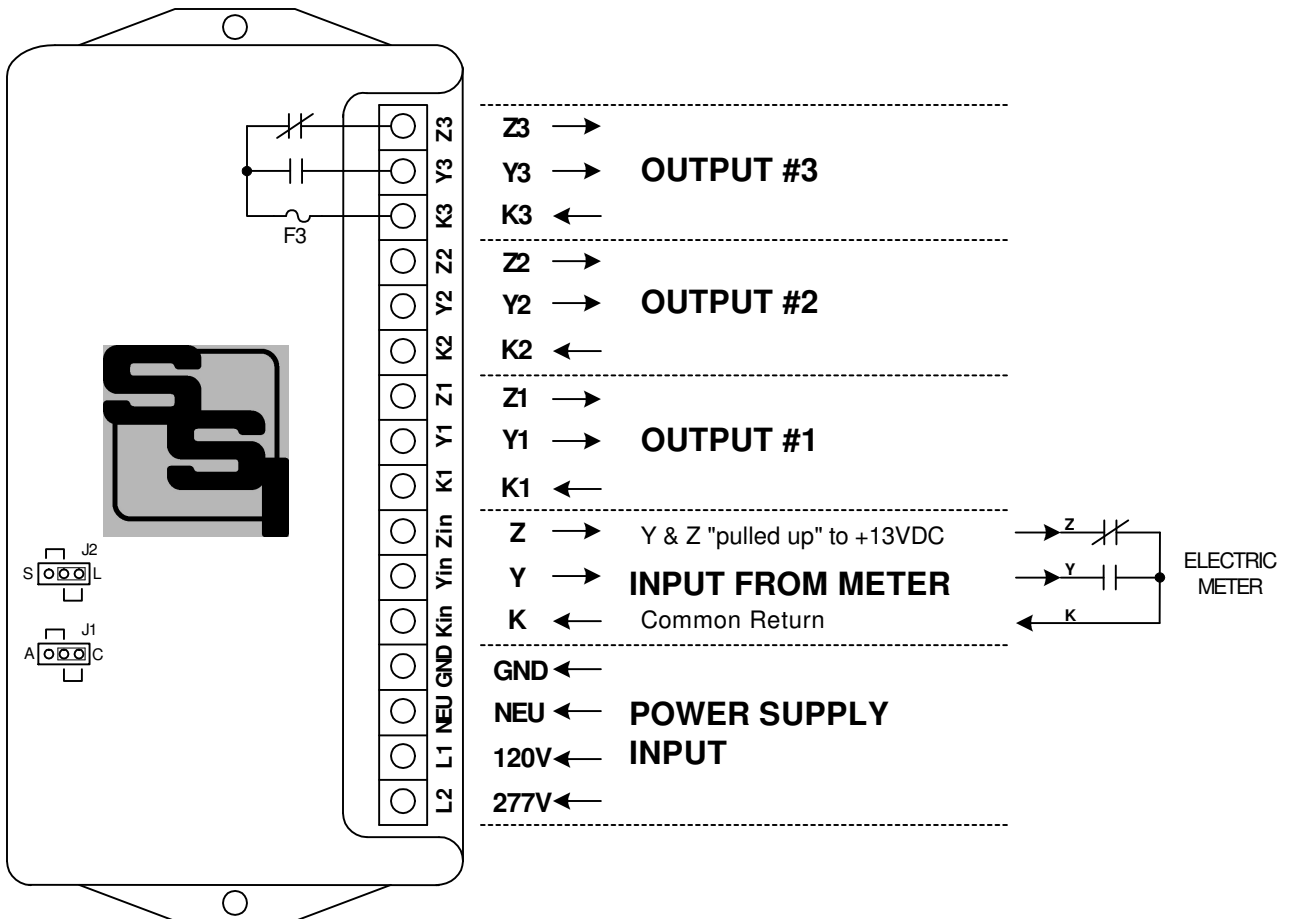


# INSTRUCTION SHEET

## SPR-3 PULSE ISOLATION RELAY

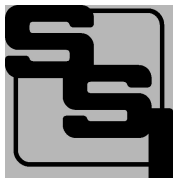


**MOUNTING POSITION** - The SPR-3 can be mounted in any position.

**POWER INPUT** - The SPR-3 is powered by an AC voltage of between 90 and 300 volts. For 208 to 277VAC, connect the AC line's "hot" wire to the **L2** terminal. For 120VAC, connect the AC line's "hot" wire to the **L1** terminal. The AC line's "neutral" wire should be connected to the **NEU** terminal. Connect **GND** to Ground. If Neutral does not exist at the meter, connect both NEU and GND to Ground.

**METER CONNECTIONS** - The SPR-3 can be set for either a 2-Wire (Form A) or 3-Wire (Form C) input. For 3 Wire (Form C) input mode, connect the SPR-3's "Kin", "Yin" and "Zin" input terminals to the meter's "K", "Y" and "Z" terminals. In the 2 Wire (Form A) mode, connect the "Kin" and "Yin" terminals to the meter's "K" and "Y" terminals. The SPR-3's "Kin" terminal is the common return. The +13VDC wetting voltage is "pulled-up" internally on the SPR-3's Yin and Zin terminals. Each alternating closure of the meter's Y and Z output will pull down each input line to the common return. Put Jumper J1 in the correct position for the input mode desired: Left=2-Wire, Right=3-Wire.

**OUTPUTS** - Three Form C (3-wire) isolated outputs are provided on the SPR-3. Transient voltage protection for the contacts of each relay is provided by MOVs on board. The output loads should be limited to 100 mA at 250 VAC/350VDC. Maximum Output power dissipation is limited to 800mW max. Outputs are protected by fuses F1, F2 and F3. One-tenth(1/10) Amp fuses are supplied standard. The SPR-3's outputs may be configured for either Long or Short output pulses. Selector Jumper J2 selects the long or short output mode for all outputs. In the Long mode, output pulses are the same width as input pulses. In the Short mode, output pulses are fixed at 100mS in length. Put Jumper J2 in the desired output mode. See Page 2 for description of these modes.



# SOLID STATE INSTRUMENTS

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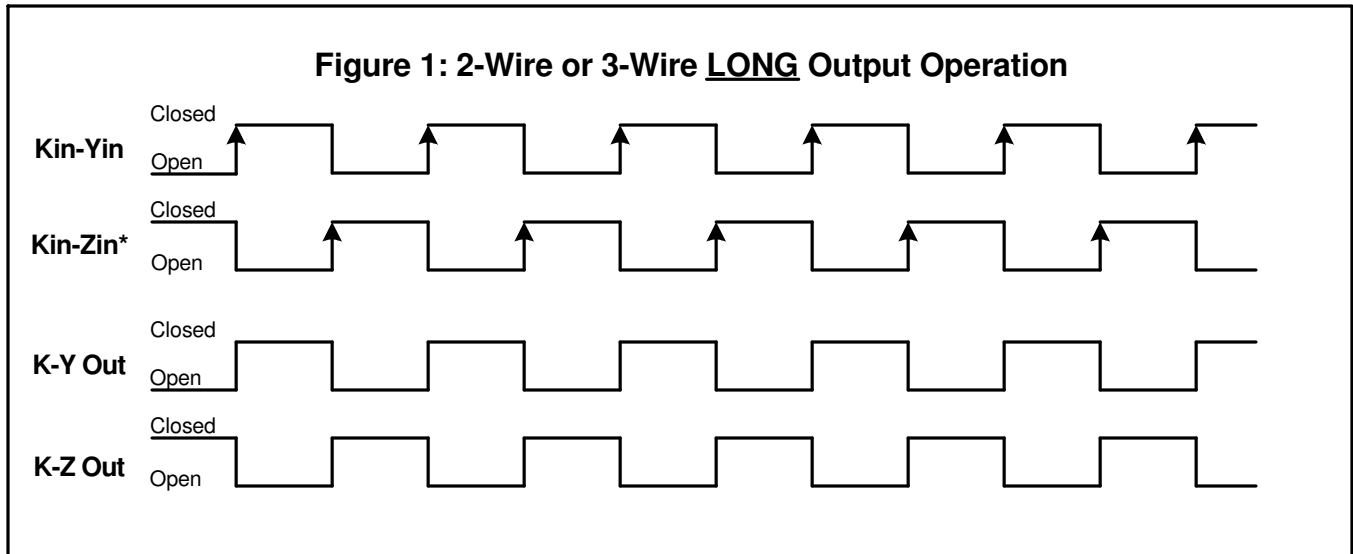
6230 Aviation Circle, Loveland, Colorado 80538

Phone: (970)461-9600 Fax: (970)461-9605

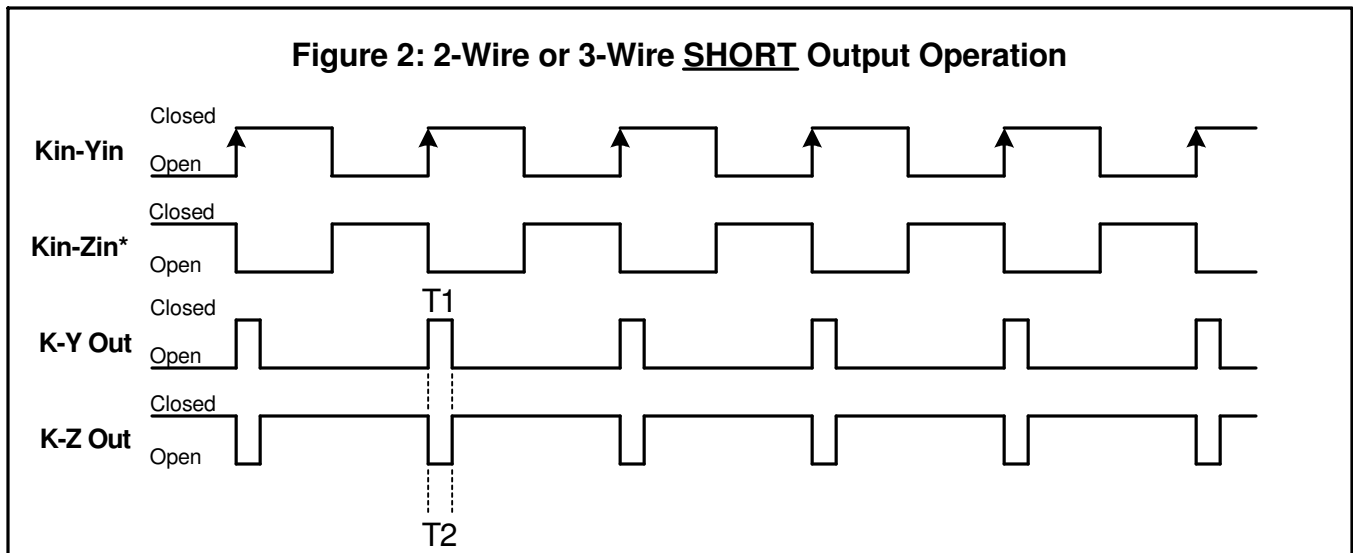
E-mail: support@solidstateinstruments.com

# WORKING WITH THE SPR-3 RELAY

**OPERATING MODES:** The SPR-3 Repeating Pulse Relay allows the outputs to be configured for either the "Long" or "Short" pulse output mode. In the Long mode, the outputs simply follow the input. Output pulse widths are equal to input pulse widths. With the "long" output configuration selected, pulse speeds of up to 72,000 pulses per hour (20/sec) are possible. Figure 1 below shows the timing diagram for the "long" output mode.

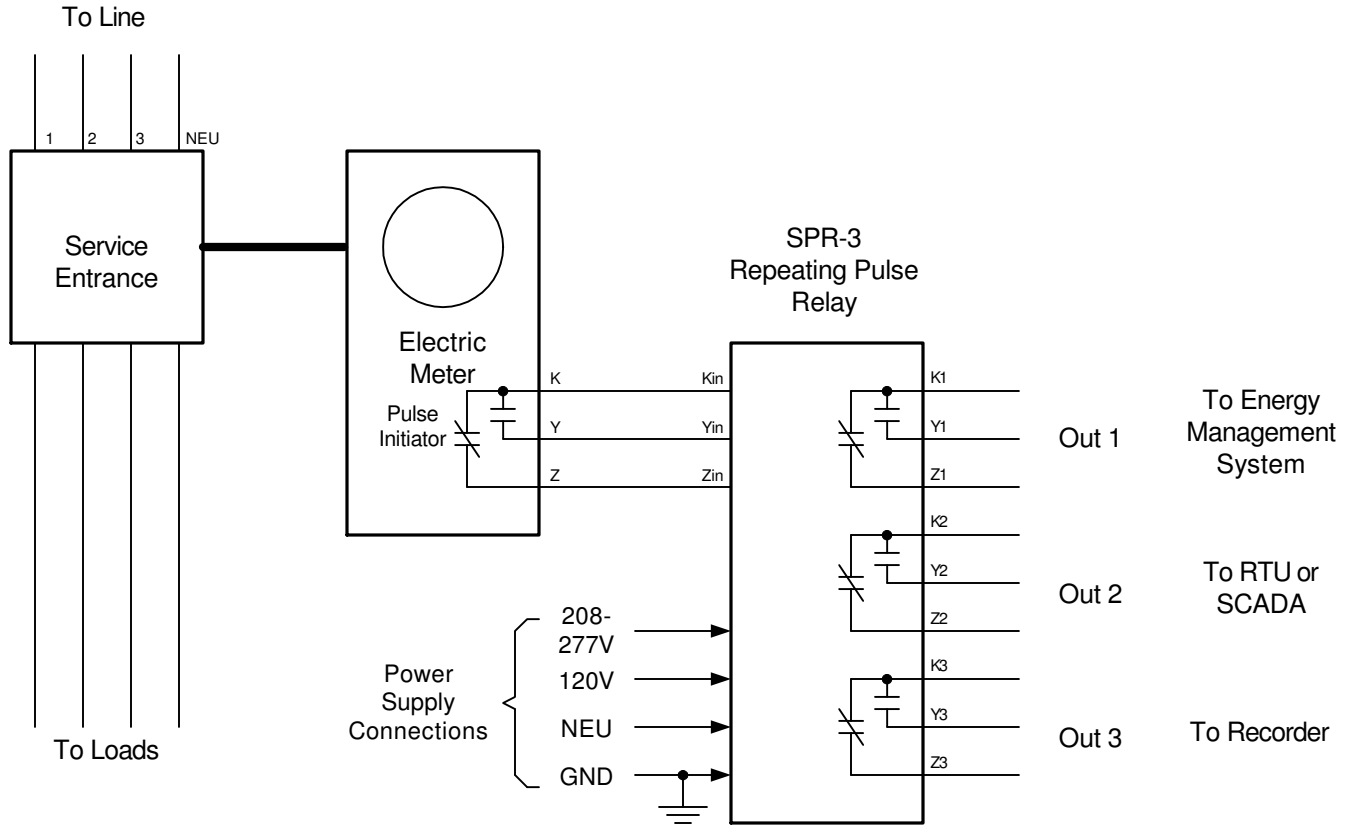


In the Short output mode, shown in Figure 2 below, an output pulse (K-Y closure) with a fixed width ( $T_1$ ) of 100mS occurs each time the input is triggered. Correspondingly, the K-Z output opens for 100mS ( $T_2$ ) each time the input is triggered. In the "short" mode, the output pulse rate is limited to 9 pulses per second, or about 32,400 pulses per hour.



If the input pulse rate is greater than 9 pulses per second, it is recommended that the LONG pulse output mode be used. Contact the factory for technical support at (888)272-9336.

# SPR-3 Wiring Diagram



SPR-3WiringDiagram.vsd

SPR-3 Repeating Pulse Relay Wiring Diagram		REVISIONS	
		NO.	DATE
DATE ORIGINAL <b>03/31/08</b>		SCALE <b>N/A</b>	
LATEST REVISION		DRAWN <b>WHB</b>	

**Brayden Automation Corp./ Solid State Instruments div.**

6230 Aviation Circle  
 Loveland, CO 80538  
 (970)461-9600  
 (970)461-9205 fax  
[www.solidstateinstruments.com](http://www.solidstateinstruments.com)