MOUNTING POSITION - The SPR-24 may be mounted in any position.

POWER INPUT - The SPR-24 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. Connect the neutral wire to the N terminal. Connect G to Ground. If neutral is not available at the meter, wire both N and G to ground.

INPUT CONNECTIONS - Connect the K terminal of each meter which is supplying pulses to the SPR-24 to the SPR-24's K1in and K2in terminals. Connect each meter's Y and Z terminals to the respective meter's Yin and Zin input terminals of the SPR-24.

INPUT TYPE SELECTION - The SPR-24's inputs may be configured as either 2-Wire (Form A) or 3-Wire (Form C). Selector Jumper J1 selects the configuration for INPUT #1. Selector Jumper J3 sets the configuration for INPUT #2. Place the Jumper Plugs in the correct position for the input type desired.

FUSES - The fuses are type 3AG and may be up to 1/10th Amp in size. Four 1/10 Amp fuses (F1-F4) are supplied standard with the unit unless otherwise specified.

OUTPUTS - Four three-wire isolated outputs are provided on the SPR-24, with output terminals K1, Y1 & Z1; K2, Y2, & Z2; K3, Y3 & Z3; and K4, Y4 & Z4. Arc suppression for the contacts of the solid state relays are provided internally. Outputs #1 and #2 are assigned to Input #1. Outputs #3 and #4 are assigned to Input #2. The SPR-24's outputs may be configured for either Long or Short output pulses. Selector Jumper J2 selects the long or short output configuration for Outputs #1 and #2. Selector Jumper J4 sets the long or short output configuration for Outputs #3 and #4. (See Page 2) Place the Jumper Plug in the correct position for the output type desired.
**OPERATING MODES:** The SPR-24 Repeating Pulse Relay allows the output to be configured for either the "Long" or "Short" pulse output mode. In the *Long* mode, the output(s) assigned to a particular input will simply follow that 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](image)

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](image)

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-24 Repeating Pulse Relay Wiring Diagram

To Line

1 2 3 NEU

Service Entrance

To Loads

K1 K1in Y1 Y1in Z1 Z1in

Pulse Initiator 1

To Loads

K2 K2in Y2 Y2in Z2 Z2in

Pulse Initiator 2

120-277VAC

Power Supply Connections

SPR-24 B-Series Repeating Pulse Relay

Out 1

To Customer EMS, etc (KWh)

Out 2

To SCADA, Recorder, etc (KWh)

Out 3

To Customer EMS, etc (Kvarh)

Out 4

To SCADA, Recorder, etc (Kvarh)

120-277VAC

Power Supply Connections

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