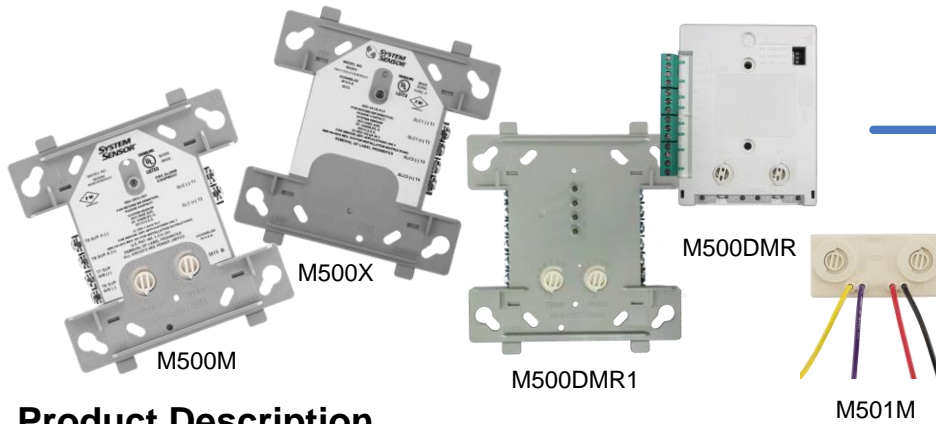


500 Series Intelligent Modules



Models Available

- M500M Monitor Module
- M501M Mini Monitor Module
- M500S Control Module
- M500X Isolator Module
- M502M Interface Module
- M500R Relay Module
- M500DMR Multiple Input-output Module
- M500DMR1 Multiple Input-output Module

Product Description

Monitor and control modules can be used to supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, conventional smoke detectors, and more. Each module is rigorously designed and tested for electromagnetic compatibility and environmental reliability, in many cases exceeding industry standards. Modules are addressed with easy-to-use rotary code switches.

M500M Monitor Module, M501M Mini Monitor Module

System Sensor Monitor modules provide an interface to contact devices, such as security contacts, waterflow switches, or pull stations. M501M is capable of Class B supervised wiring to the monitored device. M500M is capable of Class A supervision. Conventional 4-wire smoke detectors can be monitored through their alarm and trouble contacts, wired as an initiating loop to the module. In addition to transmitting the supervised state of the monitored device (normal, open, or short), the full analog supervision measurement is sent back to the panel. This allows detection of impedance changes in the supervised loop to the monitored device.

M500S Control Module

The M500S Control Module provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as horns, strobes, or bells. It is capable of Class A and Class B supervision. Upon command from the control panel, the M500S module will disconnect the supervision and connect the external power supply across the load device. The disconnection of the supervision provides a verification to the panel that the control relay actually turned on. The external power supply is always relay isolated from the communication loop, so that a trouble condition on the power supply will never interfere with the rest of the system. Full analog measurement of the supervised wiring is transmitted back to the panel and can be used to detect impedance changes or other special test functions.

M500X Isolator Module

The M500X Isolator Module is an automatic switch that opens when the line voltage drops below four volts. Isolator modules should be spaced between groups of sensors or modules in a loop to protect the rest of the loop. If a short occurs between any two isolators, then both isolators immediately switch to an open circuit state and isolate the devices between them. The remaining units on the loop continue to fully operate. The number of devices that can be installed between isolator modules varies depending on the device type. Please see your module's manual for more information.

M502M Interface Module

The M502M Interface Module allows intelligent panels to interface and monitor 2-wire conventional smoke detectors. All 2-wire detectors being monitored must be UL or ULC compatible with the module. The M502M module is addressed through the communication line of an intelligent system. It transmits the status of one zone of 2-wire detectors to the fire alarm control panel. Status conditions are reported as normal, open, or alarm. The interface module supervises the zone of detectors and the connection of the external power supply.

M500R Relay Module

The M500R Relay Module contains two isolated sets of Form C contacts, which operate as a DPDT switch. The module allows the control panel to switch these contacts on command. No supervision is provided for the notification appliance circuit.

M500DMR & M500DMR1 Multiple Input-output Module

The M500DMR & M500DMR1 multi input-output module is capable of replacing two Class B monitor modules and two individual relay control modules on an intelligent fire alarm Loop. Each monitor input is intended to interface between a fire alarm control panel and one or more devices. Each relay output is intended for Form C switching applications which don't require wiring supervision for the load circuit.

Features

- SEMS screws for easing wiring
- Panel controlled status LED (except M501M)
- Analog communications
- Rotary address switches (except M500X)
- Low standby current
- Mounts in standard 4" junction box

General Specifications	
Operating Voltage	15 to 32 VDC
Communication Line Loop Impedance	40 Ω max. (except M500DMR1)
Temperature Range	32°F to 120°F (0° to 49°C)
Relative Humidity	10% to 93% noncondensing
Shipping Weight	M501M: 1.2 oz (37 g); Others: 6.3 oz (196 g)
Dimensions	M501M: 2.7 in W x 1.7 in H x 0.5 in D; M500DMR: 3.70 in W x 4.25 in H x 0.94 in D; Others: 4.275 in W x 4.675 in H x 1.4 in D
M500M , M501M , M500S	
Standby Current	400 μA max @ 24 VDC (one communication every 5 sec. with 47k EOL); 600 μA max @ 24 VDC (one communication every 5 sec. With EOL<1k); 5.5 mA (with LED latched on)
End-of-Line Resistance	47 kΩ (included)
M500X	
Standby Current	450 μA max.
Isolation Impedance	2.25 kΩ to 2.9 kΩ
Fault Detection Delay	250 ms min.
Fault Detection Threshold	4 Volts
Line Restoration Threshold	7 Volts
M502M	
Standby Current	300 μA max @ 24 VDC (one communication every 5 sec. with LED enabled)
External Power Supply	18 to 28 VDC (100 mV ripple max.)
End-of-Line Resistance	3.9 kΩ (included)
External Supply Standby Current	11.5 mA @ 24 VDC (nominal)
External Supply Alarm Current	80 mA @ 24 VDC (nominal)
M500R	
Standby Current	300 μA max @ 24 VDC (one communication every 5 sec. with LED enabled)
LED Current	5.5 mA (with LED latched on)
Relay Contact Ratings	2.0 A @ 25 VAC (PF=.35), non-coded; 3.0 A @ 30 VDC resistive, non-coded
	2.0 A @ 30 VDC resistive, coded; 0.46 A @ 30 VDC (L/R=20ms), non-coded
	0.7 A @ 70.7 VAC (PF=.35), non-coded; 0.9 A @ 125 VDC resistive, non-coded
	0.5 A @ 125 VAC (PF=.75), non-coded; 0.3 A @ 125 VAC (PF=.35), non-coded
M500DMR	
Standby Current for complete product	1000 μA
Relay Contact Rating	2 Amps @ 30 VDC ; 1.5A @ 25VAC
M500DMR1	
Maximum Current Draw :	24 mA (4 LEDs on)
Average Operating Current:	1.3mA, 1 communication every 5 seconds
Relay Contact Rating:	3A at 30 VDC
EOL Resistance:	47K Ohms (monitor inputs only)
Maximum IDC wiring resistance:	1500 Ohms
Maximum IDC Voltage:	10.2 Volts
Maximum IDC Current:	450μA

Ordering Information

Product Model	Product Description	UL	FM	CSIRO	UOM
M500M	Monitor Module	√	√		EA.
M501M	Mini Monitor Module	√	√		EA.
M500X	Isolator Module	√	√		EA.
M502M	Interface Module	√	√		EA.
M500S	Control Module	√	√		EA.
M500R	Relay Module	√	√		EA.
M500DMR	Multi Input-output Module			√	EA.
M500DMR1	Multi Input-output Module	√	√		EA.



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