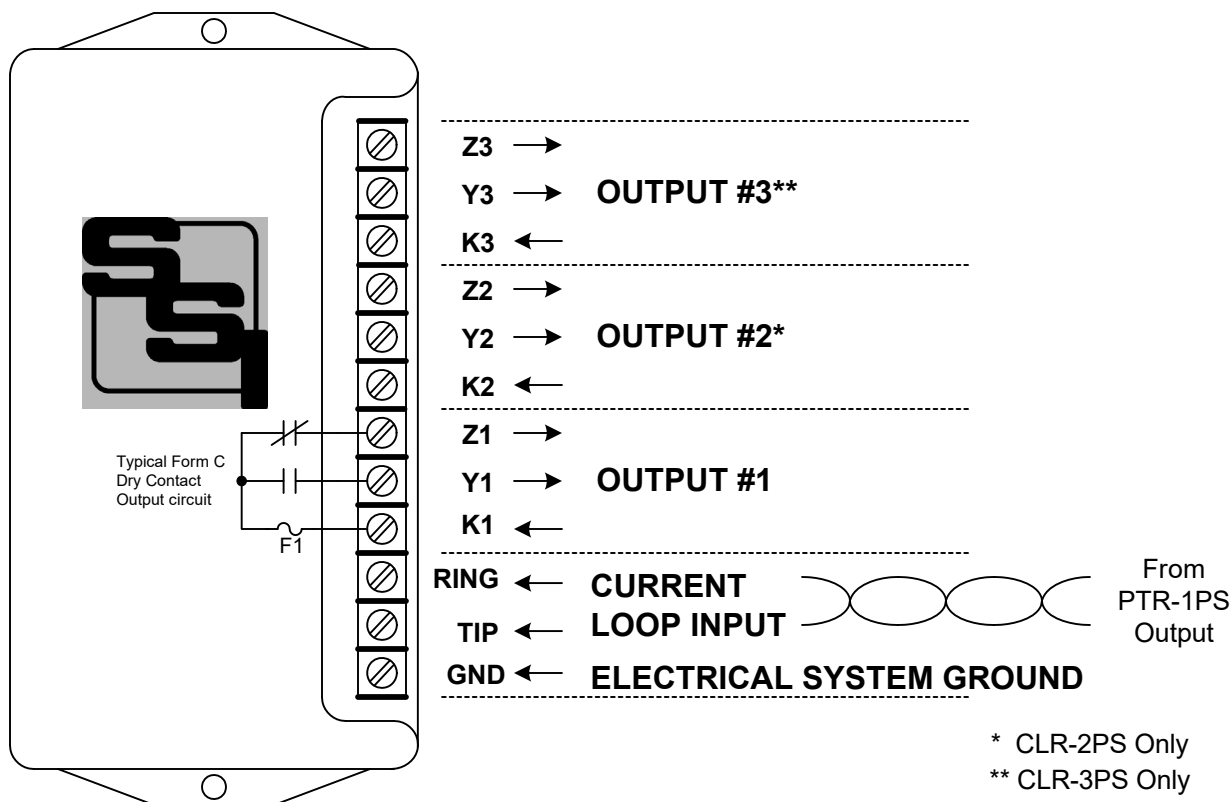


## CURRENT LOOP RELAY INSTRUCTION SHEET

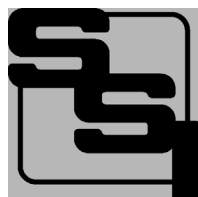


**MOUNTING POSITION** - The CLR relay may be mounted in any position.

**INPUT** - CLR-3PS Series relays are powered by a  $\pm 24\text{VDC}$  (nominal) current loop from a PTR-1PS Pulse Transmitting Relay. No other power supply to the CLR-xPS is necessary. Connect the CLR-xPS' "RING" terminal to the "RING" output terminal wire of the PTR-1PS. Connect the "TIP" terminal to the "TIP" output terminal wire of the PTR-1PS. The current loop will alternately switch the inputs of the CLR-xPS each time the Yin or Zin terminals are connected to the Kin terminal of the meter. A connection (closure) on the K-Y input of the PTR-1PS results in a closure of the K-Y contacts on the CLR-xPS' outputs. A K-Z closure results in a closure of the K-Z contacts on the CLR-xPS. MOV transient protection on the input is provided internally. Connect the GND terminal to electrical system ground. GROUND **must** be connected on the CLR to prevent potentially hazardous voltages from existing if the system is left floating.

**FUSES** - The fuses are type 3AG and may be up to 1/2 Amp in size. Three 1/2 Amp fuses (F1, F2 and F3) are supplied standard with the unit unless otherwise specified.

**OUTPUTS** - Up to three 3-wire isolated outputs are provided on the CLR-xPS relay, with output terminals K1, Y1 & Z1; K2, Y2, & Z2; and K3, Y3, & Z3. MOV transient voltage suppression for the contacts of the solid-state relays is provided internally.

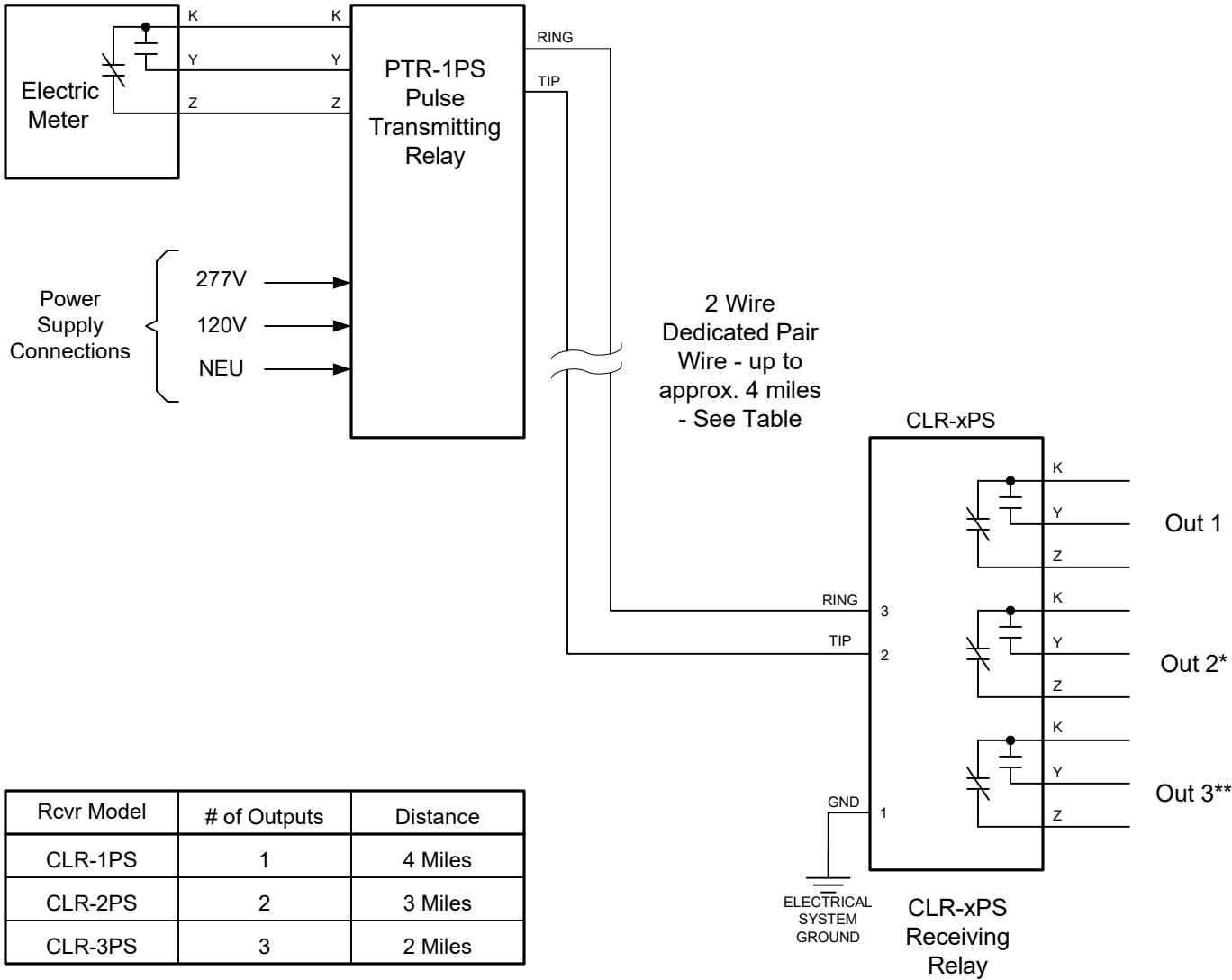


## SOLID STATE INSTRUMENTS

by Radian Research, Inc  
3852 Fortune Dr, Lafayette, IN 47905  
Phone: (765) 449-5576

Mail: [technicalsupport@radianresearch.com](mailto:technicalsupport@radianresearch.com)

# PTR-1PS/CLR-xPS System Wiring Diagram



Operation: The PTR-1PS contains a +/-15 to 36VDC current loop for long distance pulse transmission and uses a dedicated pair of wires. As the PTR-1PS' KYZ input alternates from one closure to the other, the current loop polarity reverses causing all output relays to switch in the CLR-xPS Receiving Relay. Maximum distance of transmission decreases with the increased number of outputs on the receiving relay. Maximum distance will also increase as wire size increases.

\* CLR-2PS Only  
\*\* CLR-3PS Only

PTR-1PS to CLR-xPS WiringDiagram.vsd

PTR-1PS Pulse Transmitting Relay Wiring Diagram		REVISIONS	
		NO.	DATE
DATE ORIGINAL 01/01/2025		SCALE N/A	
		LATEST REVISION	
JOB NO.		CHECKED	DRAWN WHB

**Solid State Instruments  
by Radian Research Inc**

3852 Fortune Dr  
Lafayette, IN 47905  
(765) 449-5576  
technicalsupport@radianresearch.com  
www.solidstateinstruments.com