



Formerly EIT Gas Detection Systems

SINGLE OR DUAL CHANNEL TOXIC GAS MONITOR

The Series 5300 Tox Alarm / Dual-Gas is an economical, self-contained, one- or two-point toxic gas monitoring system. Designed to be easy to install, easy to operate, and easy to maintain, the instrument requires no additional hardware or wiring.

Easy-to-Install

Easy installation and set-up of the 5300 make it the ideal instrument for one or two point applications where simple monitoring and alarm functions are all that's needed. The instrument consists of a NEMA-4X alarm module and one or two Digital Sensor Processors (DSPs) that can be located up to 3000 ft away from the alarm module. Installation involves simply mounting the alarm module and DSP(s), and plugging-in/connecting the 110 VAC power cord.

Easy-to-Operate

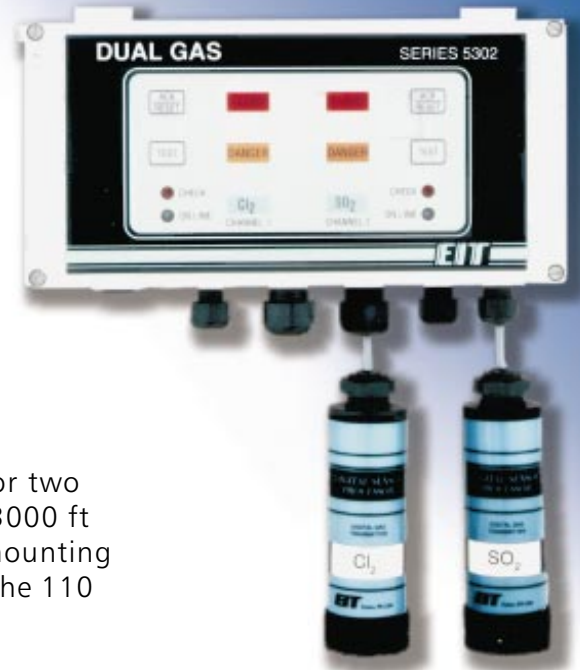
Front panel LEDs provide local indication of instrument power and communications status, which are both continuously supervised. The alarm module also includes bright yellow and red lights for each channel to indicate alarm status. A built-in 90db horn is triggered by the high alarm alerts personnel of a potential hazard. An "acknowledge" button (for latching alarm relays) is located on the front panel.

Alarm adjustments are performed with a simple-to-use push-button interface. Two on-board alarm relays (per channel) allow users to activate external devices such as exhaust fans, flashing lights etc.... All alarm setpoints are user-adjustable and latching/non-latching selectable.

Fully encapsulated with a glass epoxy, the DSPs (which house the sensors) are water-tight, are RFI/EMI-immune, and can be remoted up to 3,000 feet from the alarm module.

Easy-to-Maintain

The Series 5300's gas sensor is based on Scott-Bacharach's proprietary, field-proven electrochemical technology. The instrument is easily calibrated via a push-button interface. Gas sensor typically last 18-24 months and, when replacement is required, a patented "no-pins" pop-in elastomeric connector makes for easy insertion and removal of the sensor.



Features...

- **Single or dual channel**
- **Built-in alarm horn and warning lights**
- **Three on-board relays per channel**
- **Simple push-button user interface for calibration and alarm setting**
- **Remotable sensor - up to 3,000 feet sensor/alarm module separation possible.**
- **Line powered (70-270 VAC) - no additional wiring required.**
- **Optional gell-cell battery backup.**
- **Supervised power, communications, and logic**

Specifications

ALARM MODULE

Enclosure Polycarbonate, NEMA 4X,
4" (H) x 9.5" (L) x 5.25" (W)
Temperature Range -13° to +149°F (-25° to +65°C)
Weight with battery 4.4 lbs
Weight without battery 3.1 lbs
Relays One per channel except common
 Danger (low alarm) 5A SPDT
 Alarm (high alarm) 5A DPDT (selectable NE/NDE)
 Common power fail 5A SPDT
 Common comm/logic fail 5A SPDT
Horn Internal, 90db
Power Requirement 70-270 VAC (self-regulating)50-60 Hz
Power Consumption 5 W (single channel) or 7 W (two
 channel)
Battery Back-Up (optional) . 12 VDC lead acid gel cell, suitable for 3-4
 hours operating time
Warranty 1 year

DIGITAL SENSOR PROCESSOR/JUNCTION BOX

DSP Enclosure NEMA 4x (IP66). Epoxy shell; Noryl end
 cap;ABS coupling; EMI/ RFI-shielded.
Junction Box(*optional*) NEMA 4x (IP66). Celanex(polyester) 4
 conductor
Cable Type 22 AWG shielded
Cable Length 25 foot standard, Junction box (optional)
 enables up to 3,000 feet of cable
Entries (optional j-box) One 1/2" (DSP) Two 3/4" FNPT (field
 conn.)
Transmitter Dimensions 1.6 "(Dia.) x 4.9 " (H)
J-Box (*optional*)Dimensions 4.4" (H) x 5.3" (L) x 2.4" (W)
Transmitter Weight 6 oz (170g)
J-Box Weight(*optional*) 7 oz (200g)
Warranty 5 years

SENSOR

Operation Principle Electrochemical gas diffusion
Maintenance Requirements Quarterly calibration, Regular
 performance test ("bump test")
Operating Lifetime 18-24 months average; disposable when
 depleted (no disposal precautions
 necessary)
Warranty 1 year
Repeatability ±2% full scale
Linearity ±2% full scale

Ordering Information

MODEL 530x - AA - BB - C- D

X: Single or Dual Channel

1 - Single Channel (Tox-Alarm)

2 - Two Channel (Dual-Gas)

NOTE: Omit "BB" suffix if ordering single channel

AA: and BB: Type of Gas

85 - Ammonia (NH₃) 0 -100 PPM
65 - Arsine (AsH₃) 0 -1000 PPB
61 - Bromine (Br₂) 0 - 5 PPM
82 - Carbon Monoxide (CO) 0 - 100 PPM
52 - Chlorine (Cl₂) 0 - 10 PPM
53 - Chlorine Dioxide (ClO₂) 0 - 5 PPM
67 - Diborane (B₂H₆) 0 - 1000 PPB
62 - Fluorine (F₂) 0 - 5 PPM
69 - Germane (GeH₄) 0 - 1000 PPB
87 - Hydrogen (H₂) 0 - 5%
54 - Hydrogen Chloride Lo %RH 0 - 25 PPM
64 - Hydrogen Cyanide (HCN) 0 - 25 PPM
63 - Hydrogen Fluoride (HF) 0 - 25 PPM
89 - Hydrogen Selenide (H₂Se) 0 - 1000 PPB
81 - Hydrogen Sulfide Hi% RH 0 - 50 PPM
86 - Nitric Oxide (NO) 0 - 100 PPM
84 - Nitrogen Dioxide (NO₂) 0 - 25 PPM
80 - Oxygen (O₂) 0 - 25%
60 - Ozone (O₃) 0 - 5 PPM
66 - Phosphine (PH₃) 0 - 1000 PPB
68 - Silane (SiH₄) 0 - 10 PPM
83 - Sulfur Dioxide (SO₂) 0 - 25 PPM

C: Sensor to DSP Cable Length

1 - Standard w/ 25' cable (no j-box)
2 - One Junction Box (See Ordering Reminder 1)
3 - Two Junction Boxes (See Ordering Reminder 1)

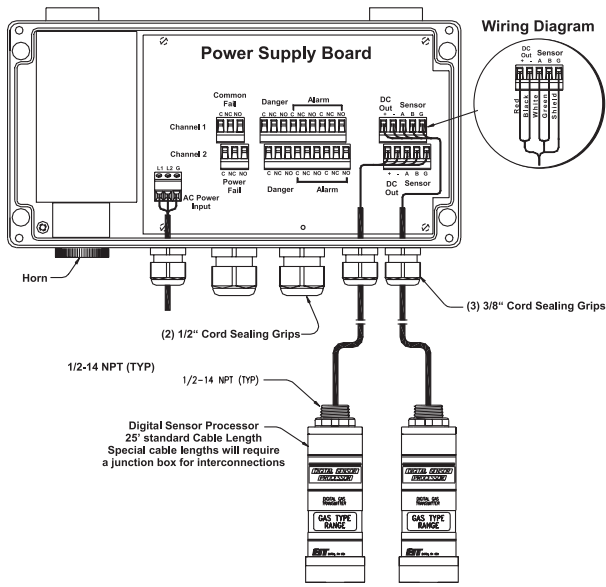
D: Power

1 - Standard
2 - Standard w / internal battery (1.1 Ah)

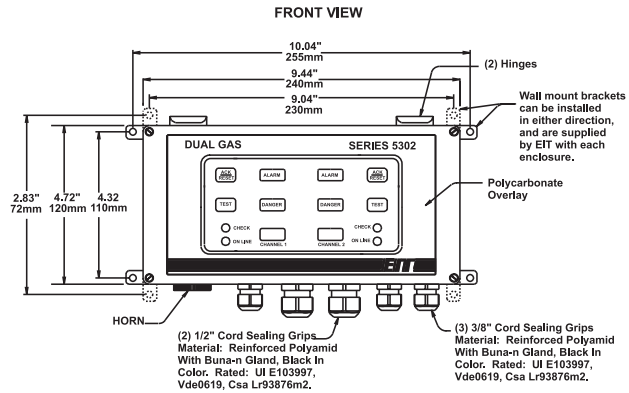
Note 1: Sensors/DSP's are supplied with 25 ft (6 meters) of cable. If longer lengths are required, use of a junction box is recommended. Interconnect cable is then purchased by the foot (up to 3000') from the accessory list below (required between the junction box and the detector).

ACCESSORIES (Both Models)

Part#	Description
069-0028	Sensor cable (2-pair, 2-c shielded). Specify length.
096-1621	Sensor Rain Shield/CalibrationAdapter (screw-on)
096-1203	Sensor Calibration Adapter (push-on)
096-1204	Sensor Flow Cell
096-1145	J-Box Wall / Pipe Mounting Kit
096-2154	1/4 turn Sensor End Cap
096-2118-6/8	6" to 8" Curved Duct Mount Adaptor
096-2118-F	Flat Duct Mount Adaptor



Dimensions



Typical Specifications

The specified gas detector shall consist of a single or two-channel channel alarm module and a separate digital sensor/processor(s) (DSP) signal transmitting unit. The instrument shall be EIT Series 5300 or equal.

Housing: Each DSP shall consist of a single unit with a shell manufactured from a metal-impregnated spun epoxy material for rejection of RFI/EMI interferences. Sensor/transmitter circuits shall be immersed in epoxy for physical protection, and shall carry a 5 year non-prorated warranty, minimum. Alarm module components shall be housed within a non-metallic NEMA 4X enclosure.

Power: The gas detector shall be powered by a 70-270 50/60 Hz VAC self-regulating power supply. The manufacturer shall make available a 12 volt, 1.1 Ahr. lead acid internal battery backup to provide system power during power outages.

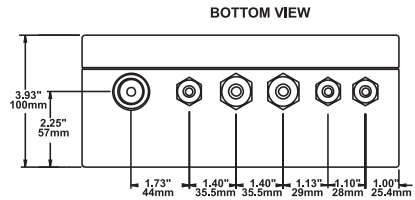
Output: The alarm module shall provide one 5A SPDT relay (low alarm), one 5A DPDT relay (high alarm) per channel, and common 5A SPDT communications/logic and power fail relays. Alarm levels and latching/non-latching modes shall be user-adjustable for all relays. Energized/non-energized mode shall be user-adjustable for high alarm relay. A built-in 90 dB horn triggered by the high alarm relay shall be provided.

Calibration: Zero and span calibration shall be performed at the alarm module using a push-button menu.

Sensor: Sensor shall be an electrochemical cell-type requiring no sample pumps or replacement of membranes and/or electrolyte. Sensor linearity and repeatability shall both be $\pm 2\%$ of full-scale. Sensor replacement shall not require the alignment of pins, twist-locks, or other easily-damaged connectors.

Sensor separation: The DSP shall be capable of being located up to 3,000 feet from the alarm module.

Fail-safe features: The gas detector shall automatically perform a self-diagnostic routine at least fifteen times each hour. Communication links, memory components, and software configurations shall be checked during this routine for system faults and errors. Discovery of such faults shall illuminate an LED on the gas detector's faceplate and activate the communications/logic fail relay.



NOTES:
 1) **Enclosure:** material: polycarbonate lid & base, (solid color), white grey in color, high gloss finish. (4) polycarbonate wall mounting brackets, hardware included.
Ratings: NEMA types 1,2,3,3R,4,4X,5,12,13 IP65, and DIN 40050.
 2) **gasket:** 2.7mm neoprene

3) To install wall mounting brackets onto enclosure, loosen (4) cover fixing screws. lift and open front cover. slide (4) screws, supplied with brackets, down into (4) large corner holes. install (4) square nuts into brackets and hold brackets in place against back of enclosure and tighten screws to brackets. reassemble unit.

SIDE VIEW

