

# DST Digital Transmitter



The rugged, reliable DST digital transmitter offers a variety of sensor types to detect a wide range of gases, including solid state and electrochemical.

The standard enclosure is a rugged polycarbonate and an optional watertight polycarbonate enclosure is available to suit different applications.

DST transmitters output scaled linear signals on an RS485 communication bus, and feature a thermal resetting fuse, an LED indicator for power, alarm and fault, RoHS compliant circuit boards, and an internal "on line" LED.

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

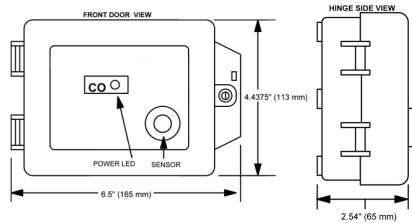
## KEY FEATURES

- » RS485 digital output signal
- » Wide variety of sensors for all applications
- » RoHS compliant circuit boards
- » Configured for 4 wire multi-drop wiring
- » Thermal resetting fuse
- » LED indicator for power & alarm status
- » Power requirement 24VDC nominal
- » Simple calibration procedure

## APPLICATIONS

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

## TECHNICAL DRAWING



## SAMPLE ENGINEERING SPECIFICATIONS

### *Carbon Monoxide & Combustible Gas Transmitters for Parking Garages*

Provide digital transmitters with continuous, linear, signal capable of being connected to a PDC controller on a RS485 communication bus. The transmitter shall be a CETCI model DST-ECO for Carbon Monoxide and a model DST-SCB for combustible gases. The transmitters shall provide a digital signal representing a Carbon Monoxide measurement range of 0 - 200 ppm CO or 0 - 50% LEL Propane (or other Combustibles gases / vapours). The circuit shall incorporate a long-life HVAC electrochemical sensor for CO or a long life solid-state sensor for combustibles with temperature compensation and an automatic resetting thermal fuse for fault protection.

The transmitter circuit shall be housed in a wall mount, rugged, break resistant, corrosion resistant, PVC junction box with a secured, hinged door. The PVC junction box shall have conduit entry ports on the top, bottom, right side and rear. The circuit shall operate from 24 VDC input voltage supplied from the controller. Wiring shall be 2 conductors for low voltage power, and a two wire shielded twisted pair for the communication bus. Wiring shall be shielded or in conduit.

An optional watertight Polycarbonate enclosure shall be available.

Provide digital signal readings to the controller to allow accurate settings 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](http://www.critical-environment.com).

# DST Digital Transmitter

## TECHNICAL SPECIFICATIONS

### GAS TYPE

Ammonia (NH <sub>3</sub> )	EAM
Carbon Monoxide (CO)	ECO
Combustible Gases (solid state)	SCB
Chlorine (Cl <sub>2</sub> )	ECL
Ethylene Oxide (ETO)	EET
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> )	OO2
Ozone (O <sub>3</sub> )	EO3
Propane (C <sub>3</sub> H <sub>8</sub> )	SCB
Sulphur Dioxide (SO <sub>2</sub> )	ESO

### 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

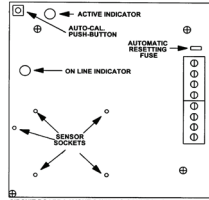
Power Requirement	24 VDC supplied by PDC controller
Current Draw	80 - 120 mA
Outputs	Scaled linear digital signal RS485 communication bus Daisy chain configuration only.
Wiring	Power: 14 gauge stranded, 2-conductor Signal: shielded twisted pair, 18 gauge, low capacitance. Network bridge every 1,000 feet or less.
Fuse	Automatic resetting thermal

### ENVIRONMENTAL (sensor dependant)

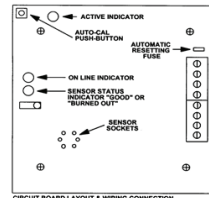
Operating Temperature	-20°C to 40°C (-4°F to 104°F)
Humidity	15 - 95% RH non-condensing



## WIRING



Electrochemical



Solid State

## PRODUCT CODES

Ammonia (NH <sub>3</sub> ), 0 - 500 ppm	DST-EAM
Carbon monoxide (CO), 0 - 200 ppm	DST-ECO
Combustible gases (solid state), 0 - 50% LEL	DST-SCB
Chlorine (Cl <sub>2</sub> ), 0 - 5 ppm	DST-ECL
Ethylene oxide (ETO), 0 - 20 ppm	DST-EET
Hydrogen (H <sub>2</sub> ), 0 - 2,000 ppm	DST-EH2
Hydrogen sulphide (H <sub>2</sub> S), 0 - 50 ppm	DST-EHS
Methane (CH <sub>4</sub> ), 0 - 50% LEL	DST-SCB
Nitrogen dioxide (NO <sub>2</sub> ), 0 - 10 ppm	DST-END
Nitric oxide (NO), 0 - 100 ppm	DST-ENO
Oxygen (O <sub>2</sub> ), 0 - 25% volume	DST-OO2
Ozone (O <sub>3</sub> ), 0 - 2 ppm	DST-EO3
Propane (C <sub>3</sub> H <sub>8</sub> ), 0 - 50% LEL	DST-SCB
Sulphur dioxide (SO <sub>2</sub> ), 0 - 20 ppm	DST-ESO

## 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