

SIEMENS

Installation Instructions Models TSM-1X

Intelligent Test Switch Module with Dual Isolators

INTRODUCTION

The Model TSM-1X Intelligent Test Switch Module, P/N S54370-B7-A1, from Siemens Industry, Inc. is an addressable, key-activated momentary switch (T-45) with a tri-color LED indicator for use with intelligent duct detectors or other compatible intelligent devices on the Device Loop Circuit of Desigo FC2025/FC2050/FV2025/FV2050 and Cerberus PRO FC922/FC924/FV922/FV924 Fire Alarm Systems (refer to Figure 1). The key activation will cause its associated intelligent duct detectors or other smoke detectors and compatible devices to go into alarm. This alarm condition will cause all logic associated with the duct detector to activate. The 3-color LED of the module will show the status of its associated intelligent duct detector. The TSM-1X is mounted on a switch plate and can be installed in a 3½ inch deep single gang box.

The TSM-1X module supports two operation modes: polarity insensitive mode and isolator mode. The module can be wired for either mode (refer to Figures 3 to 4). During the isolator mode, the built-in dual isolators will work at both sides of the module to isolate the line short in front or behind the module.



Observe precautions for handling

Electrostatic Sensitive Devices.

ESD

PROGRAMMING

1. Refer to Figure 2 to locate the programming holes on back of the TSM-1X.
2. To connect the TSM-1X to the DPU Programmer/Tester, insert the plug from the DPU cable provided with the Programmer/ Tester into the programming holes.
3. To prevent potential damage to the DPU, DO NOT connect a TSM-1X to the DPU until all conductors of the same polarity are removed from the device line of the TSM-1X.
4. Follow the steps in the DPU Manual, P/N 315-033260, to program the TSM-1X to the desired address. Record the device address on the label located on the side of the TSM-1X module.
5. Add a logic function in the system configuration tool, Document ID A6V10315023, with the intelligent duct detector or other compatible intelligent devices that will be tested. The TSM-1X can now be installed and wired to the system.

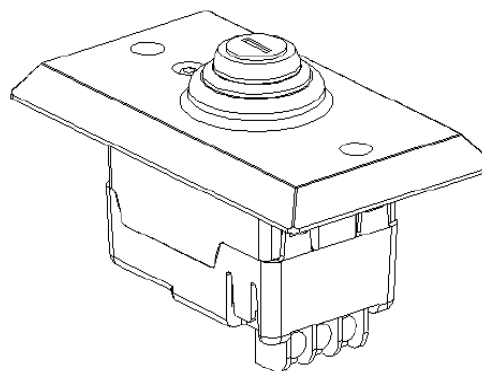


Figure 1
TSM-1X Intelligent Test Switch Module

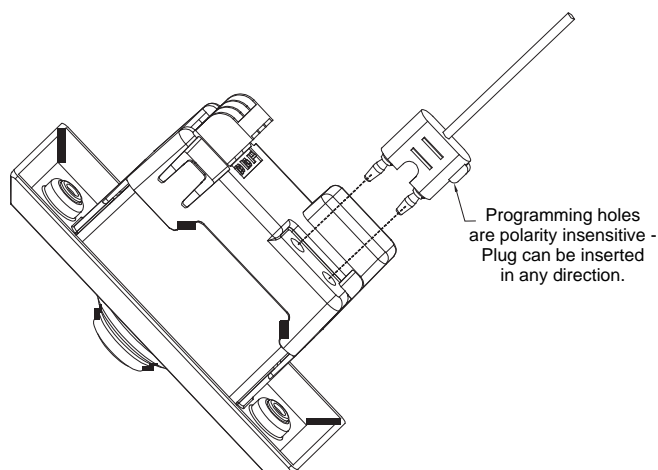


Figure 2
Connecting to the DPU Plug

WIRING INSTRUCTIONS

CAUTION: Deactivate P2 circuit by either or both of the following: Using the PMI, bypass the circuit being modified, and/or physically disconnect the circuit from the P2 source.

Refer to the wiring diagrams in Figures 3 and 4 and wire the TSM-1X to the device line of Desigo FC2025/FC2050/FV2025/FV2050 and Cerberus PRO FC922/FC924/FV922/FV924 Fire Alarm Systems, Document ID A6V10315023.

Note: The recommended wire size is as follows:
18 AWG minimum
14 AWG maximum

POWER LIMITED WIRING FOR THE TSM-1X TEST SWITCH MODULE

In compliance with NFPA 70—National Electrical Code, all power limited fire protective signaling conductors must be separated by a minimum of ¼ inch from all of the following items located within an outlet box:

- Electric light
- Power
- Class 1 or non-power limited fire protective signaling conductors

INSTALLATION

1. Remove the module from its protective bag. Mount the TSM-1X in a user supplied, UL-listed/recognized standard single gang mounting box (minimum 3½ inches deep is recommended). Refer to Figure 5.
2. Terminate all field wires to the TSM-1X as required for your application. Refer to the connection diagrams shown in Figures 3 and 4.
3. Insert the face plate and attach the cover plate with the two screws provided. Refer to Figure 5.

NOTES:

1. In the device line, up to 30 of any compatible devices in polarity insensitive mode with 20 ohms max line resistance can be isolated between two modules in isolator mode in a Class A Style 6 wiring.
2. In the device line, up to 30 of any compatible devices in polarity insensitive mode with 20 ohms max line resistance can be isolated behind one module in isolator mode in a Class B Style 4 wiring.
3. HLIM isolator module and SBGA-34 sounder base cannot be used in the same loop with the modules in isolator mode.

OPERATION

Reset the system until system normal is displayed on the panel. Activate the momentary switch by turning

the key to the right.

When the TSM-1X key switch is activated, the activation message is received by the panel. The panel then sends a reduced alarm threshold to the associated duct detectors or other compatible intelligent devices. This causes the detector to alarm. And the LED of the TSM-1X will change colors accordingly.

Reset the system. The panel will restore the detector's alarm threshold and the system back to normal.

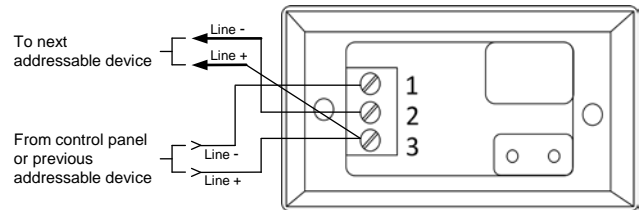


Figure 3
TSM-1X Isolator Mode Wiring

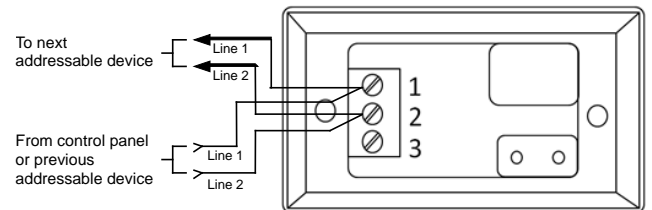


Figure 4
TSM-1X Polarity Insensitive Mode Wiring

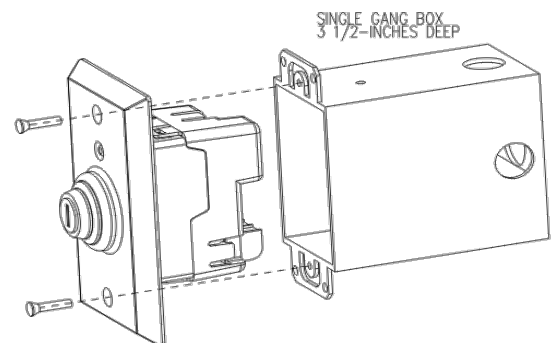


Figure 5
TSM-1X Mounting View

CAUTION:

The TSM-1X Test Switch Module does not perform all of the required smoke detector tests as specified in NFPA Standard 72. Please refer to the instructions that accompany the smoke detector for the complete test requirements.

ELECTRICAL RATINGS

Operating voltage	13 -32 Vdc
Max average current (RMS)	500 μ A

CONTROL AND INDICATORS

The LED of TSM-1X will mimic the LED of the associated duct detectors or other compatible intelligent devices. The logic function is setup in the system configuration tool.

The LED flashing rate is shown in the chart below:

Flash Color	Condition	Flash Intervals (Seconds)
Green	Normal supervisory operation	10
Amber	Device is in trouble	4
Red	Alarm	1
No Flashes	No power or need to be replaced	-

Cyber security disclaimer


Siemens products and solutions provide security functions to ensure the secure operation of building comfort, fire safety, security management and physical security systems. The security functions on these products and solutions are important components of a comprehensive security concept.

It is, however, necessary to implement and maintain a comprehensive, state-of-the-art security concept that is customized to individual security needs. Such a security concept may result in additional site-specific preventive action to ensure that the building comfort, fire safety, security management or physical security system for your site are operated in a secure manner. These measures may include, but are not limited to, separating networks, physically protecting system components, user awareness programs, defense in depth, etc.

For additional information on building technology security and our offerings, contact your Siemens sales or project department. We strongly recommend customers to follow our security advisories, which provide information on the latest security threats, patches and other mitigation measures.

<http://www.siemens.com/cert/en/cert-security-advisories.htm>

FCC Statement

	WARNING!
	Installation and usage of equipment not in accordance with instructions manual may result in: Radiation of radio frequency energy Interference to radio communications <ul style="list-style-type: none">• Install and use equipment in accordance with instructions manual• Read the following information

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications.

It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.