

GasMark M255

MULTI-CHANNEL MODBUS CONTROLLER

Key Features



- Supports up to 255 CTI Modbus addressable devices
- (4) RS-485 channels for sensor wiring
- Distributed I/O with optional M-XM expansion modules
- 10" color touchscreen
- 8 analog inputs, 8 relay outputs, and 8 discrete inputs
- 4 alarm setpoints per channel plus TWA, STEL, and fault
- TWA and STEL time-weighted averaging with alarm setpoints
- Large power supply for detectors and external horn/strobes
- USB port for fast field programming, updates, & configuration backup
- Alarm Log records and stores every event
- Ethernet IP over Ethernet, Modbus and BACnet over RS-485 & Ethernet, for PLC/BAS connectivity

Flexible meets Powerful.
The GasMark M255 gas detection control panel.

The M255 can interface to, but operate independently of plant control systems for a reliable stand-alone safety system. The M255 comes standard with four Modbus channels with a capacity of 255 devices, eight analog input channels, and eight onboard relays, user programmable to trigger upon any event for any sensor or group of sensors.

The 10" color touchscreen displays real-time status of gas detector concentrations and alarms, and allows for easier programming via a user-friendly menu system. A USB port allows for easy field software updates, provides a means to backup system programming, and allows for datalogging downloads.

The M-XM expansion modules are intended to provide users with options to increase the number of analog and discrete inputs and relay and analog outputs for the M255 controller. All modules allow an operator to monitor and/or control connected devices from the M255. This modular design provides users with the ability to tailor the network to the unique needs of their facility

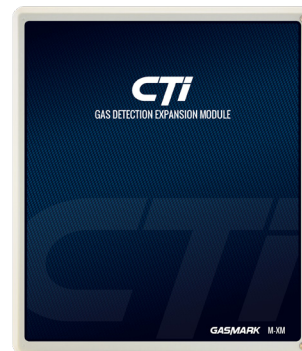
Applications

- Food Processing areas
- Cold Storage
- Compressor Rooms
- Refrigeration Systems
- Parking Garages
- Sea Vessels
- Chemical Plants
- Perimeter Monitoring
- Warehouses

Benefits

- Versatile for any application
- RS-485 daisy-chain cuts cable installation cost by up to 50%
- Remote I/O option with the M-XM expansion modules
- Easy programming from touchscreen

M-XM Expansion Module enclosure



CTI GAS DETECTION SPECIALISTS

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Out of the box, the M255 is configured with default setpoints loaded in the software. Easily enter the zone location names and adjust alarm setpoints as necessary.

The onboard power supply is large enough to power most connected detectors and external 24 VDC horn/strobes. For larger systems, additional power supplies can be installed along the bus when needed.

Expansion modules available:

Relay Output Module: Eight Form C dry contact relays are available to meet user need for increased connections to audio/visual devices, exhaust fans, solenoid valves, etc.

Analog Input Module: Receives up to eight 4-20mA analog inputs from gas detectors or other sensors and re-transmits over RS-485 Modbus to the M255.

Analog Output Module: Outputs up to eight 4-20mA signals to devices such as Entry Monitors or PLCs.

Discrete Input Module: Receives up to four dry contacts NO/NC input devices such as switches or pushbuttons to be configured by the M255.

Ordering Information

The **M255** is delivered ready to install (detectors not included). Use the model numbers below to order.

Order #: [M255](#)

255-channel Modbus controller includes LCD, operator interface, 8 analog inputs, 8 relay outputs, 8 discrete inputs, and power supply.

Options:

[PS-24-6500](#)

Remote 24 VDC power supply, 6.5A

[MM420-LR](#)

4-20ma analog to RS-485 Modbus converter

[M255 Startup](#)

Contact us for details

[M-XM-ENC](#)

Enclosure - up to 4 modules

[M-RM8](#)

Relay Module - 8 relay outputs

[M-AIM8](#)

Analog Input Module - 8 inputs

[M-AOM8](#)

Analog Output Module - 8 outputs

[M-DIM4](#)

Discrete Input Module - 4 Inputs



See [M-XM datasheet](#) for expansion module specifications

Coming soon: Remote Display

SPECIFICATIONS

Due to ongoing research and product improvement, specifications are subject to change

Input Power Requirements:

120 VAC, 5.5A, 50/60Hz
240 VAC, 3.5A, 50/60Hz

Output DC Power:

24 VDC, 6.5A @ 86 °F (30°C)
24 VDC, 4A @ 104 °F (40°C)

Communications:

RS-485 Modbus RTU, 4 channels, compatible with CTI Modbus capable device models only.
Analog Inputs: (8) 4-20 mA, 251 Ohm input impedance.

Capacity:

255 devices.

Cable Recommendation:

Communication: RS-485 communication cable, 22 AWG, 2 conductor, twisted pair, shielded, stranded, with drain wire (Alpha Wire 6460 or equivalent). 4,000 ft (1,220 m) per channel max.

Device Power: See detector manual for wiring details (typically 12 AWG, 2 conductor, stranded cable (General Cable C2410A or equivalent).

Analog Inputs: See detector manual for wiring details (typically 3-conductor, shielded, stranded, 18 AWG cable; General Cable C2535A or equivalent, up to 1500 ft).

Relay Outputs:

(8) Programmable relays, SPDT, Form C dry contacts 5A @ 24Vdc or 8A @ 240Vac
(1) Dedicated Fault relay, normally energized, SPDT, Form C dry contacts 5A @ 24 Vdc or 8A @ 240 Vac.

Discrete Inputs:

(8) Programmable discrete inputs, contact open/closure only. Do not apply voltage.

Dimensions:

14.5" high x 19.5" wide x 6.2" deep (368mm high x 483mm wide x 158mm deep)

Weight:

15 lbs (6.8kg)

Enclosure:

Polyurethane with neoprene gasket. Continuous stainless-steel hinge pin. Clasp-type latches with captive locking screw in latch. For Indoor non-classified areas. Tighten captive screw on latch to 0.56 N-m (5.0 in-lbs).

Temperature Range:

-4°F to 104°F (-20°C to 40°C)

Humidity Range:

0-95% RH condensing

Terminal Block Plugs (Field Wiring):

26-12 AWG, torque 4.4 in-lbs.

User Interface/Display:

10" (254mm) color, capacitive touch LCD.

Language:

English only

Controller Functions:

Real-Time Status Display: Displays gas concentrations and any current alarm conditions. TWA / STEL trending selectable

Adjustable Alarm 1, Alarm 2, Alarm 3, Alarm 4, TWA and STEL setpoints

Alarm Log: Records and stores 10,000 events for easy recall

Calibration Mode: Locks relay outputs for sensor calibration or maintenance

Relay Test Function: Allows for easy testing of relay output functions

Downscale Alarm Setting for Oxygen Monitoring

Certification:

Nemko listed to UL 61010-1, and CSA C22.2 No. 61010-1-12

Warranty:

2-years

