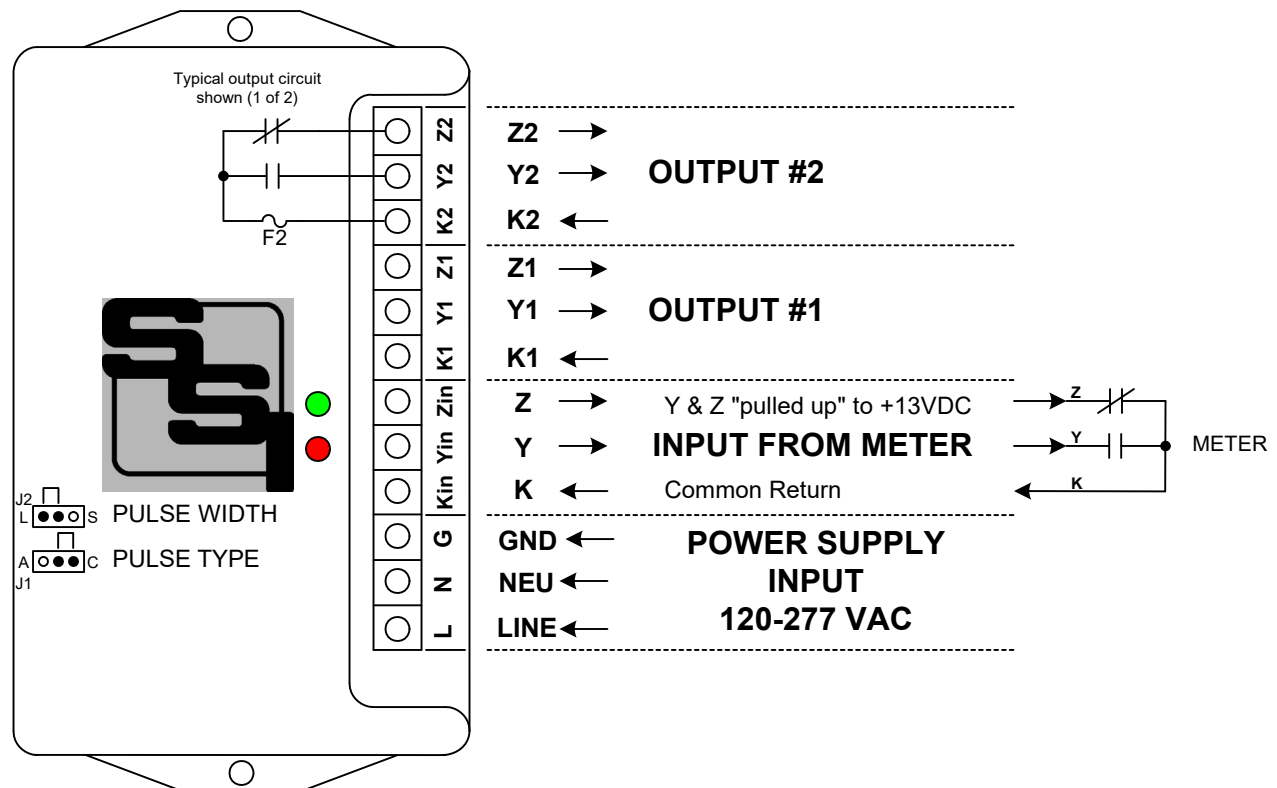


INSTRUCTION SHEET

SPR-2 PULSE ISOLATION RELAY

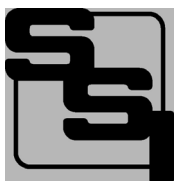


MOUNTING POSITION - The SPR-2 can be mounted in any position.

POWER INPUT - For 120 to 277VAC, connect the "hot" lead (phase) to the **LINE** terminal and the neutral to the **NEU** terminal. Connect the **GND** terminal to Ground. **GROUND** must be connected for proper noise immunity. If no true Neutral exists, tie Neutral and Ground terminals to GROUND.

METER CONNECTIONS - The SPR-2 can be used with either a 2-Wire(Form A) or 3- Wire(Form C) input. In the 3W (FormC) input mode, connect the SPR-2's "K", "Y" and "Z" input terminals to the meter's "K", "Y" and "Z" terminals. In the 2W mode, connect the "K" and "Y" terminals to the meter's "K" and "Y" terminals. The SPR-2's "K" terminal provides the common return. The wetting voltage for the meter is provided through the SPR-2's Yin and Zin input terminals, and is "pulled up" to +13VDC provided by the SPR-2's isolated power supply. Upon each alternating closure of the meter's contacts, the pulled up input is pulled down to the common return "K" terminal. Set Jumper **J1 PULSE TYPE** in the correct position for the desired input mode as shown above: Left pin to center pin = 2 Wire(Form A); Right pin to center pin=3 Wire(Form C). The RED LED indicates that the KY input is closed and corresponding K-Y output is closed. The GREEN LED indicates that the KZ input is closed and the corresponding K-Z output is closed.

OUTPUTS - Two 3-wire isolated outputs are provided. Transient voltage protection for the contacts of each relay is provided by MOV's on board. The output loads should be limited to 100 mA at 250 VAC/VDC, and are protected by fuses F1& F2. Maximum power dissipation of each output is 800mW. One-tenth (1/10) Amp fuses are supplied standard. Jumper **J2 PULSE WIDTH** sets the long or short output modes. The long mode sets the outputs to the same pulse width as the input. The short mode sets the outputs for a fixed 100mS wide pulse width. Put Jumper **J2** in the correct position for the desired output mode as shown above: Left=Long, Right=Short. See explanation of Long and Short modes on Page 2.



SOLID STATE INSTRUMENTS

by Radian Research, Inc

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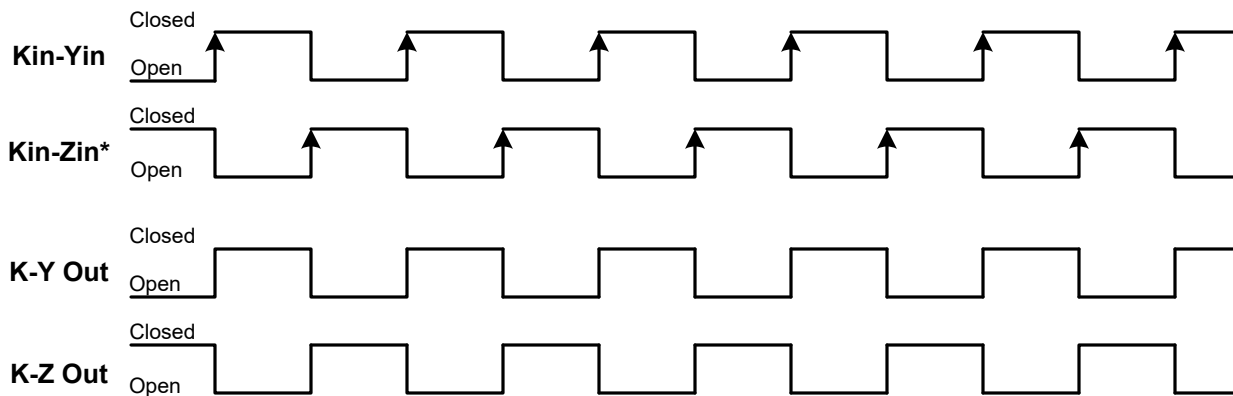
Phone: (765) 449-5576

Mail: technicalsupport@radianresearch.com

WORKING WITH THE SPR-2 RELAY

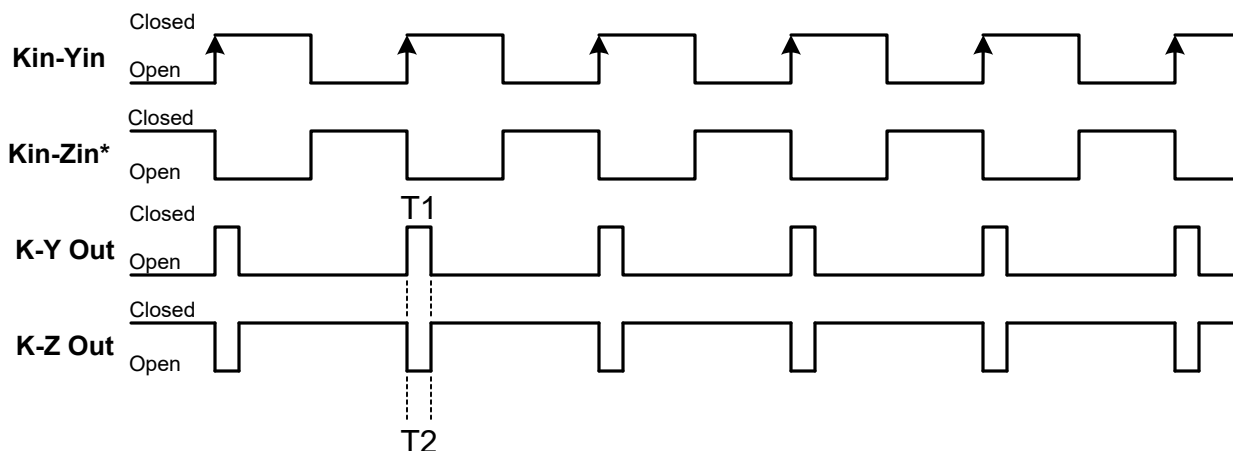
OPERATING MODES: The SPR-2 Repeating Pulse Relay allows the outputs to be configured for either the "Long" or "Short" pulse output mode. In the Long mode, the outputs simply follow the input. Output pulse widths are equal to input pulse widths. With the "long" output configuration selected, pulse speeds of up to 72,000 pulses per hour (20/sec) are possible. Figure 1 below shows the timing diagram for the "long" output mode.

Figure 1: 2-Wire or 3-Wire LONG Output Operation



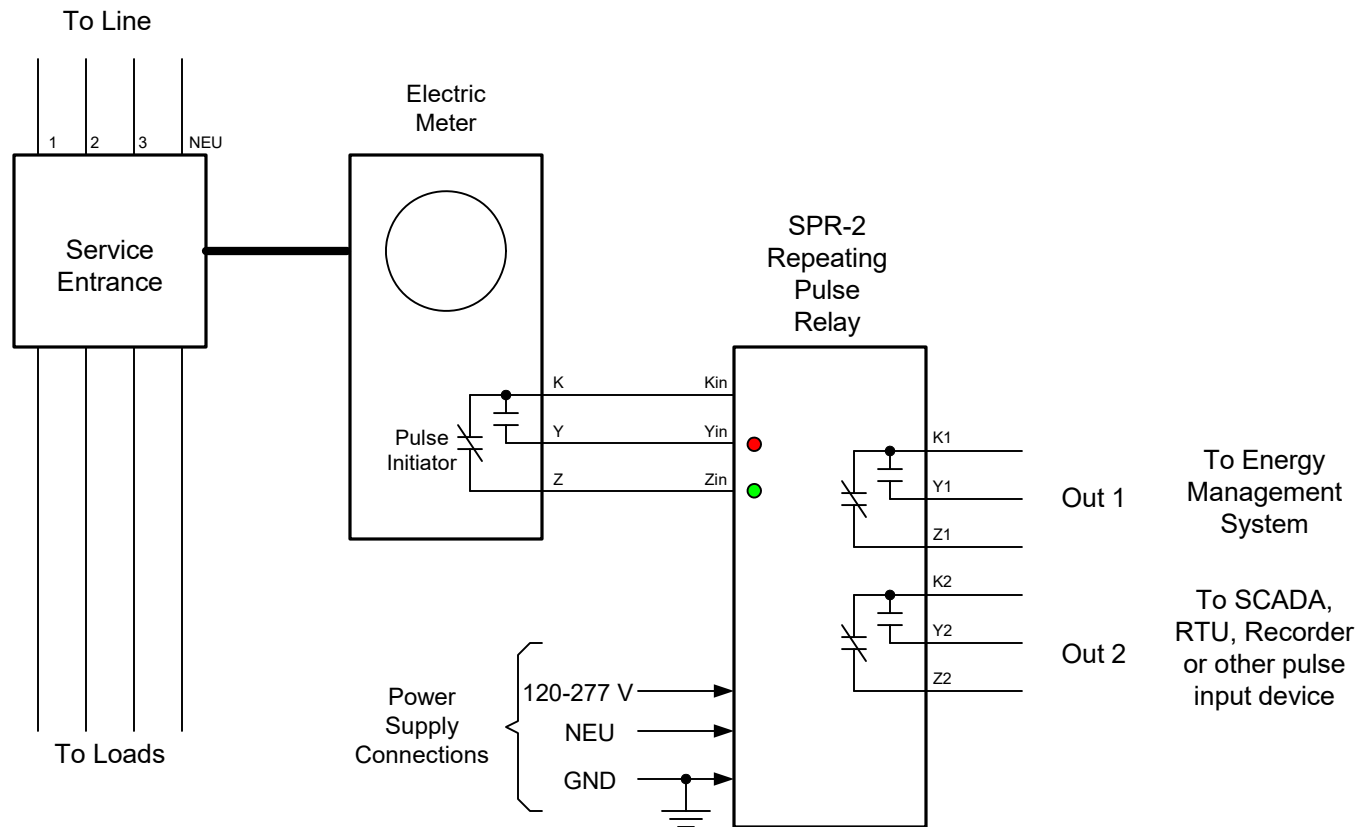
In the Short output mode, shown in Figure 2 below, an output pulse (K-Y closure) with a fixed width (T1) of 100mS occurs each time the input is triggered. Correspondingly, the K-Z output opens for 100mS (T2) each time the input is triggered. In the "short" mode, the output pulse rate is limited to 9 pulses per second, or about 32,400 pulses per hour.

Figure 2: 2-Wire or 3-Wire SHORT Output Operation



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-2 Wiring Diagram



SPR-2 Repeating Pulse Relay Wiring Diagram		REVISIONS		
		NO.	DATE	DESCRIPTION
DATE ORIGINAL	SCALE			
01/01/2025	N/A			
LATEST REVISION	JOB NO.	CHECKED	DRAWN	
			WHB	

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