

The Vision Metering Sentry 30E is the all solid state version of the Sentry 30 Isolation Relay designed for electric metering applications that require multiple KYZ Outputs.



The Sentry 30-E is an all solid state version of the Sentry 30. It is a direct replacement, with all mounting holes and terminal block locations being identical to the Sentry 30. The Sentry 30-E is housed in a plastic enclosure with a clear cover to protect the circuit board from dust and debris and to permit viewing of the LED's. The Sentry 30-E Isolation Relay (Bistable) Input accepts one Form C open collector or relay contact input and provides up to three isolated bistable outputs. Therefore, excellent electrical isolation is achieved between the originating device and up to three end devices.

The Form C bistable outputs prevent propagation of contact bounce from the input relay and also eliminates extraneous pulses during power up or power down. Bistable outputs serve as excellent interface devices between hard bounce, dry contacts and newer end devices that need clean bounceless inputs for proper operation.

Because the Sentry 30-E is an all solid state device, it can be mounted in any position, thus allowing for maximum use of space in typical meters cabinets. The on-board LED's (Red D9 for K-Z and Green D10 for K-Y and Green D12 for the output) provide a good indication of proper operation. The LED's are located directly above the Y and Z inputs.

Power input is jumper selectable:

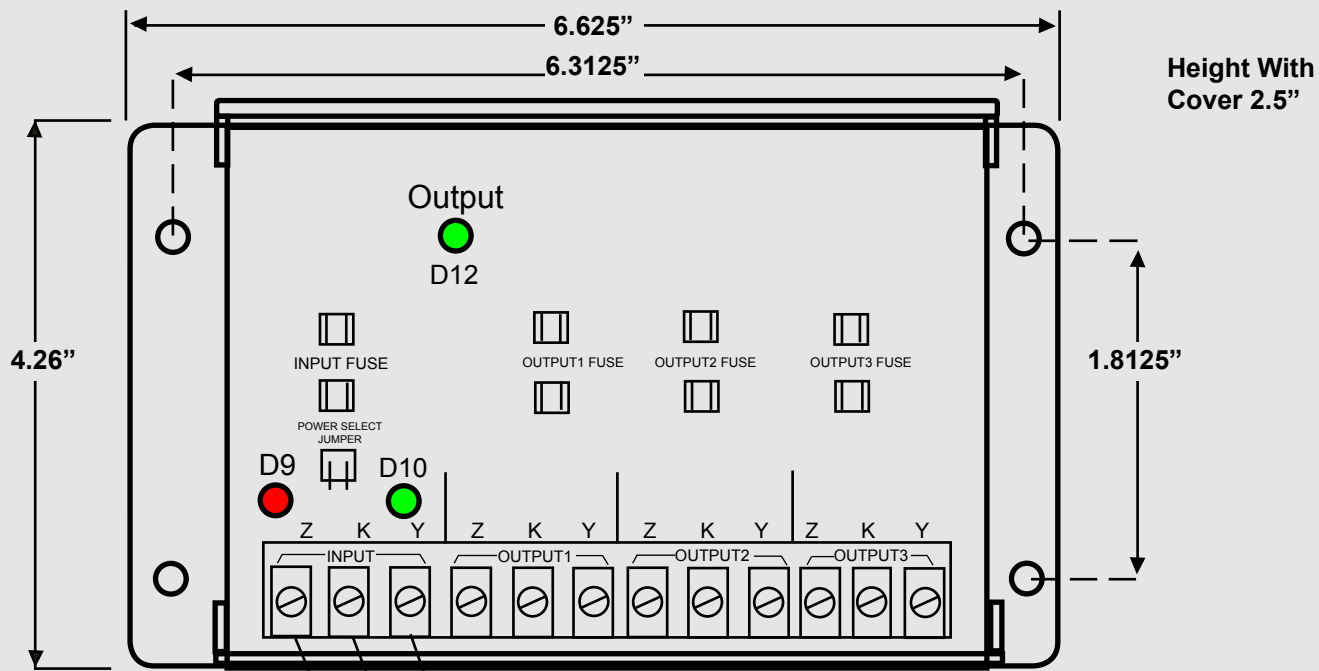
- Jumper on for 120 VAC or VDC only
- Jumper off for 240, 277 VAC or VDC

As a direct replacement for the Sentry 30, it eliminates the mercury wetted relays and removes any future possibility of disposal problems.

Power Input:	120 VAC or VDC	+/-20%
	240 VAC or VDC	20%
	277 VAC or VDC	+20%

AC Input

Surge Suppression:	320 VAC/ 420 VDC 90 joules, 4,500 A
Power Dissipation:	2 VA max. at 277 VAC
Signal Input:	Form C only
Max Pulse Rate:	15 Pulses / Second
Contact Type:	Solid State Photomos Relay 350 Volts DC or Peak AC
Output Current Rating:	350 mA max @ 10ms 120 mA continuous 100/250 mA (fuse protected) per customer
Operating Temperature:	40° C to +85° C
Operating Humidity:	5% to 95%, noncondensing
Life Expectancy:	Unlimited Operating
Mounting:	Any Position



Form C contacts from wathour meter or other device



Wiring Diagram for Bistable Operation

AC OPERATION

- 120/240 277 VAC L1
- 120/240 277 VAC L2

DC OPERATION

- 120/240 277 VDC Positive L1
- 120/240 277 VDC Negative L2

LED

- K-Y Closed, K-Z Open D10 and D12 lit
- K-Z Closed, K-Y Open D9 lit; D10 and D12 unlit

Installation

The Sentry 30-E can be mounted in any position.

The Z lead from the originating relay should be connected directly to the terminal labeled Z INPUT. The Y lead from the originating relay should be connected directly to the terminal labeled Y INPUT. The K lead from the originating relay should be connected to L2 of the AC line or the VDC negative terminal. The terminal labeled K INPUT on the Sentry 30E should be connected to L1 of the AC line or the VDC positive terminal.

The input fuse (0.25 amp slow-blow) is located on the extreme left of the board. Fuse clips are mounted to the left of each output relay. These fuses are on the K leg of each output relay and the fuse size is determined by the end device on a per relay basis. The Sentry 30-E is supplied with (250 MA slowblow) output fuses. This fuse current rating

may not be appropriate for the load current rating and Vision Metering accepts no responsibility for equipment damage or improper system operation caused by inappropriate sized output fuses.

Note: Total external circuit resistance for any Sentry 30-E Isolation Relay input must be less than 500 ohms. Twisted pair or shielded cable must be used in cases where external input lines exceed 2,000 feet in order to avoid inductive or capacitive interference.

CAUTION: For applications requiring 240 or 277 VAC input, the user should verify that the pulse initiator or other pulse source supplying inputs to the Sentry 30-E does not have output protection devices with voltage breakdown levels less than 318 VAC rms (455 VDC peak).