GasMark M255

MULTI-CHANNEL MODBUS CONTROLLER

Key Features

- Supports up to 255 CTI Modbus addressable devices.
- (4) RS-485 channels for sensor wiring
- Remote relays can be added anywhere along the bus (w/ MVFD's)
- 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
- 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 and provides a means to backup system programming.

The rugged NEMA 1 polyurethane enclosure is rated for indoors use only, but can be mounted outside in a NEMA 4 window box.

Applications

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

Benefits

- Versatile for any application
- RS-485 sensor cable cuts cable installation cost by up to 50%
- Easy programming from touchscreen

CTi GAS DETECTION SPECIALISTS

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 utilizing the RS-485 Modbus wiring, additional power supplies can be installed along the bus when needed.

Eight discrete inputs can be used for a variety of switches such as remote silence, reset, E-stop, and ventilation monitoring and activation.

All wiring is safely enclosed inside and easily accessed from the hinged lids. All human interfacing is performed via the touchscreen on the outside of the M255, for non-intrusive operation.

The feature-packed M255 gas detection controller delivers the ultimate in performance and safety.

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-24-3200   Remote 24 VDC power supply, 3.2A

PS-24-6500   Remote 24 VDC power supply, 6.5A

MVFD   Remote relay outputs (3)

M255 Startup   Contact us for details

Coming Soon: Remote I/O's, Remote Display, and more!

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, 4A @ 86 °F (30°C)
24 VDC, 2A @ 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 imedance.

Capacity:
255 devices.

Cable Recommendation:
Communication: RS-485 communication cable, 22-24 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, shielded, stranded cable with a drain wire (General Cable C2539A or equivalent). (use C2538A for 14AWG)
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.

Digital 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