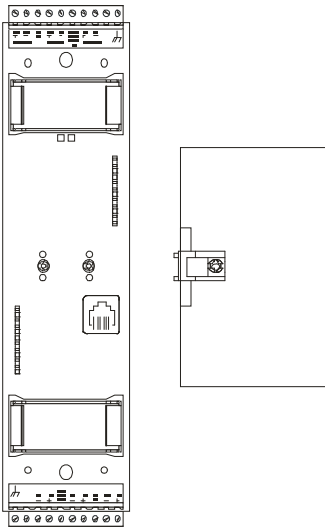


# Signature Controller Module and Data Circuit Card Installation Sheet



## Description

The Signature controller module provides up to two Class A, Class B, or Class X Signature data circuits for Signature Series detectors and modules. The module also provides a connection for powering conventional two-wire smoke detector circuits on Signature Series modules.

The Signature controller module supports the full complement of Signature diagnostic features including mapping. The module features a hinged front panel for mounting displays or a blank protective faceplate.

All field wiring connections are made via plug-in connectors that permit termination of field wiring without the module installed in the enclosure. The plug-in connectors and snap rivet mounting also facilitate rapid troubleshooting without the use of tools.

Model numbers	Description
3-SSDC1	Single Signature loop controller module with the option to add a second loop
3-DSDC1	Single Signature loop controller module with the option to add a second loop
3-SDDC1	Dual Signature loop controller module
3-SDC1	Signature data circuit card

The 3-SDDC1 module provides all the features of the 3-SSDC1 or 3-DSDC1 plus support for a second Signature data circuit.

**Note:** Adding a second 3-SDC1 card to a 3-SSDC1 or 3-DSDC1 converts the controller into an 3-SDDC1 and requires that you redefine it as such in the project database.

## WARNINGS

- This product contains components that are sensitive to static electricity. Failure to follow proper handling procedures may result in equipment damage.
- Rail modules may not be plugged into the rail chassis assembly while voltages are present on the rail. Failure to de-energize the panel before plugging in the rail module may result in equipment damage.

## Installation

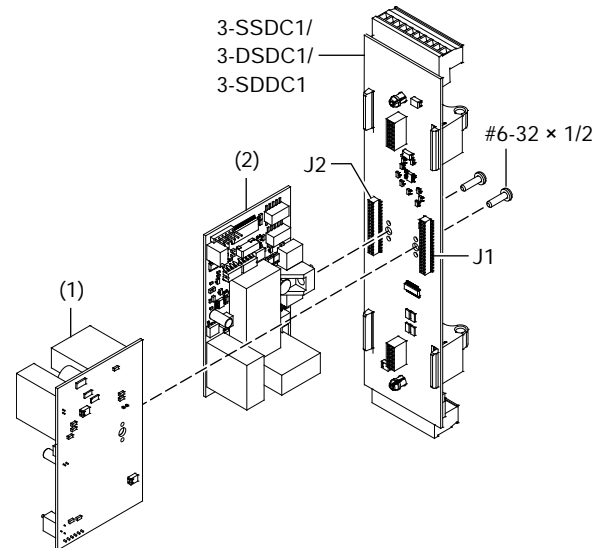
Install and wire this module in accordance with applicable national and local codes, ordinances, and regulations.

### To install the data circuit card and module:

1. Connect the data circuit card to the appropriate connectors on the backside of the loop controller module. See Figure 1.
2. If a control-display module is required, install it at this time. Refer to the installation instructions provided with the control-display module.
3. Install the controller module on the rail.
4. Before connecting the field wiring, test the field wiring for opens or shorts.

When a circuit checks out properly, connect it to the appropriate terminals on the controller card as shown in "Wiring" below.

Figure 1: Installing the 3-SDC1 card



(1) 3-SDC1 for LOOP1

(2) 3-SDC1 for LOOP2

## Wiring

Connect field wiring as shown in Figure 2 through Figure 4.

### Notes

- Wiring is supervised and power-limited.
- The signaling line circuit on LOOP2 (TB2) is wired the same as the signaling line circuit on LOOP1 (TB1).
- SLC pathways that provide signaling outputs to more than one fire notification zone must prevent a single break, single ground, or wire-to-wire fault from adversely affecting more than one zone. Exception: SLC pathways installed for survivability from attack by fire in accordance NFPA 72.

- If shielding is used it must be continuous, free from earth ground, terminated at the shield terminal only, and taped throughout the entire circuit.
- If notification appliances are used on the data line for more than one zone, each zone must have isolation so that a break, ground, or wire-to-wire fault does not affect more than one zone.

Figure 2: 3-SSDC1, 3-DSDC1, and 3-SDDC1 Class B wiring

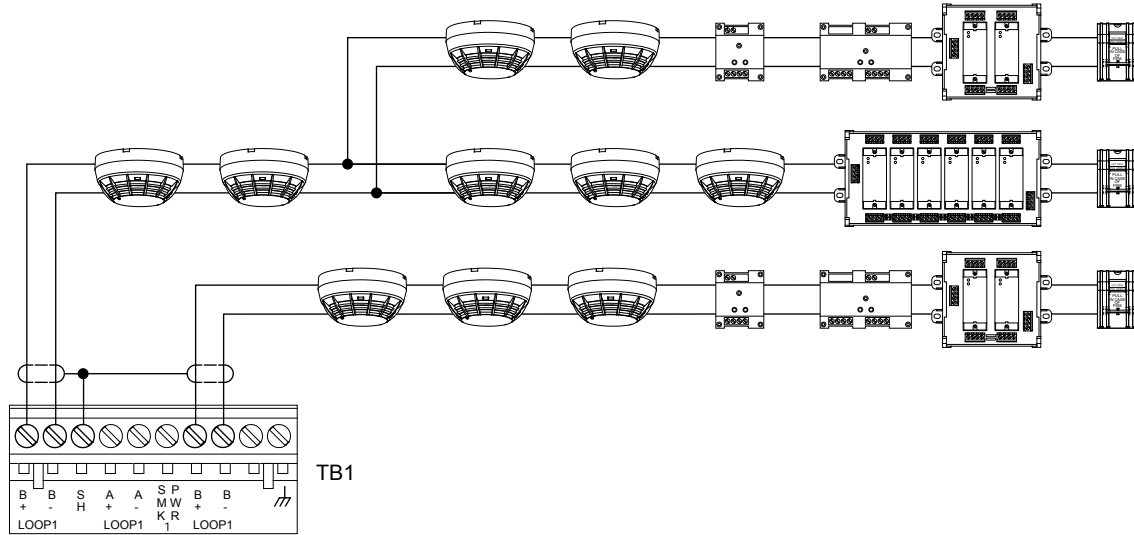
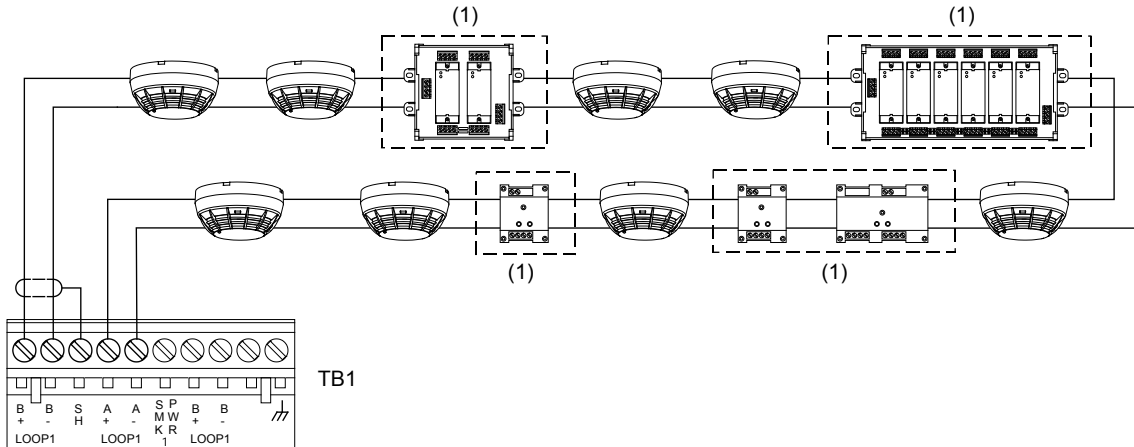


Figure 3: 3-SSDC1, 3-DSDC1, and 3-SDDC1 Class A [1] and Class X wiring [2]



Legend

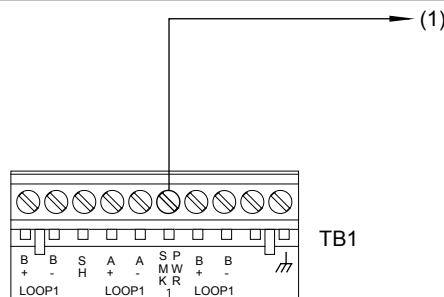
(1) For Class X wiring, un-isolated devices must be mounted in a cabinet with isolators on the incoming and outgoing wiring.

Notes

[1] For Class A wiring, isolator modules and isolator detector bases are required to prevent wire-to-wire shorts on the signaling line circuit wiring from adversely affecting other segments of the loop. Do not install more than 50 addressable devices between isolators, per NFPA 72.

[2] For Class X wiring, isolator modules and isolator detector bases are required to prevent wire-to-wire shorts on the signaling line circuit wiring from adversely affecting any devices of the loop.

Figure 4: 3-SSDC1, 3-DSDC1, and 3-SDDC1 smoke power wiring



(1) Smoke power to SIGA-UM or SIGA-MAB for a two-wire smoke detector

## Specifications

---

Quantity	
3-SSDC1	One 3-SDC1 card
3-DSDC1	One 3-SDC1 card
3-SDDC1	Two 3-SDC1cards
Voltage	19.0 VDC nom., 24 VDC max.
Current with full loop of devices for one circuit	
Standby	144 mA at 24 VDC
Alarm	204 at 24 VDC
Current with full loop of devices for two circuits	
Standby	264 mA at 24 VDC
Alarm	336 mA at 24 VDC
Smoke power	
Voltage	24 VDC max.
Current	19.95 mA
Circuit	
Designation	Class B, Class A, Class X
Capacity	125 detector and 125 module addresses per circuit, Signature Series
Resistance	100 $\Omega$ max.
Capacitance	0.5 $\mu$ F max.
Wire size	12 to 18 AWG (1.0 to 4.0 mm <sup>2</sup> ) max.
Compatible devices	Refer to the FACU compatibility list
Operating environment	
Temperature	32 to 120°F (0 to 49°C)
Relative humidity	0 to 93% noncondensing

---

## Contact information

For contact information, see [www.edwardsfiresafety.com](http://www.edwardsfiresafety.com).