



The rugged, reliable AST analog transmitter offers a variety of sensor types to detect a wide range of gases, including solid state, electrochemical, catalytic, infrared, and PID.

AST transmitters convert the raw signal from a sensor into a useful output that can be sent to a controller or building automation system.

Several enclosure options are available to meet the requirements of many different applications.

AST transmitters feature 4 - 20 mA or 0 - 10 VDC linear output signals, automatic thermal resetting fuse, RoHS compliant circuit boards, and LED indicators for power and open loop. Options include a field settable dry contact relay and a local digital display.

Automated calibration and other maintenance procedures are simple and are easily performed in the field.

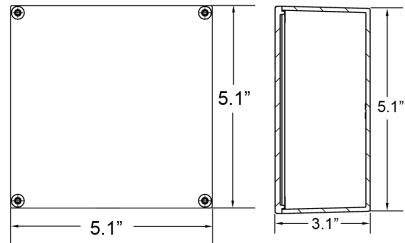
### KEY FEATURES

- » 4 - 20 mA or 0 - 10 VDC linear output signal
- » LED indicators for power and open loop
- » RoHS compliant circuit boards
- » Temperature compensation
- » Automatic thermal resetting fuse
- » Automated calibration procedure
- » C-Tick certified

### APPLICATIONS

- » Parking Garages
- » Repair Shops
- » Ice Cleaning Machine Rooms
- » Pools
- » Hotels
- » Manufacturing plants
- » ... and many more

### TECHNICAL DRAWING



### SAMPLE ENGINEERING SPECIFICATIONS

*Carbon Monoxide & Nitrogen Dioxide Transmitters for Parking Garages*  
Provide analog transmitters, with continuous, linear, analog signal capable of being connected directly to a building management system (BMS). The transmitter shall provide a 4 - 20 mA signal representing the quantitative measurement range of the gas it has been designed to detect.

Provide transmitters for the Nitrogen Dioxide detection range of 0 - 10 ppm and transmitters for the Carbon Monoxide detection range of 0 - 200 ppm. All transmitters shall incorporate accurate electrochemical sensors and automatic resetting thermal fuse for fault protection. The transmitters shall be installed 4 - 6 ft from the floor (breathing zone) and each unit shall be capable of monitoring an area of approximately 5,000 - 7,500 ft<sup>2</sup> each.

Optional 0 - 10 Volt output signal and relay output shall be available.

The transmitter circuit shall be housed in a wall mount, rugged, break resistant, corrosion resistant, PVC junction box with a secured, hinged door. The circuit shall be capable of operating from 24 VDC or 24 VAC (nominal) input voltages. The PVC junction box shall have conduit entry ports on the top, bottom, right side and rear. Wiring shall be 3-conductor shielded cable or conduit for VDC installation or 4-conductor shielded cable or conduit for VAC installation. An optional watertight Polycarbonate enclosure shall be available.

System operation shall be as follows: Upon detection of 0.7 ppm NO<sub>2</sub> or 25 ppm CO, the BMS shall activate exhaust fans. Upon detection of 1.5 ppm NO<sub>2</sub> or 100 ppm CO, the BMS shall activate audible and visual alarms.

The contractor shall provide all required wiring, conduit and interconnection required for a successful installation.

More specification samples are available at [www.critical-environment.com](http://www.critical-environment.com).

### TECHNICAL SPECIFICATIONS

#### GAS TYPE

Ammonia (NH <sub>3</sub> )	EAM
Carbon Monoxide (CO)	ECO
Combustible Gases (solid state or catalytic)	SCB or CCB
Chlorine (Cl <sub>2</sub> )	ECL
Ethylene (C <sub>2</sub> H <sub>4</sub> )	EC4
Formaldehyde (CH <sub>2</sub> O)	EFO
Hydrogen (H <sub>2</sub> )	EH2
Hydrogen Sulphide (H <sub>2</sub> S)	EHS
Methane (CH <sub>4</sub> )	SCB
Nitrogen Dioxide (NO <sub>2</sub> )	END
Nitric Oxide (NO)	ENO
Oxygen (O <sub>2</sub> )	002
Ozone (O <sub>3</sub> )	E03
Propane (C <sub>3</sub> H <sub>8</sub> )	SCB
Refrigerants (R12, R22, R134A, R401A, R402A, R404A, R407C, R410A, R422A, R422D, R438A, R507)	SR2
Sulphur Dioxide (SO <sub>2</sub> )	ESO
TVOCs (solid state or PID)	SOS, SPL or SPH

#### MECHANICAL

Enclosure	Water / dust tight polycarbonate
Weight	340 g (12 oz)
Size	5.1" x 5.1" x 3.1" (129 mm x 129 mm x 77 mm)

#### ELECTRICAL

Power Requirement	12 - 30 VAC or 16 - 30 VDC
Current Draw	Approximately 80 - 120 mA
Outputs	Linear 4 - 20 mA or 0 - 10 VDC signal, jumper selectable
Wiring	VDC three-conductor shielded VAC four-conductor shielded
Fuse	Automatic resetting thermal

#### ENVIRONMENTAL (sensor dependant)

Operating Temperature	-20°C to 40°C (-4°F to 104°F)
Humidity	15 - 90% RH non-condensing

#### CERTIFICATION

C-Tick	Certified
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### PRODUCT CODES

Ammonia (NH <sub>3</sub> ), 0 - 500 ppm	AST-EAM-W
Combustible gases (solid state), 0 - 50% LEL	AST-SCB-W
Combustible gases (catalytic), 0 - 100% LEL	AST-CCB-W
Carbon monoxide (CO), 0 - 200 ppm	AST-ECO-W
Chlorine (Cl <sub>2</sub> ), 0 - 5 ppm	AST-ECL-W
Ethylene (C <sub>2</sub> H <sub>4</sub> ), 0 - 2,000 ppm	AST-EC4-W
Formaldehyde (CH <sub>2</sub> O), 0 - 10 ppm	AST-EFO-W
Hydrogen (H <sub>2</sub> ), 0 - 2,000 ppm	AST-EH2-W
Hydrogen sulphide (H <sub>2</sub> S), 0 - 50 ppm	AST-EHS-W
Methane (CH <sub>4</sub> ), 0 - 50% LEL	AST-SCB-W
Nitrogen dioxide (NO <sub>2</sub> ), 0 - 10 ppm	AST-END-W
Nitric oxide (NO), 0 - 100 ppm	AST-ENO-W
Oxygen (O <sub>2</sub> ), 0 - 25% volume	AST-002-W
Ozone (O <sub>3</sub> ), 0 - 2 ppm	AST-E03-W
Propane (C <sub>3</sub> H <sub>8</sub> ), 0 - 50% LEL	AST-SCB-W
Refrigerants (R12, R22, R134A, R401A, R402A, R404A, R407C, R410A, R422A, R422D, R438A, R507), 0 - 2,000 ppm	AST-SR2-W
Sulphur dioxide (SO <sub>2</sub> ), 0 - 20 ppm	AST-ESO-W
TVOCs (solid state), 0 - 500 ppm	AST-SOS-W
TVOCs (PID), 0 - 50 ppm	AST-SPL-W
TVOCs (PID), 0 - 300 ppm	AST-SPH-W

#### OPTIONS (to be added to the end of the product code)

LED digital display	N
Relay, dry contact SPDT, 2 amps @ 28 V	R
Splash guard	S

#### ACCESSORIES

Calibration kit, 15 L or 17 L cylinders, 0.5 LPM flow regulator	CET-8000-CK1
Calibration kit, 34 L, 58 L, 75 L, or 103 L cylinders, 0.5 LPM flow regulator	CET-7150-CK1
Metal protective guard, small, 16 gauge, galvanized metal guards for transmitters	SCS-8000-RSG

