



GENERAL MONITORS
Protection for life.

H₂S

MODEL TA202A

Single-Channel H₂S Trip Amplifier Module



Features

- RS-485 Serial Communications
- Digital Display
- LED Status Indication
- Relay, Open Collector Alarm & Fault Outputs
- User Setup, Setup Check Modes
- Live Insertable into Rack
- Password Option

Benefits

- Remote set-up and interrogation via General Monitors' Model CC02A Communications module
- Provides visual indication of alarm status and setup cues
- Provides visual indication of fault and status
- Multiple outputs for multi-function use
- Configuration easy to set up or change
- Ease of maintenance
- Tamper-proof operation

Description

The General Monitors Model TA202A is a single-channel H₂S Trip Amplifier Module that has been designed for use with General Monitors' H₂S Smart Sensors. It is designed to monitor hydrogen sulfide in parts per million (ppm) levels and provide status indication and alarm outputs.

Microprocessor-based electronics allow all options to be user selectable through front panel interface (mode/select switch and digital display). A digital display on the TA202A indicates fault codes and setup options. Other features of the TA202A are LED indications of status, as well as both open collector and relay outputs for fault, low alarm and high alarm.

Each module has RS-485 serial communications providing an interface with a General Monitors Model CC02A MODBUS communications module. Fault and alarm status, as well as setup options, can be configured via the CC02A module.

The TA202A is part of the Zero Two Series Gas and Fire Detection System which is a flexible solution for various combustible, toxic gas and fire detection applications. All of the Zero Two Series system cards are compatible and can be intermixed within the same rack if required. The Zero Two Series Rack includes options of 4, 8 or 16 channels and provides a bus of common terminals to each channel.

Applications

- Refineries
- Drilling Platforms and Rigs
- Gas Collection and Distribution Facilities
- Gas and Oil Production Platforms
- Mud-logging Operations
- Sulfur Recovery / De-Sulfurization Facilities
- Chemical Plants
- Wastewater Treatment Facilities



MODEL TA202A

System Specifications

Detector Type: Any General Monitors
Metal Oxide Semiconductor (MOS) sensor-based smart transmitter

Sensor Life: 3 to 5 years typical

Accuracy: ±2 ppm or 10% of the applied gas, whichever is greater

Response Time: T50 < 1 minute with full scale gas applied (screen)
T50 < 2 minutes with full scale gas applied (sintered)

Measuring Ranges: 0-20 ppm, 0-50 ppm, 0-99 ppm

Front Panel Indicators: A1 - Warning
A2 - Alarm
READY - Normal Operation
FAULT - Malfunction
SETUP - User Options/Check
DISPLAY - 2x7 Segment

Test Features: Power on - Electronic Integrity Card - Functionality & Alarm Ramp
LED - Integrity of LED's & Display

Modes: Setup, Setup Check & Inhibit Outputs

Password: Prevents unauthorized alteration of setup parameters (can be disabled)

Classification:
TA202A: General purpose, non-hazardous areas
Smart Sensor: Explosion-proof

Warranty: Two years

Approvals: CSA, CE Marking, GOST

Environmental Specifications

Operating Temperature Range:
TA202A: 0°F to +150°F (-18°C to +66°C)
Smart Sensor: -40°F to +140°F (-40°C to +60°C)

Storage Temperature Range:
TA202A: -40°F to +150°F (-40°C to +66°C)
Smart Sensor: -40°F to +140°F (-40°C to +60°C)

Humidity: 5% to 100% RH, non-condensing

EMC Susceptibility: 10V/m max.

Mechanical Specifications

Length: 9.9 inches (251mm)

Height: 6.8 inches (173mm)

Width: 1.0 inch (25mm)

Weight: 11.2 ounces (318 grams)

Electrical Specifications

Power: 20-36 VDC @ 475mA max., including Smart Sensor

Input Impedance: 30 ohms

Relay Ratings: 4A @ 250 VAC / 30V RMS/42.4 peak, 3A @ 30 VDC, resistive max.
A1, A2 - DPDT
Fault - SPDT

Analog Signal: 0 - 20mA (300 ohms max. load)
Malfunction - 0mA
Calib/Setup/Check - 1.5mA
0-100% Scale - 4mA
Over-range - 20-22mA

Open Collector Ratings: 100mA @ 35 VDC max.
A1, A2, Fault, LA1, LA2, CAL, FUA, UA

Cable Requirements: 3 wire shielded cable. Max. allowable distance between Smart Sensor & TA202A @ 24 VDC nominal:

14AWG - 4500 ft. (1372m)

Max. allowable distance for analog output (300 ohms loop resistance max. between AO+ and AO-):

14AWG - 9000 ft. (2740m)

Standard Configuration: TA202A-321-100-133
Latch alarm, non-latch warn, de-energized, 0-100ppm scale, 3 sec. ramp time

Specifications subject to change without notice.

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