

# PET BACnet® Transmitter



PET BACnet® digital transmitter is a "Parkade Emissions Transmitter" that communicates via BACnet® protocol MS / TP. It is available with one or two electrochemical sensors or solid-state sensors and temperature sensor, enclosed in a general purpose ABS enclosure.

Featuring thermal resetting fuse, tri-color LED indicator for power and alarm, and an optional 4-digit LED display.

Includes new sensor CEF (Calibration Extending Firmware) that takes into account the aging of the sensors so that less frequent calibrations are acceptable in non-critical applications.

Calibration and maintenance procedures are easily performed in the field without requiring access to the controller.

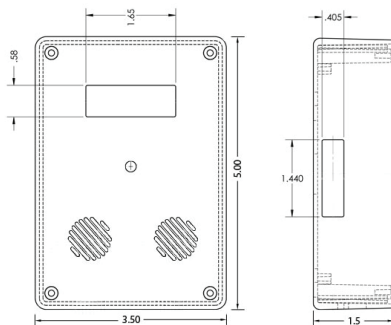
## KEY FEATURES

- » MS / TP BACnet® communication
- » RoHS compliant circuit boards
- » Thermal resetting fuse
- » Tri-color LED indicator
- » Economical
- » Easy maintenance
- » Single or dual gas sensor
- » Includes temperature sensor
- » BTL certified

## APPLICATIONS

- » Parking Garages
- » Repair Shops
- » Commercial HVAC Buildings
- » Light Industrial Plants
- » Laboratories
- » Schools / Educational Institutions
- » ... and many more

## TECHNICAL DRAWING



## SAMPLE ENGINEERING SPECIFICATIONS

*CO & Combustible gases/vapours BACnet® Transmitters for Parking Garages*  
Provide PET series BACnet® transmitters, capable of being connected directly to a BACnet® building automation system. The transmitter shall be capable of communicating via BACnet® MS / TP protocol with a BACnet® controller / head end. Provide transmitters for the Carbon Monoxide with a detection range of 0 - 200 ppm and transmitters for Combustible gases & vapours with a detection range of 0 - 50% LEL.

The transmitters shall be a CETCI model PET-TCO for Carbon Monoxide and model PET-SCB for Combustible gases & vapours. All CO transmitters shall incorporate accurate electrochemical sensors and all Combustibles transmitters shall incorporate rugged semi-conductor sensors. All transmitters shall incorporate an automatic resetting thermal fuse for fault protection. The CO transmitters shall be installed 4' - 6' from the floor (breathing zone). The Combustibles transmitters shall be installed 6' from the floor and each unit shall be capable of monitoring an area of approximately 5,000 - 7,500 ft<sup>2</sup> in relatively open unobstructed parking areas.

The transmitter circuit shall be housed in a rugged, ABS junction box with a secured cover and designed to mount directly onto standard electrical junction boxes. The transmitter shall operate on 24 VD (nominal) input voltages. Digital display is available as an option.

Wiring shall be 2 conductor 16 gauge for low voltage power, and a 18 gauge two wire low capacitance shielded twisted pair for the communication bus.

System operation shall be as follows: Upon detection of 25 ppm CO or 10% LEL Combustibles, the BACnet® controller shall activate exhaust fans. Upon detection of 100 ppm CO or 20% LEL combustibles, the BACnet® controller shall activate higher ventilation level and audible / visual alarms.

The contractor shall provide all wiring, conduit and interconnection required for a successful installation. System should be tested and commissioned by manufacturer after installation, with a report provided after the site visit.

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

## WIRING

Coming soon...

# PET BACnet® Transmitter

## TECHNICAL SPECIFICATIONS

### GAS TYPE

Ammonia (NH <sub>3</sub> )
Carbon Monoxide (CO)
Combustible Gas (solid state) <i>Hydrogen (H<sub>2</sub>), Methane (CH<sub>4</sub>), Propane (C<sub>3</sub>H<sub>8</sub>), etc.</i>
Ethylene (C <sub>2</sub> H <sub>4</sub> )
Formaldehyde (CH <sub>2</sub> O)
Nitrogen Dioxide (NO <sub>2</sub> )
Nitric Oxide (NO)
Oxygen (O <sub>2</sub> )
Refrigerants (solid state) <i>R22, R134A, R402A, R404A, R407C, R410A, R422A, R422D, R507A</i>
Sulphur Dioxide (SO <sub>2</sub> )
TVOCs (solid state)

### MECHANICAL

Enclosure	General Purpose ABS
Weight	284 g (10 oz)
Size	5.0" x 3.5" x 1.5" (127 mm x 89 mm x 38 mm)

### ELECTRICAL

Power Requirement	24 VDC
Current Draw	30 mA; 90 mA (with display)
Outputs	BACnet® MS / TP up to 76,800 bps MAC address 0-127 DIP switch settable
Wiring	4-conductor shielded network wiring (daisy-chained)
Fuse	Automatic resetting thermal

### ENVIRONMENTAL (sensor dependant)

Operating Temperature	Sensor dependant
Humidity	Sensor dependant

### CERTIFICATION

BTL	Certified
CE & C-Tick	Pending



PET-TCO-END-N model, contains an LED digital display, is pictured beside a PET-SCB-R model which is a remote propane sensor (picture to the right).

## PRODUCT CODES

Single Channel Mode:		Options:
Electrochemical		(Select all that applies)
<b>EAM</b>	NH <sub>3</sub> sensor (0 - 500 ppm)	- None
<b>TCO</b>	CO sensor (0 - 200 ppm)	<b>N</b> LED digital display
<b>EC4</b>	C <sub>2</sub> H <sub>4</sub> sensor (0 - 2,000 ppm)	<b>R</b> Remote housing (solid state sensor only)
<b>EFO</b>	CH <sub>2</sub> O sensor (0 - 10 ppm)	
<b>EH2</b>	H <sub>2</sub> sensor (0 - 2,000 ppm)	
<b>END</b>	NO <sub>2</sub> sensor (0 - 10 ppm)	
<b>ENO</b>	NO sensor (0 - 100 ppm)	
<b>002</b>	O <sub>2</sub> sensor (0 - 25% volume)	
<b>ESO</b>	SO <sub>2</sub> sensor (0 - 20 ppm)	
Solid State		
<b>SCB</b>	Combustible gas sensor (0 - 50% LEL)	
<b>SCB</b>	H <sub>2</sub> sensor (0 - 100% LEL)	
<b>SCB</b>	CH <sub>4</sub> sensor (0 - 50% LEL)	
<b>SCB</b>	C <sub>2</sub> H <sub>6</sub> sensor (0 - 50% LEL)	
<b>SR2</b>	Refrigerants (R22, R134A, R402A, R404A, R407C, R410A, R422A, R422D, R507A) sensor (0 - 2,000 ppm)	
<b>SOS</b>	TVOCs sensor (0 - 500 ppm)	

### Dual Channel Mode:

<b>TCO-END</b>	CO sensor (0 - 200 ppm) & NO <sub>2</sub> sensor (0 - 10 ppm)
<b>TCO-ENO</b>	CO sensor (0 - 200 ppm) & NO sensor (0 - 100 ppm)
<b>TCO-002</b>	CO sensor (0 - 200 ppm) & O <sub>2</sub> sensor (0 - 25% volume)
<b>TCO-ESO</b>	CO sensor (0 - 200 ppm) & SO <sub>2</sub> sensor (0 - 20 ppm)

### ACCESSORIES

Calibration kit for 17, 34, 58, 74, 103 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder	CET-715A-CK1
Heavy duty, large, metal protective guard, 16 gauge, galvanized	SCS-8000-RSG

