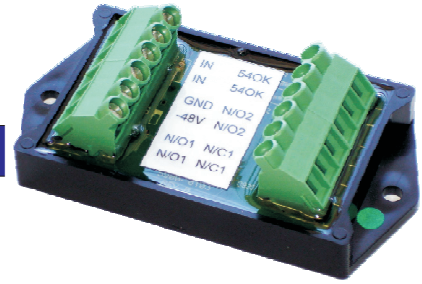


Contact Alarm Expander



Increasing the capability of alarm contactors

The System Studies Contact Alarm Expander (Part No. 9800-4450) is a small, DC powered block of solid-state relays that makes it possible to convert a standard “open/closed” contact indicator into several isolated and varying contact configurations. Each of these outputs can be read simultaneously by different monitors. The Contact Alarm Expander takes a normally dry contact as an input and relays the state of this contact to two normally open contacts, one normally closed contact, and one 540/270 ohm contactor.

In application, this means that a contact alarm installed on an air dryer which normally provides only an “open” or “closed” status condition, can now be read by another monitor (such as a 289H LSS™) to check alarm circuit continuity. For example, using a 289H LSS and the 540/270 ohm relay output of the Contact Alarm Expander, a reading of 540K would represent an “OK” condition; 270K would indicate an “ALRM” condition at the dryer; and “PAIR” would mean that the monitoring circuit is physically open. A Sparton monitor would read “OK,” “ALRM,” and “OPEN” (instead of “PAIR”).

This output capability is especially valuable because it can identify whether a contactor is actually in alarm, as opposed to a problem with the pair (e.g. someone pulling a jumper and causing the device to go open).

The Contact Alarm Expander also makes it possible to monitor air dryer equipment remotely using a Dial-a-Ducer™ without interfering with existing, on premises contactor alarming. By connecting the Dial-a-Ducer’s orange/white pair to either of the normally open output terminals on the Contact Alarm Expander, the Dial-a-Ducer (via PressureMAP) will provide either an “OK” or “ALRM” reading for the contactor. If the Dial-a-Ducer is setup to report to a digital pager, the two readings are “0” for open contact and “1” for closed contact.

Physical Description

The body of the Contact Alarm Expander is rectangular in shape and equipped with two mounting flanges to fa-

ilitate quick and permanent installation. There are twelve screw terminals located on the top (face) of the Contact Alarm Expander. These terminals are used to make the required conductor connections (see figure above).

Installation

The top left set of lugs, labeled “IN” is used to connect the contactor pair coming from the equipment being monitored. The contact to be monitored should not have any voltage on it. This can be verified by measuring each contact lead with a voltage meter (Measure for AC and DC voltage relative to ground). The contact should be a floating “open/closed” type contact alarm.

The center left pair of terminals is for the power connection. One of them is labeled “GND,” the other “-48V.” It is important that the power lead and ground are properly connected to the Contact Alarm Expander. Polarity is important.

The remaining four pairs of connector lugs are used to expand the contactor output. These connections are illustrated in the figure above. When configuring the Contact Alarm expander for an application, simply determine the alarm status of the contactor to be monitored (i.e. open or closed when active). Then select the Contact Alarm expander output that meets the requirements of the monitoring system.

Specifications

Electrical Requires source of -48 volts DC to operate

Construction Solid-state relays are housed in a phenolic resin based material, sealed with DO-270 epoxy compound

Physical dimensions 4 inches long (including mounting wings) by 2-1/16 inches wide by 1-1/8 inches thick (including conductor screw-down connectors).

Operating temperature range 0 to +150 degrees F

