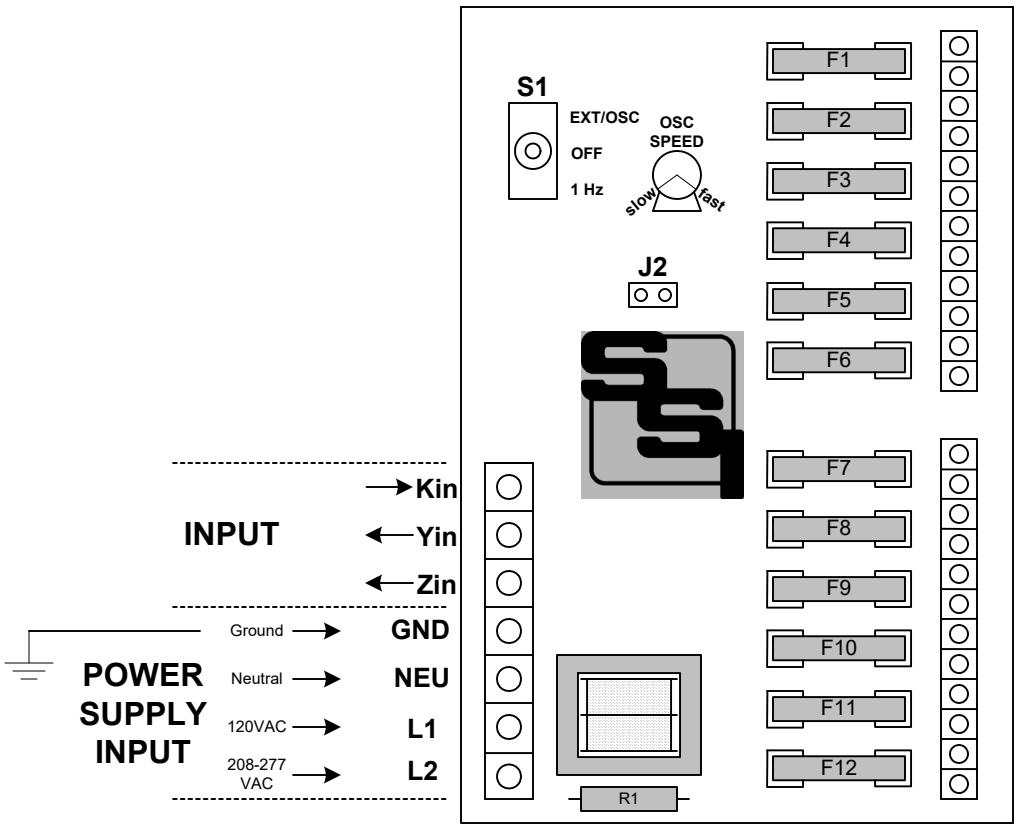
INSTRUCTION SHEET
SPR-112 Isolation Relay and Test Unit

SPR-112 Isolation Relay



MOUNTING POSITION - The SPR-112 may be mounted in any position.

POWER INPUT - The SPR-112 can be powered by 120VAC or 208 to 277VAC. Connect the Neutral lead to the NEU terminal. Connect the **L1** terminal to the 120VAC "Hot" lead for 120VAC operation. Connect the **L2** terminal to the 208, 240, or 277 "Hot" lead. **Do not use both L1 and L2. I**f Neutral does not exist at the meter, connect both NEU and GND to Ground.

GROUND - The GND terminal on the left side of the board (Terminal #4) is the electrical system ground. Connect this terminal to the electrical system (earth) ground.

KY INPUT TO SPR-112 - The SPR-112 is equipped with a 2-wire (Form A) pulse input. The SPR-112 supplies a +13VDC wetting voltage from the Y terminal to "wet" the meter's output contacts. As the pulse output of the meter toggles, the Y input is alternately switched to the K terminal, thus activating the SPR-112's isolated outputs. When the Y input of each channel receives a pulse from the meter, the corresponding Red LED will light. Input pulses from the meter are "echoed" on all outputs of the SPR-112 in unison.

SOLID STATE INSTRUMENTS
by Radian Research, Inc
3852 Fortune Dr, Lafayette, IN 47905
Phone: (765) 449-5576
Mail: technicalsupport@radianresearch.com

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RELAY OUTPUTS - The SPR-112's has twelve 2-wire isolated, dry-contact solid state outputs for repeating the pulses of the input. Outputs are K1 & Y1 for channel #1; K2 & Y2 for channel #2, etc. The output relay contacts are "dry" (no voltage present). A wetting voltage must be supplied from the destination device to each output's "K" terminal. Transient suppression for the contacts is provided internally by metal oxide varistor (MOV) surge suppression devices. Outputs are rated at 250VAC/VDC @ .1 Amp. Maximum on-state power dissipation is 800mW.

FUSES - The fuses are type 3AG or AGC and may be up to 1/10th Amp in size. Twelve 1/10 Amp fuses (F1-F12) are supplied standard with the unit unless otherwise specified. Care should be taken to insure that the input burden of the destination device will not exceed the rating of the fuse.

ALTERNATE PULSE SOURCES - The SPR-112 is with two alternate pulse sources available for testing where a stable pulse rate is required.

1 Hz Pulse - This 1 hertz pulse rate is derived fromt he AC line by means of a divide by 60 divider. As such this pulse rate is very stable and repeatable over long periods of time. Place Switch S1 in the down position to connect the 1 Hertz source to the output relays. All relays will operate with a 50/50 duty cycle with 500mS closed and 500mS open.

Oscillator - The SPR-112 also contains an variable oscillator that produces a variable pulse rate from approximately 1 pulse per 10 seconds (.1 Hz) to about 10 pulses per second (10 Hz). This oscillator is used by putting Jumper J2 in place and disconnecting any pulse source from the KY input terminals. The oscillator is provided as a means to test various devices and a range of pulse rates and not as a precision pulse generator.

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