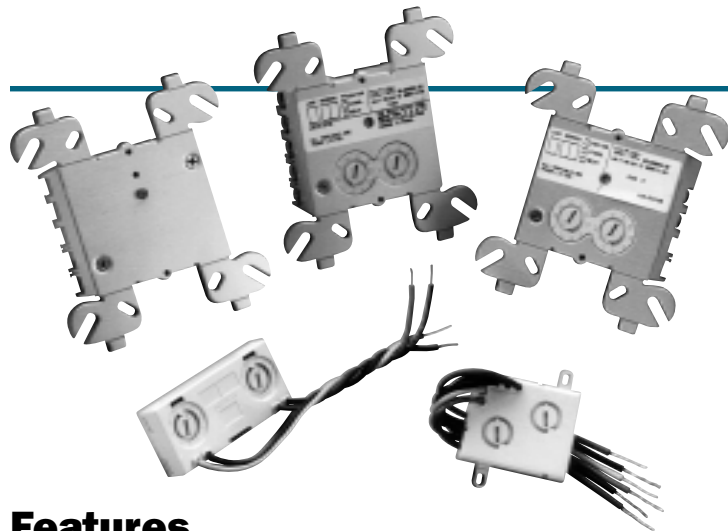


500 Series™ Intelligent Monitor and Control Modules



A Division of Pittway
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<http://www.systemsensor.com>



Models Available

- M500MB Monitor Module**
- M500CH Control Module**
- M500X Isolator Module**
- M501M Mini-Monitor Module**
- M502M Interface Module**
- M503ME Micro Module**

Features

- Mount in 4" square junction box or SMB500 (surface mounting box)
- Full analog supervision
- Interface with 4-wire conventional detector loops (M502M)
- Low standby current
- Latching output drive circuit controlled by the panel command
- Rugged industrial construction
- Listed to UL 864 and EN-54
- SEMS screws for easy wiring
- Direct dial decade address entry
- Stable communications techniques with noise immunity
- Visible LED controlled by panel to be off, blinking, or latched on

Specifications – M500MB, M500CH, M500X, and M501M

Operating Voltage:	15–32 VDC	Temperature Range:	32° to 140°F (0° to 60°C)
Standby Current		(Note: Do not install in locations where the normal ambient temperature range extends beyond 32° to 120° F [0° to 50°C] for extended periods.)	
M500MB,		Shipping Weight	
M500CH, M501M:	300µA (includes 100µA normal supervision current, no communication)	M500MB,	
M500X:	450µA	M500CH, M500X:	5 oz. (150 g)
Alarm Current		M501M:	1.2 oz. (34 g)
M500MB, M500CH:	5.1 mA max. current with visible LEDs latch on	Dimensions	
Supervision Current		M500MB,	
M500MB,		M500CH, M500X:	4"W × 4 1/2"H × 1 1/4"D
M500CH, M501M:	50µA open (max.); 100µA normal (typical); 150µA short (min.)	M501M:	2 5/8"W × 1 1/4"H × 1/2"D
Relay Contact Rating for M500CH			
Resistive:	2 amp @ 30 VDC		
Inductive:	0.3 amp @ 110 VDC (.35 P.F.); 0.3 amp @ 125 VAC (.35 P.F.); 0.6 amp, 30 VDC (.35 P.F.)		
Humidity:	10% to 93% relative humidity		



General Description

System Sensor's Intelligent System offers features and performance that surpass conventional systems. The intelligent communication and command capabilities are used not only for the intelligent sensors but also for monitor, control, and isolator modules which can supervise and activate sounders, strobes, door closers, pull stations, waterflow switches, etc. Loops of non-intelligent 4-wire smoke detectors, which do not require their own individual address, can also be monitored by using an intelligent monitor module.

Each module (except the M500X) can be programmed from 01 to 99 with convenient direct decade address dials. A built-in address bit (not settable) is used by the system to differentiate a module address from a sensor address.

M501M Mini-Monitor Module

The M501M Mini-Monitor Module is designed to fit inside devices or inside junction boxes behind devices. It provides an interface to contact devices, such as security contacts, waterflow switches, pull stations, etc. It is capable of Styles A and B supervised wiring to the load device. Conventional 4-wire smoke sensors can be monitored through their alarm contacts and trouble contacts, wired as an initiating loop to the module.

In addition to transmitting the supervised state of the monitored device (Normal, Short, or Open), the full analog supervision measurement is sent back to the panel. This allows impedance changes in the supervised loop to the monitored device to be detected.

M500MB Monitor Module

The M500MB Monitor Module is designed to interface to contact devices, such as security contacts, waterflow switches, pull stations, etc. It is capable of Styles A, B, and D supervised wiring to the load device. Conventional 4-wire smoke sensors can be monitored through their alarm contacts, wired as an initiating loop to the module.

In addition to transmitting the supervised state of the monitored device (Normal, Short, or Open), the full analog supervision measurement is sent back to the panel. This allows impedance changes in the supervised loop to the monitored device to be detected.

M500CH Control Module

The M500CH Control Module provides supervised monitoring of wiring to load devices that require an external power supply to operate, such as horns, strobes, bells, etc. It is capable of Styles A, B, and D supervision in the normal condition. Upon code command from the panel, the M500CH will disconnect the supervision and connect the external power supply in the proper polarity across the load device. The disconnection of the supervision provides a positive indication 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 external 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. The module signalling lines can operate with styles .5 through 6, dependent upon panel function.

M500X Isolator Module

The M500X Isolator Module is an automatic switch that opens when the line voltage drops below 4 volts. Isolator Modules should be spaced between groups of sensors 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 groups of sensors between them. The remaining units on the loop continue to fully operate. No more than 25 sensors are recommended for each sensor group.

M503ME Micro Module

The M503ME stand-alone micro modules provides a two-wire initiating circuit for normally open contact fire alarm and supervisory devices. An LED indicator output drive is provided to allow visual monitoring of the module's operating condition.

The M503ME is small and light enough to fit inside a single gang junction box behind the device being monitored, without the need to be rigidly mounted.

Specifications

Communication Line		Weight:	0.07 lbs. (33 g)
Supply Range:	15 to 32 VDC	Dimensions:	1 ⁷ / ₈ "W × 1 ⁹ / ₁₆ "H × 1 ¹ / ₂ "D
Standby Current:	300μA @ 24 VDC (maximum, no communication)		(excluding screw fixings and cables)
Supervisory Current:	50μA open (max.); 100μA normal (typical); 150μA short (min.)	Temperature Range:	14° to 140°F (-10° to 60° C)
Humidity:	10% to 93% relative humidity, noncondensing		(Note: Do not install in locations where the normal ambient temperature range extends beyond 32° to 120° F [0° to 50° C] for extended periods.)

M502M Interface Module (not shown)

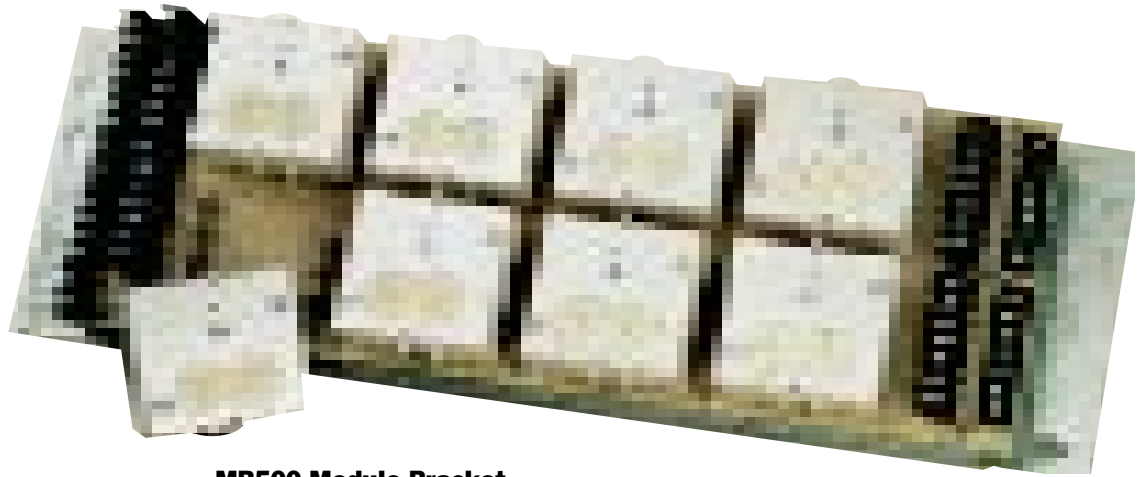
The M502M Interface Module allows intelligent panels to interface and monitor two-wire conventional smoke detectors. All two-wire detectors being monitored must be UL compatible with the module.

The M502M is addressed through the communication line of intelligent systems. When the module is interrogated, it transmits the status of one zone of two-wire detectors to an intelligent control panel. Status conditions are reported as normal, open, or alarm. The

interface module supervises the zone of detectors and the connection of an external power supply. Two rotary decade switches allow setting module addresses from 00-99. A status LED indicator is provided and is controlled by code command from the control panel. The module provides a magnetically activated test switch for testing the module's electronics and connections to the control panel.

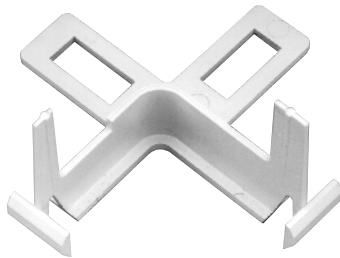
Specifications

Communication Line – Terminals 1 and 2		Communication Line	
Operating Voltage:	15 – 32 VDC	Loop Impedance:	40 Ω maximum
Standby Current:	200μA (maximum @ 24 VDC, no communication)	Temperature Range:	32° to 140°F (0° to 60° C)
	1.3 mA (maximum, Style D enabled);		(Note: Do not install in locations where the normal ambient temperature range extends beyond 32° to 120° F [0° to 50° C] for extended periods.)
	5.1 mA (maximum, 24V, LED latched on)	Humidity:	10% to 93% noncondensing
		Shipping Weight:	0.5 lbs. (232 g)
		Dimensions:	4"W × 4 ¹ / ₂ "H × 1 ¹ / ₄ "D (Mounts to 4" square by 2 ¹ / ₈ " deep electrical boxes.)



MB500 Module Bracket

A compact and labor-saving way to mount multiple modules in one location



CB500 Control Module Barrier

Separates power limited wiring from non-power limited wiring in control module applications

Ordering Information

Part No.	Description	Part No.	Description
M500MB	Monitor Module	M502M	Interface Module
M500MAB	Monitor Module, ULC listed	M502MA	Interface Module, ULC listed
M500CH	Control Module	M503ME	Micro Module
M500CHA	Control Module, ULC listed	<u>Accessories</u>	
M500X	Isolator Module	CB500	Control Module Barrier
M501M	Mini-Monitor Module	MB500	Module Bracket
M501MA	Mini-Monitor Module, ULC listed	C58-134-03	Mounting Plate, 4 ³ / ₄ " Square
		SMB500	Surface Mount Box for M500 Series Modules

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