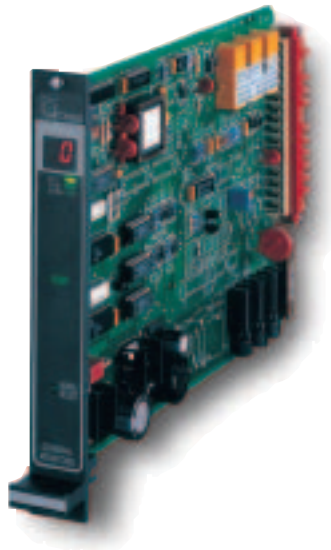




**GENERAL MONITORS**  
Protection for life.

# MODEL TA502A

## Single-Channel Generic Trip Amplifier



### Features

- Microprocessor-based Electronics
- User Setup, Setup Check Modes
- Digital Display
- LED Status Indication
- Relay, Open Collector Alarm and Fault Outputs
- Power-on, Card and LED Test Modes

### Benefits

- Low component count, higher reliability
- Configuration easy to setup or change
- LED digits clear in all light conditions
- Provides visual indication of fault and status at the detection location
- Multiple digital outputs for multi-function use
- Functionality indicator, test(s) allows user to see all indicators

### Description

The General Monitors Model TA502A is a single-channel, generic trip amplifier designed for use in Zero Two Series Gas and Flame Detection Systems. This module connects to any field mounted 4-20mA transmitter.

The TA502A is capable of displaying a sensor range of 0-2, 0-5, 0-10...up to 0-100 (in increments of 5 units), 0-200 and 0-500. The 4-20mA signal received from the field device and re-transmitted from the TA502A is proportional to the 0-100% of full-scale indication for the range in use.

The unit will automatically detect the presence of a General Monitors Model TS400 Toxic Gas Detector (3.6 mA at start up) and switch to TS400 mode.

A remote test feature tests the front and rear panel indicators and outputs by simulating and increasing inputs from 0-100% of full scale. The alarm outputs are software selectable.

The TA502A is electrically and physically compatible with the other gas detection, flame detection and system modules in the Zero Two Series. It is designed for use in non-hazardous environments.

### Applications

- Refineries
- Drilling Platforms and Rigs
- Gas and Oil Production Platforms
- Gas Gathering Facilities
- Oil Well Logging Operations
- Solvent Vapors
- Wastewater Treatment Facilities
- Chemical Plants
- Electronics/Semiconductors



# MODEL TA502A

## System Specifications

<b>Application:</b>	Generic 4-20mA input module
<b>Device Type:</b>	Any 4-20mA field transmitter
<b>Sensor Ranges:</b>	0-2, 0-5, 0-10...up to 0-100 (in increments of 5 units), 0-200, 0-500
<b>Display Multipliers:</b>	Three multiplier LED's on front panel x1, x10, or x100
<b>Front Panel Indicators:</b>	A1 - Warning A2 - Alarm CAL - Calibration/Check READY - Normal Operation FAULT - Malfunction SETUP - User Options/Check DISPLAY - 3 x 7 Segment
<b>Test Features:</b>	Power on - Electronic Integrity Card - Functionality and Alarm Ramp LED - Integrity of LED's and Display
<b>Modes:</b>	Setup, Setup Check and Inhibit Outputs
<b>Password:</b>	Prevents unauthorized alteration of setup parameters (can be disabled)
<b>Performance Accuracy:</b>	±1% of input signal
<b>Approvals:</b>	CSA, CE Marking
<b>Warranty:</b>	Two years
<b>Classification:</b>	General purpose, non-hazardous areas

## Environmental Specifications

<b>Operating Temperature Range:</b>	0°F to +150°F (-18°C to +66°C)
<b>Storage Temperature Range:</b>	-40°F to +150°F (-40°C to +66°C)
<b>Humidity:</b>	5% to 100% RH, non-condensing
<b>EMC Susceptibility:</b>	10V/m max.

## Electrical Specifications

<b>Input Power:</b>	20 to 36 VDC @ 300mA max.
<b>Input Impedance:</b>	30 ohms
<b>Relay Ratings:</b>	4A @ 250 VAC, 3A @ 30 VDC res. max., A1, A2 - DPDT, Fault - SPDT 4A @ 30V rms, 42.4V pk
<b>Analog Signal:</b>	0-20mA (300 ohms max. load)
<i>Normal Mode:</i>	Malfunction 0.0mA Calib/Setup/Check 1.5mA 0 to 100% 4-20mA Over-range 20-22mA
<i>TS400 Mode:</i>	Malfunction ≤3.5mA Start up 3.6mA Calibration 3.75mA 0 to 100% 4-20mA Over-range 20-22mA
<i>TS420 Mode:</i>	Malfunction ≤3.5mA Start up 3.6mA Calibration 3.75mA 0 to 25% 4-20mA Over-range 20-22mA
<b>Open Collector Ratings:</b>	100mA @ 35 VDC max. A1, A2, Fault, LA1, LA2, CAL, FUA, UA

<b>Cable Requirements:</b>	3 wire shielded recommended (4 wire shielded when cable length > 400 ft.).
----------------------------	----------------------------------------------------------------------------

## Mechanical Specifications

<b>Length:</b>	9.9 inches (251mm)
<b>Height:</b>	6.8 inches (173mm)
<b>Width:</b>	1.0 inch (25mm)
<b>Weight:</b>	11.2 ounces (318 grams)
<b>Standard Configuration:</b>	TA502A-1-10-1-1-1 Latch alarm, non-latch warn, de-energized, 3 sec. delay

*Specifications subject to change without notice.*

*Represented by:*

## General Monitors Worldwide



[www.generalmonitors.com](http://www.generalmonitors.com)

### Lake Forest, CA

26776 Simpatica Circle  
Lake Forest, California, 92630  
Tel: +1-949-581-4464  
Fax: +1-949-581-1151  
email: [sales@generalmonitors.com](mailto:sales@generalmonitors.com)

### Houston, TX

9776 Whithorn Drive  
Houston, Texas, 77095  
Tel: +1-281-855-6000  
Fax: +1-281-855-3290  
email: [gmhou@generalmonitors.com](mailto:gmhou@generalmonitors.com)

### Ireland

Ballybrit Business Park  
Galway  
Republic of Ireland  
Tel: +353-91-751175  
Fax: +353-91-751317  
email: [info@gmil.ie](mailto:info@gmil.ie)

### Singapore

No. 2 Kallang Pudding Road  
#09-16 Mactech Building  
Singapore 349307  
Tel: +65-6748-3488  
Fax: +65-6748-1911  
email: [genmon@generalmonitors.com.sg](mailto:genmon@generalmonitors.com.sg)

### United Arab Emirates

P.O. Box 61209  
Jebel Ali  
Dubai  
United Arab Emirates  
Tel: +971-4-8815751  
Fax: +971-4-8817927  
email: [gmme@emirates.net.ae](mailto:gmme@emirates.net.ae)

### United Kingdom

Heather Close  
Lyme Green Business Park  
Macclesfield, Cheshire  
United Kingdom, SK11 0LR  
Tel: +44-1625-619583  
Fax: +44-1625-619098  
email: [info@generalmonitors.co.uk](mailto:info@generalmonitors.co.uk)