

## M502M Interface Module

### Specifications

Normal Operating Voltage:	15 to 32 VDC
Maximum Current Draw:	5.1 mA (LED on)
Average Operating Current:	300 $\mu$ A, 1 communication and 1 LED flash every 5 seconds, 3.9k eol
EOL Resistance:	3.9K Ohms
Maximum IDC wiring resistance:	25 Ohms
IDC Supply Voltage (between Terminals T10 and T11)	24 VDC power limited
Regulated DC Voltage:	0.1 Volts RMS maximum
Ripple Voltage:	90 mA per module
Alarm Current:	13 mA Maximum @24 VDC
Standby Current:	32°F to 120°F (0°C to 49°C)
Temperature Range:	10% to 93% Non-condensing
Humidity:	4.5" H x 4" W x 1.25" D (Mounts to a 4" square by 2.125" deep box.)
Dimensions:	Accessories:
	SMB500 Electrical Box

### BEFORE INSTALLING

This information is included as a quick reference installation guide. Refer to the control panel installation manual for detailed system information. If the modules will be installed in an existing operational system, inform the operator and local authority that the system will be temporarily out of service. Disconnect power to the control panel before installing the modules.

NOTICE: This manual should be left with the owner/user of this equipment.

### GENERAL DESCRIPTION

The M502M Interface Module is intended for use in intelligent, two-wire systems, where the individual address of each module is selected using the built-in rotary decade switches. This module allows intelligent panels to interface and monitor two-wire conventional smoke detectors. It transmits the status (normal, open, or alarm) of one full zone of conventional detectors back to the control panel. All two-wire detectors being monitored must be UL compatible with this module. The M502M has a panel controlled LED indicator.

### COMPATIBILITY REQUIREMENTS

To ensure proper operation, these modules shall be connected to listed compatible system control panels only.

### MOUNTING

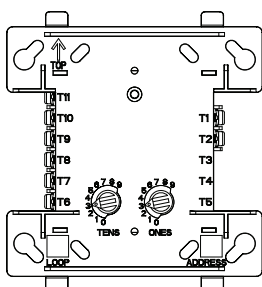
The M502M mounts directly to 4" square electrical boxes. (See Figure 2A.). The box must have a minimum depth of 2.125". Surface mounted electrical boxes (SMB500) are available from System Sensor.

### WIRING

NOTE: All wiring must conform to applicable local codes, ordinances, and regulations. This module is intended for power-limited wiring only.

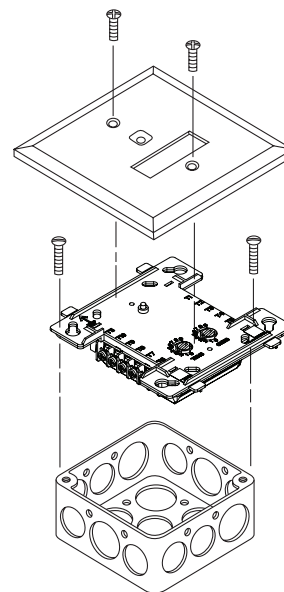
1. Install module wiring in accordance with the job drawings and appropriate wiring diagrams.
2. Set the address on the module per job drawings.
3. Secure module to electrical box (supplied by installer), as shown in Figure 2A.

### FIGURE 1. CONTROLS AND INDICATORS



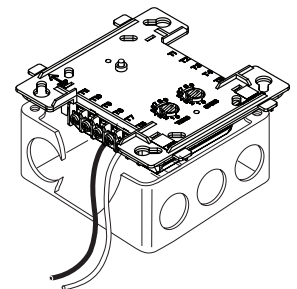
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### FIGURE 2A. MODULE MOUNTING WITH BARRIER



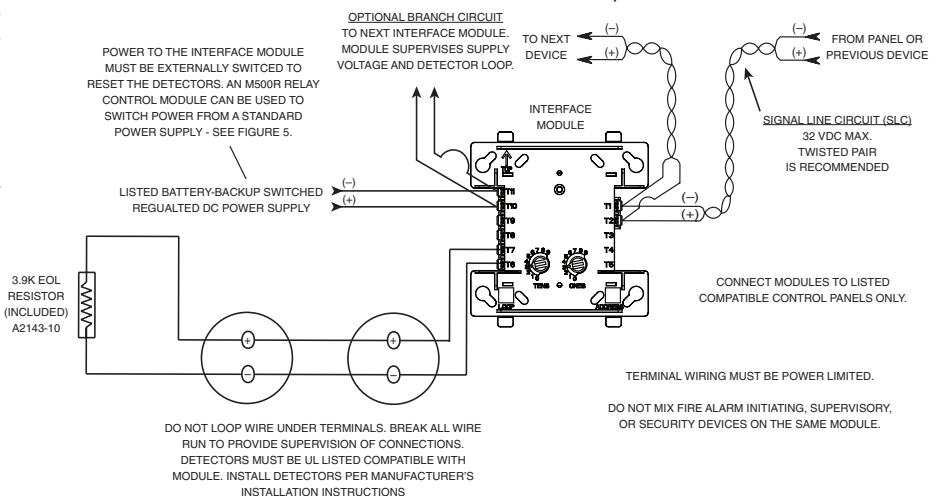
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### FIGURE 2B.



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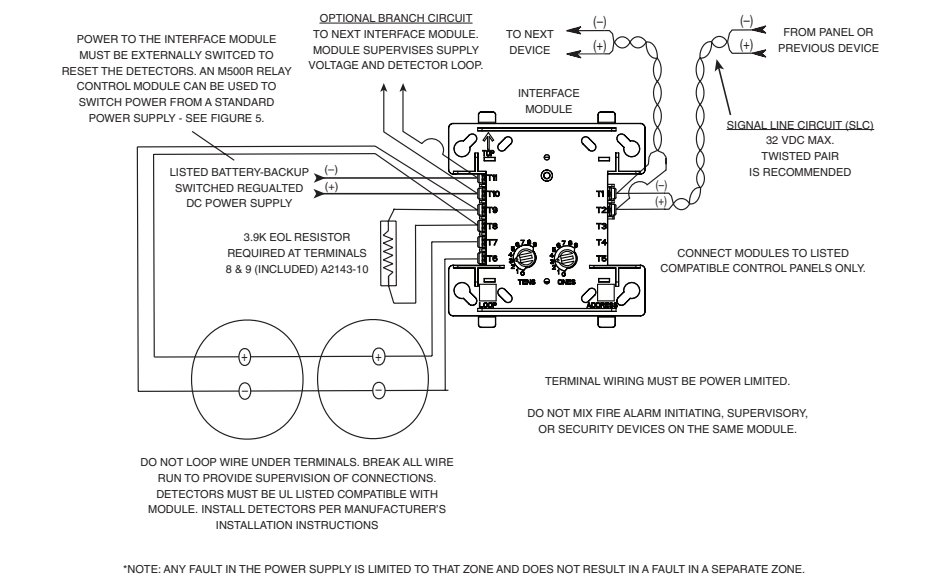
### FIGURE 3. INTERFACE TWO-WIRE CONVENTIONAL DETECTORS, NFPA CLASS B



\*NOTE: ANY FAULT IN THE POWER SUPPLY IS LIMITED TO THAT ZONE AND DOES NOT RESULT IN A FAULT IN A SEPARATE ZONE.

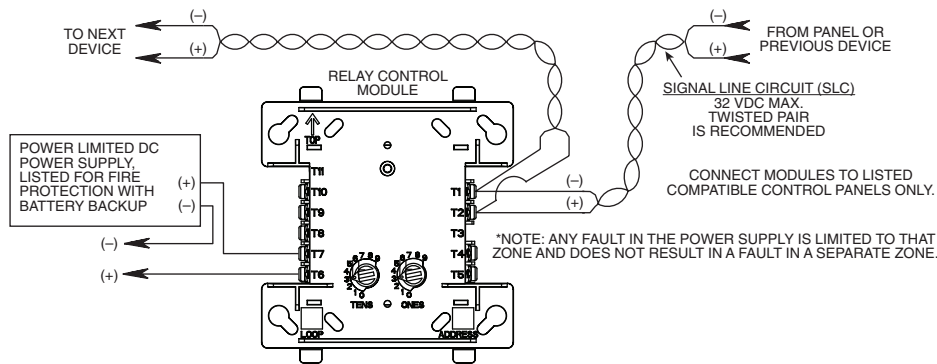
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FIGURE 4. INTERFACE TWO-WIRE CONVENTIONAL DETECTORS, NFPA CLASS A



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FIGURE 5. RELAY CONTROL MODULE USED TO DISCONNECT A POWER SUPPLY



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COMPATIBLE TWO-WIRE SYSTEM SENSOR SMOKE DETECTORS FOR USE WITH M502M WITH ZONE IDENTIFIER A

Detector Model	Compatibility ID	Detector Type	Base Model	Base Identifier	Max Detectors
1451	A	Ionization	B401/B	A	20
2451	A	Photoelectric	B401/B	A	20
2451TH	A	Photoelectric with Thermal	B401/B	A	20
1400	A	Ionization	N/A	—	20
2400	A	Photoelectric	N/A	—	20
2400TH	A	Photoelectric with Thermal	N/A	—	20
1100	A	Ionization	N/A	—	20
1151	A	Ionization	B110LP/B401	A	20
2100	A	Photoelectric	N/A	—	20
2100T	A	Photoelectric with Thermal	N/A	—	20
2151	A	Photoelectric	B110LP/B401	A	20

\*Used in combination with MTL isolator model MTL3043.

DEVICE AND SYSTEM SECURITY

Before installing this product ensure that the tamper seal on the packaging is present and unbroken and the product has not been tampered with since leaving the factory. Do not install this product if there are any indications of tampering. If there are any signs of tampering the product should be returned to the point of purchase. It is the responsibility of the system owner to ensure that all system components, i.e. devices, panels, wiring etc., are adequately protected to avoid tampering of the system that could result in information disclosure, spoofing, and integrity violation.

THREE-YEAR LIMITED WARRANTY

System Sensor warrants its enclosed device to be free from defects in materials and workmanship under normal use and service for a period of three years from date of manufacture. System Sensor makes no other express warranty for this air duct smoke detector. No agent, representative, dealer, or employee of the Company has the authority to increase or alter the obligations or limitations of this Warranty. The Company's obligation of this Warranty shall be limited to the replacement of any part of the air duct smoke detector which is found to be defective in materials or workmanship under normal use and service during the three year period commencing with the date of manufacture. After phoning System Sensor's toll free number 800-SENSOR2 (736-7672) for a Return Authorization number, send defective units postage prepaid to: System Sensor Canada

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(3PL), c/o Kuehne and Nagel, 6335 Edwards Blvd., Mississauga, Ontario L5N 2W7, RA # \_\_\_\_\_. Please include a note describing the malfunction and suspected cause of failure. The Company shall not be obligated to replace units which are found to be defective because of damage, unreasonable use, modifications, or alterations occurring after the date of manufacture. In no case shall the Company be liable for any consequential or incidental damages for breach of this or any other Warranty, expressed or implied whatsoever, even if the loss or damage is caused by the Company's negligence or fault. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.