SDA Card

Shorted Solid State Relay Detector

Data Sheet

There is concern that if a solid state relay fails, it will most likely fail in a shorted condition. To alleviate this concern, Watlow Controls has designed a low-cost card (Watlow P/N 08-5386) that provides a shorted SSR alarm. It is designed to be used with DC input SSRs, rated 10 to 40 Amps on either a single phase or two-leg, three-phase system. In addition to the SDA card, we strongly recommend semiconductor fuses to protect the SSR, and a high limit cutout to protect the thermal system from any runaway conditions.

The SDA card mounts directly on the solid state relay and takes its power from the current flowing through the current transformer. If there is no input command signal from the temperature control to the SSR, and there is current flow to the load, the alarm becomes energized. The alarm circuit's output is a triac rated for 300mA @ 120 or 240V~ (ac). This can be wired through a customer supplied latching relay and alarm to 120 or 240 volts.

NOTE: Mount with two 6-32 screws 5/8" long. (Included with the SDA card.)

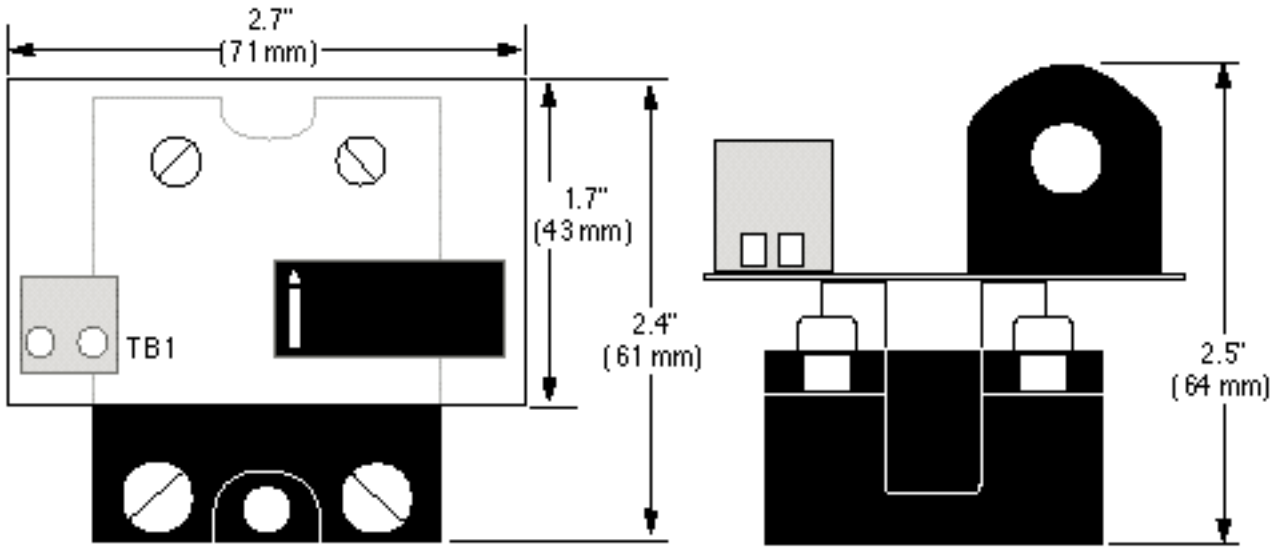

Figure 1 - SDA Card Dimensions (08-5386)

Watlow Controls
1241 Bundy Blvd., P.O. Box 5580
Winona, MN 55987-5580
Phone: 507-454-5300, Fax: 507-452-4507

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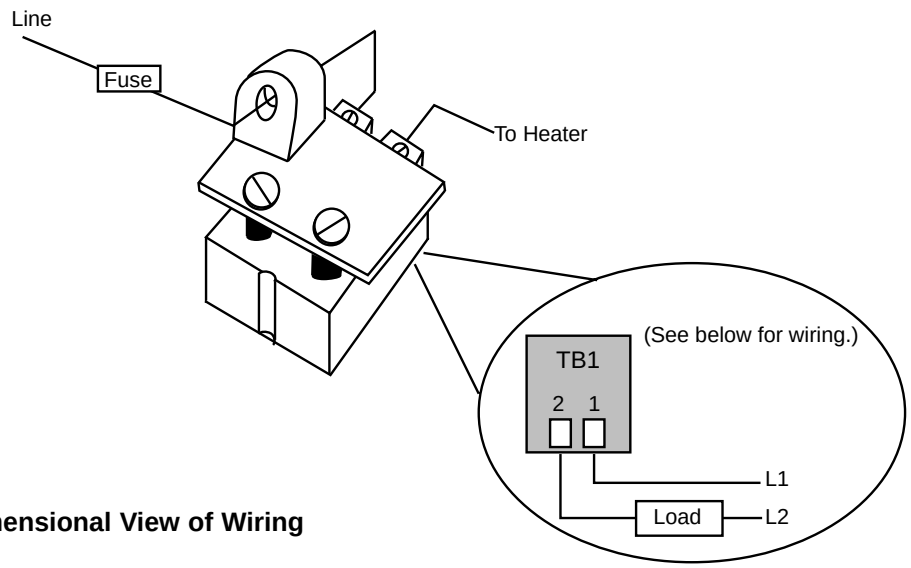

Figure 2 - Three Dimensional View of Wiring

Load Current	Number of Passes of Load Wire Through Current Transformer
2 to 3 Amps	5
3 to 4 Amps	4
4 to 5 Amps	3
5 to 10 Amps	2
10 to 40 Amps	1

Table 1 - Application of 16-0231 Current Transformer

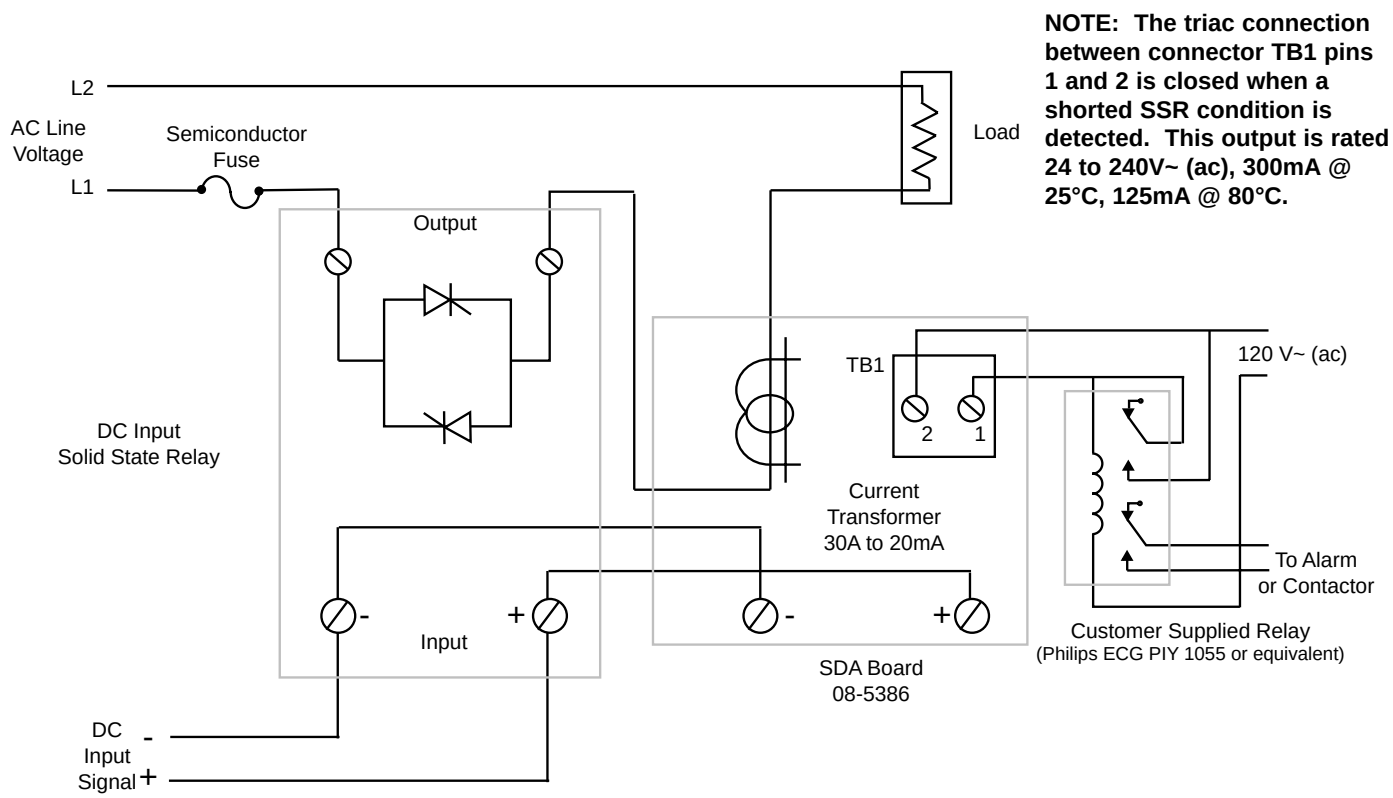

Figure 3 - SDA Card Wiring