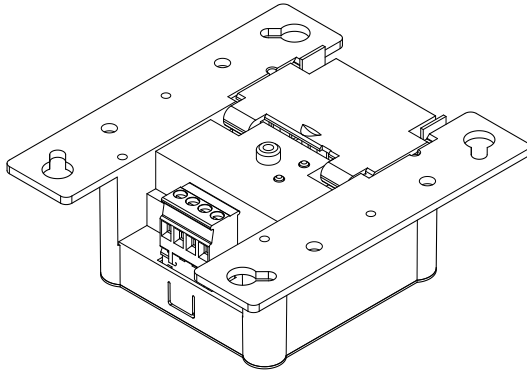


SIGA-CRH High Power Control Relay Module Installation Sheet



Description

The SIGA-CRH High Power Control Relay Module is an addressable device designed for interface applications that require a high voltage, high current relay. Two identical sets of relay terminals are provided. Both sets of relay contacts transfer when the module is activated or restored. The state of the output terminals is not supervised.

The module requires one address on the signaling line circuit (SLC). Addresses are assigned electronically. There are no address switches.

A status LED shows the state of the module through the cover plate:

- Normal: Green LED flashes
- Alarm/active: Red LED flashes

Personality codes

Use this personality code to configure the SIGA-CRH module.

Personality code 8: Signal - dry contact output. Configures the module as a dry relay contact to control external appliances (door closers, fan controllers, dampers) or equipment shutdown.

Installation

Install and wire this device in accordance with applicable national and local codes, ordinances, and regulations.

Refer to the Signature loop controller installation sheet for SLC wiring specifications.

WARNING: Connecting a device that exceeds this module's contact ratings may cause activation failure. This module does not support capacitive loads. See "Specifications" on page 2 for contact ratings.

Notes

- Install the SIGA-CRH in the same room and within 36 in. (91 cm) of the devices connected to the output terminals. Install the output wiring in conduit or provide equivalent protection against mechanical injury.
- The module is shipped from the factory as an assembled unit; it contains no user-serviceable parts and should not be disassembled.
- This module does not operate without electrical power. As fires frequently cause power interruption, discuss further safeguards with the local fire protection specialist.
- Each terminal on the module is limited to a single conductor.

To install the module:

1. Write the address assigned to the module on the label provided, and then apply the label to the module. Remove the serial number label from the module, and then attach it to the project documentation.
2. Verify that all field wiring is free of opens, shorts, and ground faults.
3. Strip 1/4 in. (about 6 mm) from the ends of all wires that connect to the terminal block of the module.

When stripping wire ends, exposing more wire may cause a ground fault; exposing less wire may result in a faulty connection.

4. Use a slotted screwdriver to release the latches on the hinged terminal cover, and then swing the cover up to access the relay terminals.
5. Make the wiring connections as shown in Figure 1.

Use separate knockouts for the SLC wiring and the high voltage wiring.

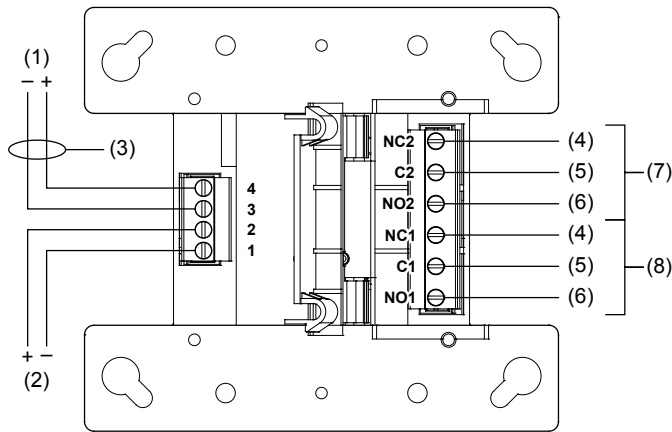
Make sure that power-limited and nonpower-limited wires will have a minimum of 0.25 in. (6.4 mm) separation when fitted into the box.

6. Swing the terminal cover down and snap it back into place, one latch at a time.
7. Attach the module to the electrical box, using the screws provided with the box. See Figure 2.

See "Specifications" for a list of compatible boxes.

8. Attach the wall plate to the module, using the two self-tapping screws provided.

Figure 1: Wiring diagram



- (1) Signaling line circuit (SLC) from previous device
- (2) Signaling line circuit (SLC) to next device
- (3) Power-limited and supervised
- (4) Normally closed contact (NC)
- (5) Common contact (C)
- (6) Normally open contact (NO)
- (7) Relay terminal set 2.

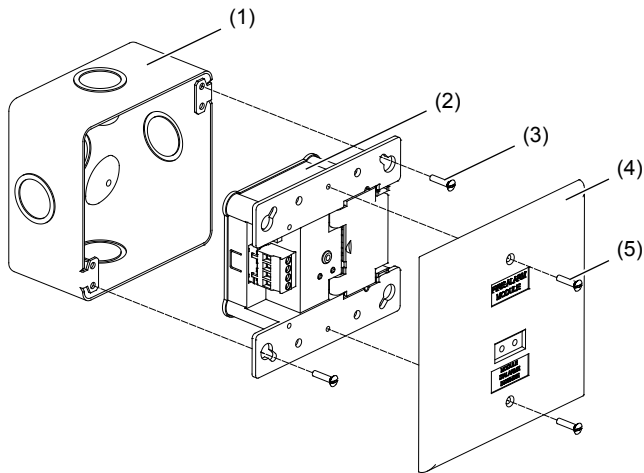
Not supervised. Power-limited unless connected to a nonpower-limited source. If the source is nonpower-limited, eliminate the power-limited mark and maintain a minimum of 0.25 in. (6.4 mm) space from power-limited wiring. For other mounting methods, see enclosure and bracket installation sheets to maintain separation of power-limited and nonpower-limited wiring. The wire size must be capable of handling fault current from a nonpower-limited source.

— or —

Use type FPL, FPLR, FPLP, or permitted substitute cables, provided these power-limited cable conductors extending beyond the jacket are separated by a minimum of 0.25 in. (6.4 mm) space or by a nonconductive sleeve or nonconductive barrier from all other conductors. Refer to the NFPA 70 *National Electrical Code* for more details.

- (8) Relay terminal set 1. Identical to (7).

Figure 2: Mounting the SIGA-CRH



- (1) Compatible electrical box
- (2) Module
- (3) Machine screw (2X, from electrical box)
- (4) Wall plate
- (5) #4 x 1/2 self-tapping screw (2X, provided)

Specifications

SLC voltage	15.20 to 19.95 VDC
SLC current	
Standby	75 µA max.
Activated	75 µA max.
Contact ratings [1][2]	
240 V 50/60 Hz	7 A (PF 0.75), 1.5 A (PF 0.35)
120 V 50/60 Hz	7 A (PF 0.75), 3.0 A (PF 0.35)
24 VDC	6 A resistive
Current	8.4 A max. (AC or DC)
Audio switching	0 to 20 kHz [3]
Relay type	2 Form C, programmable
Relay ready delay	
From power up	30 s max. (includes initial state set)
From previous activation	5 s max. (one activation) 8 s max. (two activations, 1 s apart)
Circuit designation	
Signaling line circuits	Class A, Style 6 or Class B, Style 4. Refer to the control panel technical publications for SLC wiring details.
Relay circuits	Class E
Number of SIGA-CRH per SLC	60 max.
Wire size	12 to 18 AWG (1.0 to 4.0 mm ²)
Compatible electrical boxes	North American double-gang × 2-1/8 in. (54 mm) deep box North American standard 4 in. square × 2-1/8 in. (54 mm) deep box
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93%, noncondensing
Storage temperature	-4 to 140°F (-20 to 60°C)

[1] Provide external fusing and back-EMF mitigation as required by your application. Do not use the SIGA-CRH in a mixed application, where one set of relay terminals has high-power requirements and the other set carries a low-power signal, as this may result in physical contamination of the low-power signal contacts.

[2] The minimum load required in order to avoid long-term contact oxidation is 100 mA and 12 V.

[3] Power must not exceed the contact ratings shown for a given PF (power factor).

Regulatory information

North American standards	CAN/ULC-S527, UL 864
FCC compliance	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Industry Canada compliance	This Class B digital apparatus complies with Canadian ICES-003.
Environmental class	UL: Indoor dry

Contact information

For contact information, see www.edwardsfiresafety.com.

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