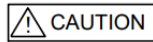


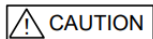
**Before Installation**

Please read these instructions carefully and keep for future reference. The information in this document is subject to change without notice.

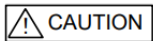
For updates please refer to our website.



Do not use the products outside the rated power supply voltage range specified in the Specifications. It may cause a fire or damage to equipment.



Do not disassemble, repair, or modify the products. It may cause a fire or electric shock.



Make sure to turn the power off before commencing any wiring work. Otherwise it may cause electric shock or damage to equipment.

**Note :** Follow the requirements for the installation of the product in accordance with the Specifications. Otherwise it may cause malfunction.

**Note :** Do not install the product in any location where oil, dust, iron powder, chemicals, or hydrogen sulphide may occur or affect the product. It may cause malfunction.

**Description**

VDOT-SCM-SCI Sounder Control Module with Short Circuit Isolator is an output module intended for use in addressable two wire systems, which provides the control of NAC (Notification Appliance Circuit) devices. The Notification Appliance Circuit can be wired on Class A and Class B.

**General Operation**

**Normal standby condition:** The module receives polling from the control panel at the regular interval. Polling LED (green) flashes.

**Active condition:** When receiving a control signal from the control panel, the module operates NAC devices, and Output LED (red) illuminates.

**Trouble condition:** If an overcurrent occurs because SLC (Signaling Line Circuit) is shorted, SCI LED (yellow) illuminates, and the module communicates to the control panel the short status. The module also communicates to the control panel the open/short status of NAC.

**SCI (Short Circuit Isolator) Function**

The module has a built-in short circuit isolator. SCI circuit prevents entire loop failure in the event of a short between L+ and L- on the loop. If a short is detected between L+ and L-, the yellow LED indicator is illuminated. The line between Lin- and Lout- is disconnected automatically to isolate the short circuit, and short circuit status is communicated to the control panel. Upon removal of the short condition, the module will automatically connect between Lin- and Lout- to restore the entire loop to the normal operating status.

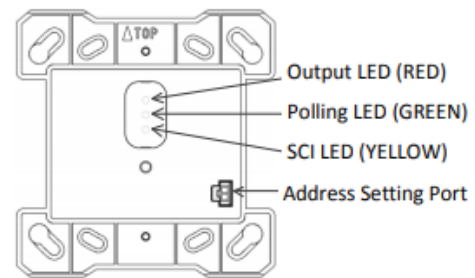


Figure 1

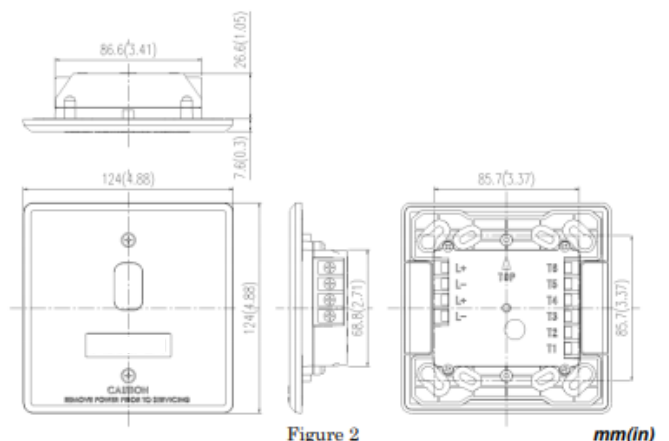


Figure 2

mm(in)

**Compatibility Requirement**

To ensure proper operation, the module shall be connected to UL listed control panel Velocity MMP series.

**Before Installing**

Disconnect power to the control panel before installing the module. If the module is installed in an existing operational system, inform the operators and local authorities that the system will be temporarily out of service.

**Mounting**

Mount the module directly to 4" square electrical box (UL Listed). Secure the module to the electrical box, as shown in Figure 3

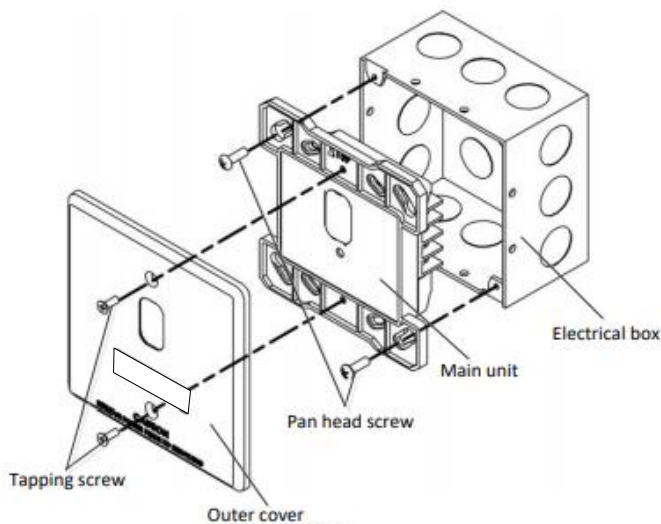


Figure 3

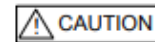
**Address Setting**

Use VDOT-AD2 Programmer for setting the address of the module prior to installation. VDOT-SCM-SCI has an address given at random from factory. Connect the Programmer with the address setting port to change the address to any of 1-254 (dec), with reference to the instruction manual of VDOT-AD2 Programmer. The address can be set regardless of whether power supply from the control panel is turned on or off. During setting address, the module does not respond to the control panel.

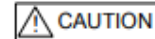
Set the address of module according to Job data.

**Wiring**

All wiring must conform to applicable local codes, ordinances, and regulations. Install module wiring in accordance with the appropriate wiring diagrams.



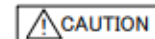
Use cable AWG12-22 for wiring. Do not connect different gauge cables at one terminal in order to prevent loosening. Use a fork terminal for crimping two cables.



Do not connect cables in reverse polarity. Failure to connect the polarity correctly could result in damage to the module and/or other equipment.

**Note:** All wiring is power-limited and supervised.

The number of NAC devices that can be connected varies depending on settings, but shall not exceed 14 devices. Please refer to the specifications of NAC devices for the consumption current and DIP switch setting. Select the "temporal" tone in each NAC device for a standard evacuation pattern.

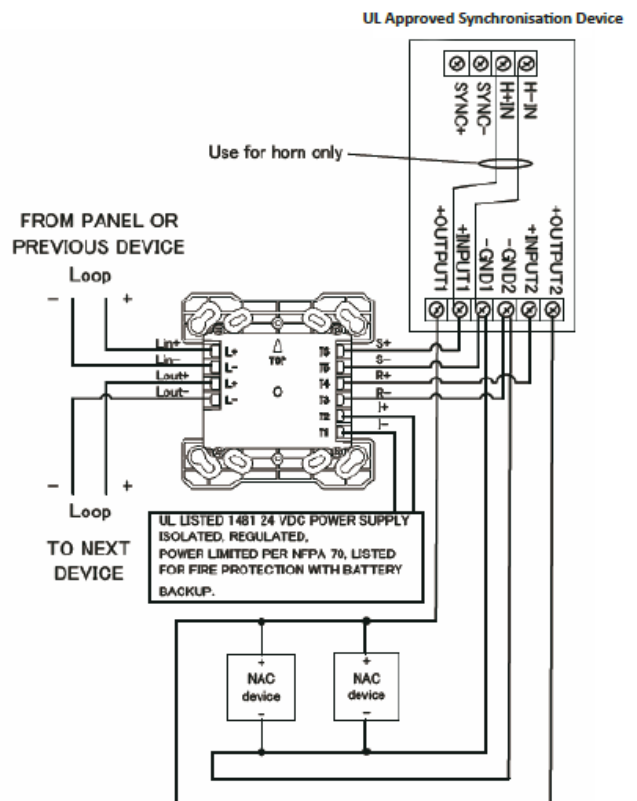


Do not exceed the maximum current rating 2A and 14 maximum number of NAC devices.

**Class A (Style Z)**

**Open Circuit Detection / Short-Circuit Detection**

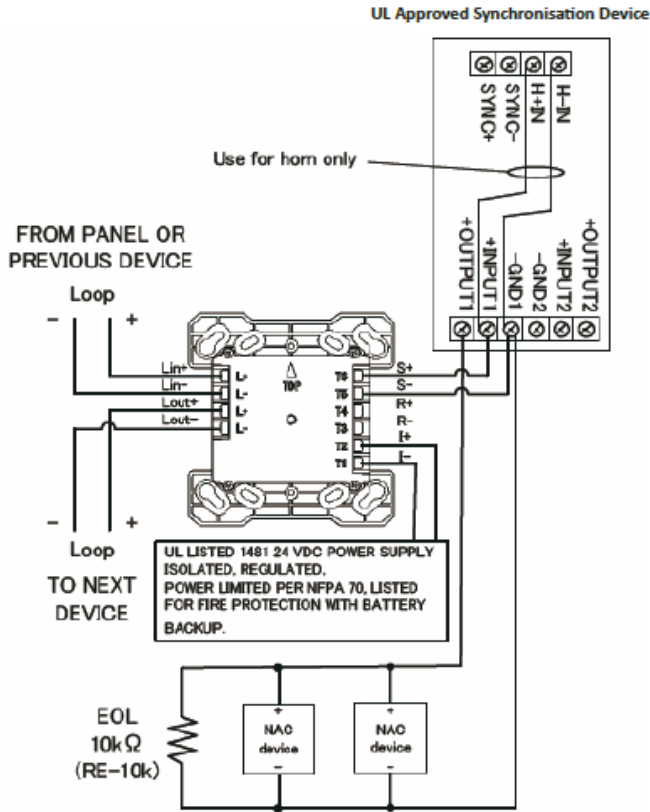
Connect UL Listed synchronisation module for the synchronisation of NAC devices.



Setting	Value
Wiring Method	Class A (Style Z)
Open-Circuit Detection	Yes
Short-Circuit Detection	Yes

**Class A (Style Z) Open Circuit Detection / Short-Circuit Detection** EOL (10k ohm) is connected between S+ and S- in VDOT-SCM-SCI.

Connect UL Listed synchronisation module for the synchronisation of NAC devices.



Setting	Value
Wiring Method	Class B (Style Y)
Open-Circuit Detection	Yes
Short-Circuit Detection	Yes

**Maintenance**

Routine Inspection: Ensure the module is secure and undamaged.

**Operation Test**

The purpose of the Operational Test is to confirm the product’s correct operation.

- 1) When carrying out site testing of the product, the control panel shall be set to “one-man-walk test mode” prior to the test.
- 2) Take any necessary precautions to limit the sounding of the alarm sounders/bells and any fire service summoning device.
- 3) Operate a control signal from the control panel to activate NAC devices, and confirm that the Output LED (red) illuminates.

**Note:** If the test cannot be carried out as terminal wiring is connected, remove the wire connected to NAC, and test between terminal S+ and S- (or R+ and R-) to check the module. (In the active status, 24V is output between S+ and S- (or between R+ and R-).

4) After the module is brought into the active condition, reset the module. It may be necessary to allow a short time to elapse before the module is reset. Confirm that the module goes back to the initial status after the active status is reset. (In the normal status, no voltage is output between S+ and S- (or between R+ and R-).

5) Short between terminal Lin+ (Lout+) and Lin- (Lout-), and the SCI LED (yellow) is illuminated. The short circuit isolator isolates the devices connected after the short-circuited area, which makes these devices have no response. Upon removal of the short condition, the area is automatically connected to go back to the normal standby status, and the SCI LED (yellow) turns off.

**Specifications**

Applied Voltage	SLC Rated Range 20 to 38VDC I± Rated Range 16 to 30VDC
SLC Current Consumption	Standby 0.8mA Activated 3.6mA
SLC Line Impedance	Up to 50 ohms
Relay (±I)	Switching capacity DC 30V/2A
Number of NAC Circuits	1 x Class A or 1 x Class B
NAC Circuit Rating	16 to 30VDC, 2A (max)
NAC Line Impedance	Up to 50 ohms
EOL Device	RE-10k (10k ohms, 1/4W) Class B only
SCI on Resistance	0.2 ohms (max)
SCI Fault Detection Threshold	10V (min)
SCI Isolation Current	22mA (max)
Visual Indicator (Status LED)	Polling LED (GREEN) Output LED (RED) SCI LED (YELLOW)
Ambient Installation Temperature	0°C to 49°C (32°F to 120°F)
Storage Temperature	-20°C to 60°C (-4°F to 140°F)
Max Relative Humidity	Up to 93% RH, non-condensing
Environment	Indoor dry use only
Maximum quantity per loop	127 units
Terminal	Screw AWG12 to 22
Address setting	VDOT-AD2 Address Programmer
Dimensions	124mm H x 124mm W x 34.5mm D (4.882" H x 4.882" W x 1.358" D) (Mount to a 4" square by 2 1/8" deep box)
Weight	Approximately 167g (5.9oz)
Conformity	UL864