



ELECTRONIC

Compatible with VS & VM control systems

ADDRESSING

Technology that saves lives

Input Modules

GSA-MM1 & GSA-WTM



Overview

The GSA-MM1 Monitor Module and GSA-WTM Waterflow/Tamper Module are part of Kidde's Signature Series system. They are intelligent analog addressable devices used to connect one or two Class B normally-open Alarm, Supervisory, or Monitor type dry contact Initiating Device Circuits (IDC). The function of the GSA-MM1 and GSA-WTM is determined by the factory loaded "personality code".

The input modules gather analog information from the initiating devices connected to them and convert it into digital signals. The module's on-board microprocessor analyzes the signal and decides whether or not to input an alarm.

The microprocessor in each module provides four additional benefits - Self-diagnostics and History Log, Automatic Device Mapping, Stand-alone Operation and Fast, Stable Communication.

Standard Features

- Monitor and waterflow/tamper applications**
Includes Alarm with delayed latching (retard) for waterflow applications, Supervisory, and Monitor.
- Non-volatile memory**
Permanently stores serial number, type of device, and job number. Automatically updates historic information including hours of operation, last maintenance date, number of alarms and troubles, and time and date of last alarm.
- Automatic device mapping**
Each module transmits wiring information to the loop controller regarding its location with respect to other devices on the circuit.
- Electronic addressing**
Permanently stores programmable address; there are no switches or dials to set. Addresses are downloaded from a PC, or the SIGA-PRO Signature Program/Service Tool.
- Intelligent module c/w integral microprocessor**
All decisions are made at the module allowing lower communication speed while substantially improving control panel response time. Less sensitive to line noise and circuit wiring properties; twisted or shielded wire is not required.
- Ground fault detection by address**
Detects ground faults right down to the device level.
- Designed for high ambient temperature operation**
Install in ambient temperatures up to 120°F (49°C).

Application

The duty performed by the GSA-MM1 and GSA-WTM is determined by their factory assigned sub-type code or "Personality Code".

GSA-WTM NORMALLY-OPEN ALARM - DELAYED LATCHING (Factory set Personality Code 2) - Assigned to one circuit. Configures circuit 1 for **Class B** normally-open **Waterflow Alarm Switches**. An ALARM signal is sent to the loop controller when the input contact is closed for approximately 16 seconds. The alarm condition is latched at the module.

GSA-WTM NORMALLY-OPEN ACTIVE - LATCHING (Factory set Personality Code 4) - Assigned to one circuit. Configures circuit 2 for **Class B** normally open dry contact **Supervisory and Tamper Switches**. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is latched at the module.

GSA-MM1 NORMALLY-OPEN ACTIVE - NON-LATCHING (Factory set Personality Code 3) - Assigned to one circuit. Configures circuit 1 for **Class B** normally-open dry contact monitoring input such as from **Fans, Dampers, Doors**, etc. An ACTIVE signal is sent to the loop controller when the input contact is closed. The active condition is not latched at the module. Compatibility

The Signature Series modules are compatible only with Kidde's Signature Loop Controller.

Warnings & Cautions

This module will not operate without electrical power. As fires frequently cause power interruption, we suggest you discuss further safeguards with your local fire protection specialist.

Compatibility

These modules are part of Kidde's Signature Series intelligent processing and control platform. They are compatible with VM, and VS Series control panels.

Testing & Maintenance

The module's automatic self-diagnosis identifies when it is defective and causes a trouble message. The user-friendly maintenance program shows the current state of each module and other pertinent messages. Single modules may be turned off (de-activated) temporarily, from the control panel. Scheduled maintenance (Regular or Selected) for proper system operation should be planned to meet the requirements of the Authority Having Jurisdiction (AHJ). Refer to current NFPA 72 and ULC CAN/ULC 536 standards. Availability of maintenance features is dependent on the fire alarm system used.

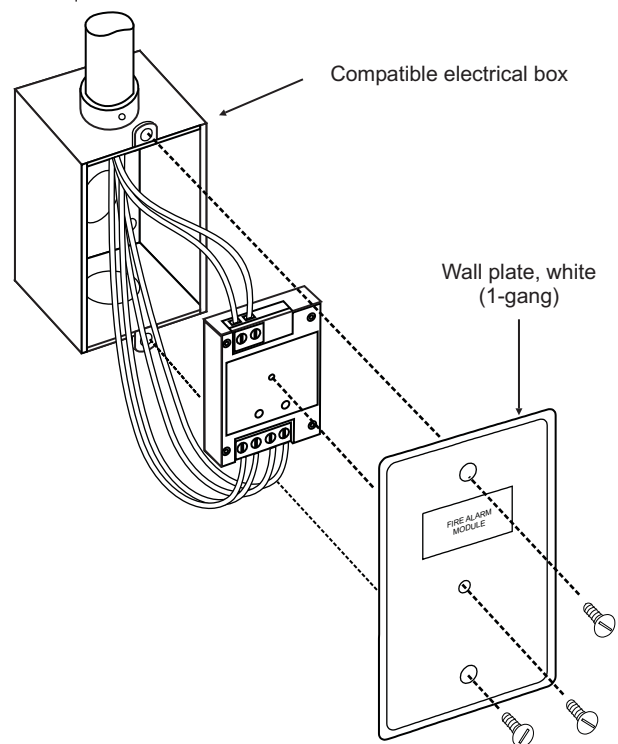
Installation

The GSA-MM1 and GSA-WTM modules mount to North American 2-1/2 inch (64 mm) deep one-gang boxes and 1-1/2 inch (38 mm) deep 4 inch square boxes with one-gang covers and GSA-MP mounting plates. The terminals are suited for #12 to #18 AWG (2.5 mm² to 0.75 mm²) wire size.

Kidde recommends that this module be installed according to latest recognized edition of national and local fire alarm codes.

Electronic Addressing - The loop controller electronically addresses each module, saving valuable time during system commissioning. Setting complicated switches or dials is not required. Each module has its own unique serial number stored in its on-board memory. The loop controller identifies each device on the loop and assigns a "soft" address to each serial number. If desired, the modules can be addressed using the SIGA-PRO Signature Program/Service Tool.

Personality codes are assigned by the factory. No user configuration is required for these modules.



Typical Wiring

The module will accept #18 AWG (0.75mm²), #16 (1.0mm²), #14 AWG (1.50mm²), #12 AWG (2.50mm²) wire sizes.

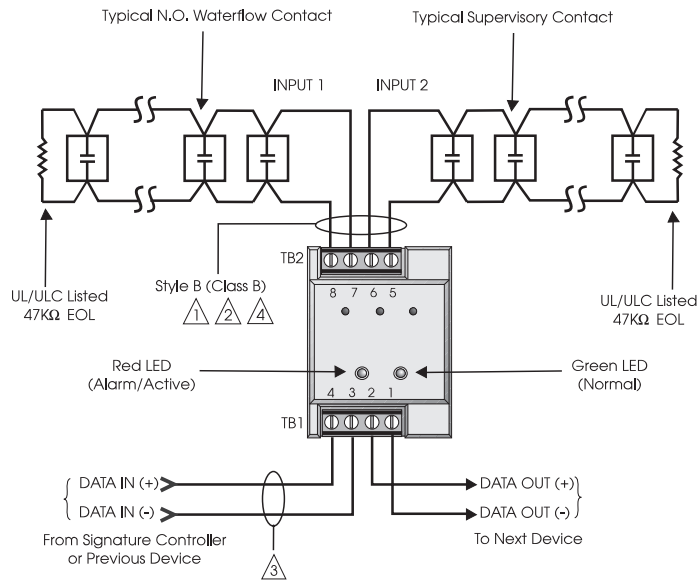
Note: Sizes #16 AWG (1.0mm²) and #18 AWG (0.75mm²) are preferred for ease of installation. See Signature Loop Controller catalog sheet for detailed wiring requirement specifications.

Initiating (Slave) Device Circuit Wire Specifications

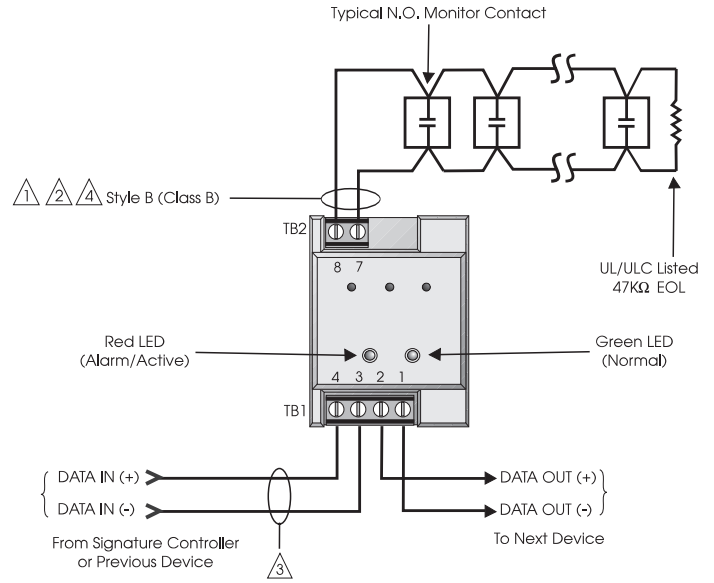
| | |
|------------------------------------|--|
| Maximum Allowable Wire Resistance | 50 ohms (25 ohms per wire) per Circuit |
| Maximum Allowable Wire Capacitance | 0.1µF per Circuit |

For Design Reference:

| Wire Size | Maximum Distance to EOLR |
|---------------------------------|--------------------------|
| #18 AWG (0.75 mm ²) | 4,000 ft (1219 m) |
| #16 AWG (1.00 mm ²) | |
| #14 AWG (1.50 mm ²) | |
| #12 AWG (1.50 mm ²) | |



Model GSA-WTM



Model GSA-MM1

Notes

- 1 Maximum 25 ohms resistance per wire.
- 2 Maximum #12 AWG (2.5mm²) wire. Min. #18 (0.75mm²)
- 3 Refer to Signature Loop Controller Installation Sheet for wiring specifications.
- 4 Maximum 10 Vdc @ 350µA.
- 5 All wiring power limited and supervised.
- 6 This module will NOT support 2-wire smoke detectors.



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Specifications

| Catalog Number | GSA-MM1 | GSA-WTM |
|-----------------------------------|--|---------------------------------------|
| Description | Monitor Module | Waterflow/Tamper Module |
| Type Code | 48 (factory set personality code 3) | 49 (factory set personality code 2,4) |
| Address Requirements | Uses One Module Address | Uses Two Module Addresses |
| Operating Current | Standby = 250µA; Activated = 400µA | Standby = 396µA; Activated = 680µA |
| Operating Voltage | 15.2 to 19.95 Vdc (19 Vdc nominal) | |
| Construction & Finish | High Impact Engineering Polymer one-gang front plate - White | |
| Storage and Operating Environment | Operating Temperature: 32°F to 120°F (0°C to 49°C) Storage Temperature: -4°F to 140°F (-20°C to 60°C) Humidity: 0 to 93% RH | |
| LED Operation | On-board Green LED - Flashes when polled On-board Red LED - Flashes when in alarm/active Both LEDs - Glow steady when in alarm (stand-alone) | |
| Compatibility Agency Listings | Use With Signature Loop Controller UL, ULC, CSFM, MEA | |
| Mounting | North American 2-1/2 inch (64 mm) deep one-gang boxes and 1-1/2 inch (38 mm) deep 4 inch square boxes with one-gang covers and GSA-MP mounting plates. | |

Ordering Information

| Catalog Number | Description | Ship Wt lbs (kg) |
|----------------|---|------------------|
| GSA-MM1 | Monitor Module - UL/ULC Listed | 0.4 (.15) |
| GSA-WTM | Waterflow/Tamper Module - UL/ULC Listed | |

| Accessories | | |
|----------------|---|------------------|
| Catalog Number | Description | Ship Wt lbs (kg) |
| 27193-11 | Surface Mount Box - Red, 1-gang | 1.0 (0.6) |
| 27193-16 | Surface Mount Box - White, 1-gang | |
| MFC-A | Multifunction Fire Cabinet - Red, supports Signature Module Mounting Plates | 7.0 (3.1) |
| GSA-MB4 | Transponder Mounting Bracket (allows for mounting two 1-gang modules in a 2-gang box) | 0.4 (0.15) |
| GSA-MP1 | Signature Module Mounting Plate, 1 footprint | 1.5 (0.70) |
| GSA-MP2 | Signature Module Mounting Plate, 1/2 footprint | 0.5 (0.23) |
| GSA-MP2L | Signature Module Mounting Plate, 1/2 extended footprint | 1.02 (0.46) |