

AST Analog Transmitter



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.

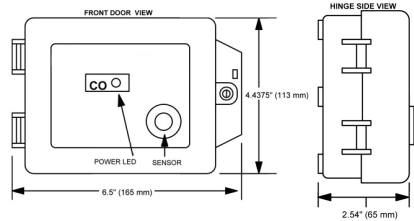
KEY FEATURES

- » 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 & Combustible Gas Transmitters for Parking Garages

Provide analog transmitters with continuous, linear, analog signal capable of being connected directly to a building management system (BMS). The analog transmitter shall be a CETCI model AST-ECO for Carbon Monoxide and a model AST-SCB for combustibles. The transmitters shall provide a 4 - 20 mA signal representing a Carbon Monoxide measurement range of 0 - 200 ppm CO or 0 - 50% LEL Propane (or other combustible gases / vapours). The circuit shall incorporate long-life HVAC electrochemical sensor for CO and long life solid-state sensors for combustibles with temperature compensation and an automatic resetting thermal fuse for fault protection.

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.

Provide current signal readings to the installing contractor to allow accurate setting of BMS for fan control at 25 ppm CO or 10% LEL Propane and a secondary alarm condition at 100 ppm CO or 20% LEL Propane.

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.

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TECHNICAL SPECIFICATIONS

GAS TYPE

Ammonia (NH ₃)	EAM
Carbon Monoxide (CO)	ECO
Combustible Gases (solid state or catalytic)	SCB or CCB
Chlorine (Cl ₂)	ECL
Ethylene (C ₂ H ₄)	EC4
Formaldehyde (CH ₂ O)	EFO
Hydrogen (H ₂)	EH2
Hydrogen Sulphide (H ₂ S)	EHS
Methane (CH ₄)	SCB
Nitrogen Dioxide (NO ₂)	END
Nitric Oxide (NO)	ENO
Oxygen (O ₂)	OO2
Ozone (O ₃)	EO3
Propane (C ₃ H ₈)	SCB
Refrigerants (R12, R22, R134A, R401A, R402A, R404A, R407C, R410A, R422A, R422D, R438A, R507)	SR2
Sulphur Dioxide (SO ₂)	ESO
TVOCs (solid state or PID)	SOS, SPL or SPH

MECHANICAL

Enclosure	Polycarbonate
Weight	255 g (9 oz)
Size	4.4" x 6.5" x 2.5" (113 mm x 165 mm x 65 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 dependent)

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 ₃), 0 - 500 ppm	AST-EAM
Combustible gases (solid state), 0 - 50% LEL	AST-SCB
Combustible gases (catalytic), 0 - 100% LEL	AST-CCB
Carbon monoxide (CO), 0 - 200 ppm	AST-ECO
Chlorine (Cl ₂), 0 - 5 ppm	AST-ECL
Ethylene (C ₂ H ₄), 0 - 2,000 ppm	AST-EC4
Formaldehyde (CH ₂ O), 0 - 10 ppm	AST-EFO
Hydrogen (H ₂), 0 - 2,000 ppm	AST-EH2
Hydrogen sulphide (H ₂ S), 0 - 50 ppm	AST-EHS
Methane (CH ₄), 0 - 50% LEL	AST-SCB
Nitrogen dioxide (NO ₂), 0 - 10 ppm	AST-END
Nitric oxide (NO), 0 - 100 ppm	AST-ENO
Oxygen (O ₂), 0 - 25% volume	AST-OO2
Ozone (O ₃), 0 - 2 ppm	AST-EO3
Propane (C ₃ H ₈), 0 - 50% LEL	AST-SCB
Refrigerants (R12, R22, R134A, R401A, R402A, R404A, R407C, R410A, R422A, R422D, R438A, R507), 0 - 2,000 ppm	AST-SR2
Sulphur dioxide (SO ₂), 0 - 20 ppm	AST-ESO
TVOCs (solid state), 0 - 500 ppm	AST-SOS
TVOCs (PID), 0 - 50 ppm	AST-SPL
TVOCs (PID), 0 - 300 ppm	AST-SPH

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

LED digital display	N
Relay, dry contact SPDT, 2 amps @ 28 V	R
Remote sensor	Z

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

