



**GENERAL MONITORS**  
Protection for life.

# MODEL TA202A

## Single-Channel H<sub>2</sub>S 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 H<sub>2</sub>S Trip Amplifier Module that has been designed for use with General Monitors' H<sub>2</sub>S Intelligent 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

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



# MODEL TA202A

## System Specifications

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

**Sensor Life:** 3 to 5 years typical

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

**Response Time:** T50 < 14 seconds with full scale gas applied (screen)  
T50 < 30 seconds with full scale gas applied (sintered)

**Measuring Ranges:** 0-20 ppm, 0-50 ppm, 0-100 (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, SIL 2 Suitable.

## Environmental Specifications

**Operating Temperature**  
**Range:** TA202A: 0°F to +150°F (-18°C to +66°C)  
Std. Sensor (CSA): -40°F to +167°F (-40°C to +75°C)

**Storage Temperature**  
**Range:** -40°F to +150°F (-40°C to +66°C)

**Humidity:** 10% to 95% 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:** 20-35 VDC @ 475mA max., including Intelligent 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 (600 ohms max. load @ nominal 24 VDC)  
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-2-1-1-1-1-1  
Latch alarm, non-latch warn, de-energized, 0-100ppm scale, 3 sec. ramp time

Specifications subject to change without notice.

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