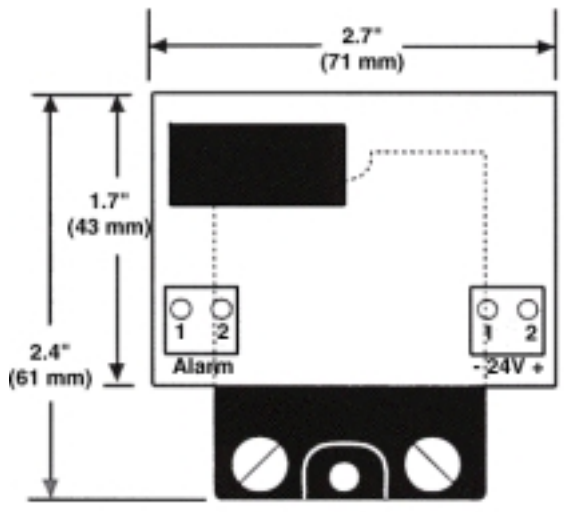
SDMA Card

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 minimize this concern, Watlow Controls has designed a low-cost card (Watlow P/N 09-2313) 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 three-phase, two-leg system. In addition to the SDMA 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 SDMA 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 through the heater, the mechanical relay alarm output will de-energize. This can be wired through a customer supplied latching relay and alarm to 120 or 240 volts. Output contact rating of the SDMA mechanical relay is 0.5 amperes maximum.



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

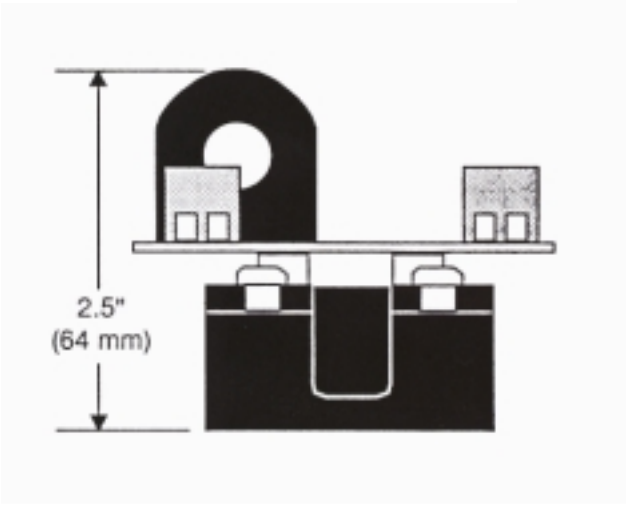


Figure 1 - SDMA Card Dimensions

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

0600-0028-0006 Rev A (1632)
January, 1999

Made in the U.S.A.

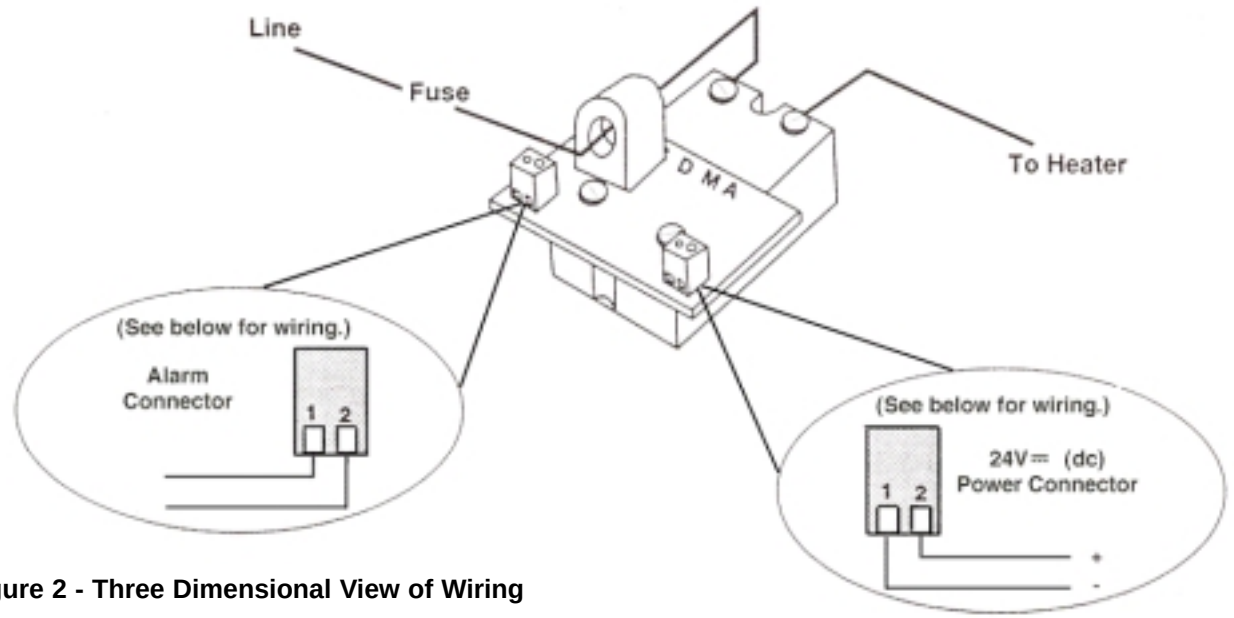

Figure 2 - Three Dimensional View of Wiring

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

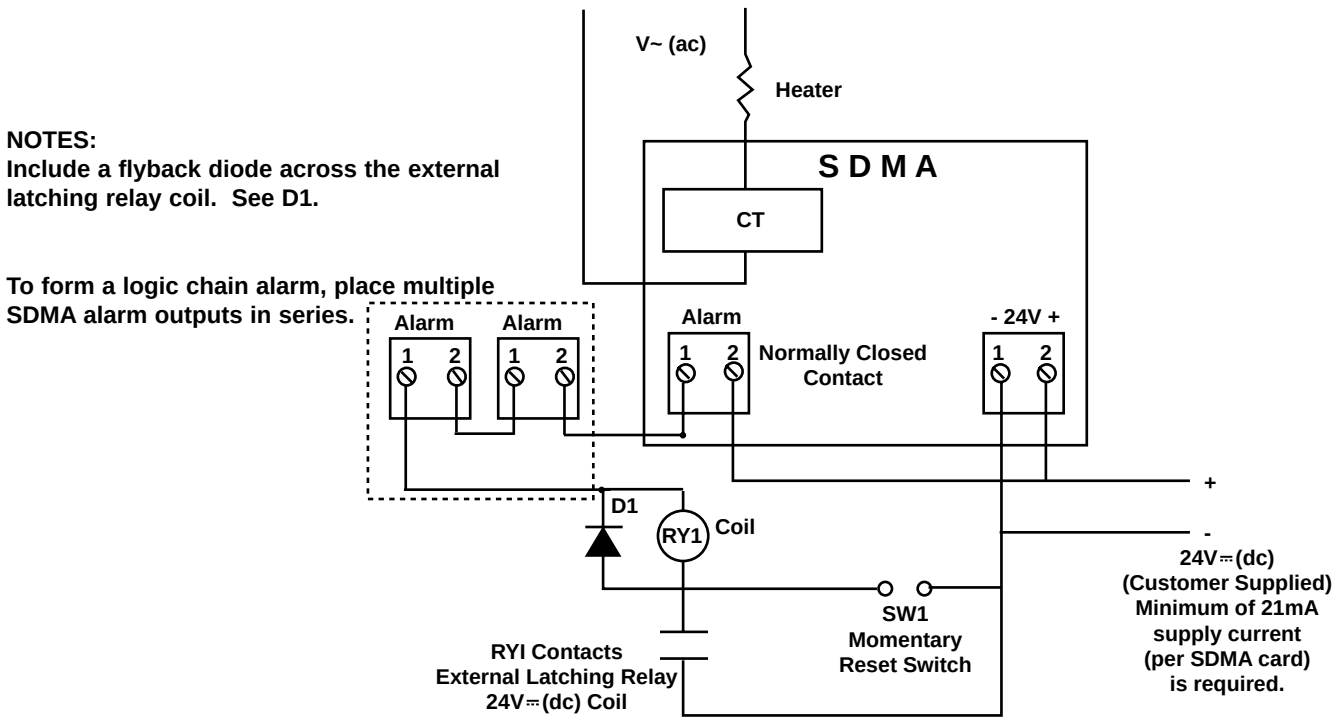

Figure 3 - SDMA Card Wiring