993435-01.cdr

Description

The A51E-1 High Voltage Relay Unit, is an addressable device used to provide two Form "C" change over dry relay contact to control external appliances (door closers, fans, dampers, etc.) or equipment shutdown. The system firmware ensures that the relay is in the proper ON/OFF state. Upon command from the control panel, the relay energizes. Terminals 1 - 2 and 5 - 6 provide normally-closed relay connections; terminals 2 – 3 and 4 - 5 provide normally-open relay connection. One device address is required.

Up to 127 devices can be assigned to the loop. All devices incorporate a binary DIP switch enabling them to be given a unique address.

A red LED indicator illuminates when the unit has activated.

The A51E-1 High Voltage Relay Unit must be mounted in an enclosure where casual entry and flooding is not possible. All cable entries to the enclosure must be glanded or water trapped to prevent the possibility of fluid entry.

The A51E-1 High Voltage Relay Unit should either be mounted on the chassis supplied with the enclosure or on a DIN 35 mounting rail inside the enclosure.

The low voltage (ZP line) terminal blocks will accept 0.33mm² to 2.0mm² wire (#22 to 14 AGW) and the high voltage (relay contacts) terminal blocks will accept 0.8mm² to 3.1mm² wire (# 28 to 12 AGW).

Specification

Application:	Indoor use
Temp range:	-10°C to +75°C (dry heat)
Humidity range:	20% to 95% RH (non condensating up to 40°C)
Indication:	LED (red) flashing on activation
Operating voltage:	20 volt pulsed analogue loop (19.5V to 20,5V). Max line drop 4V
Standby current:	600 µA
Alarm current:	1mA
Relay contact rating:	
DC	
Max Voltage :	60VDC
Current :	1 Amp
AC	
Max Voltage :	250 VAC
Current :	5 Amp
Power factor resistive load : 1	

WARNING:

▪ This module has been designed to comply with EN54-18 and IEC 60950 standards. The operation of the device may be impaired if used in conditions or circumstances, which do not comply with those tested for and allowed in the EN54-18 and IEC 60950 standards. The supplier will not be liable for any injury suffered or damage which may arise if the module is used in conditions or circumstances which do not comply with those tested for and allowed in the EN54-18 and IEC 60950 standards. You must contact our technical support division for advice if the device is to be used in conditions, which differ from those prescribed in the EN54-18 and IEC 60950 standards.

▪ This module will NOT operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.

▪ Dangerous voltages may be present at terminals even when power is shut off!!

Installation Instructions

1. The A51E-1 High Voltage Relay Unit is shipped from the factory as an assembled unit; it contains no user-serviceable parts and should NOT be disassembled.

2. Verify that all field wiring is free of opens, shorts, and ground faults.

3. Make all wiring connections as shown in the wiring diagram.

▪ Wire in accordance with NFPA70-1999, National Electrical Code Article 760, Section 760-54(a)(1), Exceptions No. 2 and 3, or to equivalent local wiring codes.

▪ Wiring segregation as specified in above codes of practice must be adhered to between the voltage on the contacts 0-250VAC and the panels SELV (low voltage).

Mounting

Mounting options include:

1. A din rail method for mounting multiple/single units.

2. Adaptor plates for accessory box mounting

3. Single box mounting options

Wiring Stripping Guide
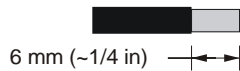
6 mm (~1/4 in)

Strip about 6 mm (1/4 in) from the ends of ALL wires that connect to the terminal block of the module.

CAUTION: Exposing more wire may cause a short, which may cause a ground fault. Exposing less wire may result in a faulty connection.
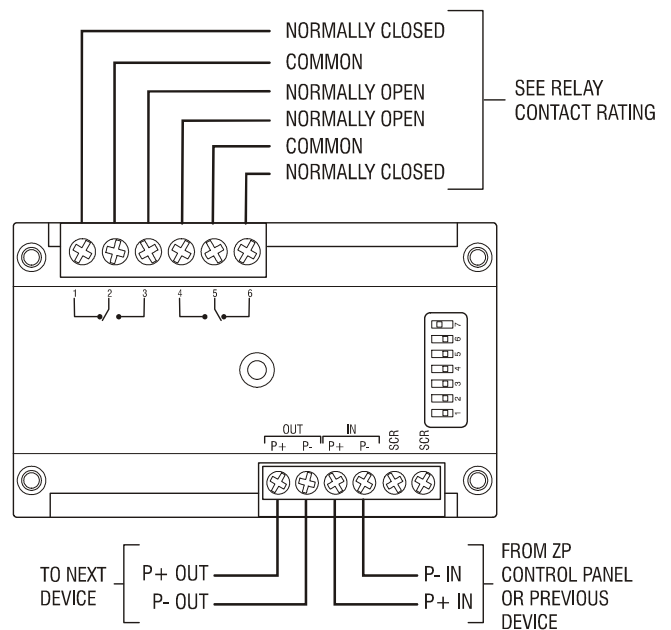
Wiring Diagram

Setting the address

The A51E-1 High Voltage Relay Unit, contains a 7 way DIP switch. The switch is used to set the device address in binary code. The switch may be set to represent all addresses from 1 to 127.

A switch only represents its coded value position. In the OFF position it represents a zero. See table below.

Switch no.	1	2	3	4	5	6	7
Coded value	1	2	4	8	16	32	64

To arrive at the address number of a device, add the representative numbers of all switches which are in the ON position: for example switches 2, 3 and 6 set to ON will represent address 38 (2 + 4 + 32).

Note: These contacts are not fused. Over current protection to be externally provided.

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