

# LPT-A Analog Transmitter



The LPT-A is a full featured, single sensor, analog transmitter available with a wide range of sensors and sensor types including electrochemical, solid state and catalytic. Operating as an analog transmitter or a standalone fixed system, the LPT-A offers 3-wire VDC or 4-wire VAC power, jumper selectable 4 - 20 mA or 0 - 10 VDC analog output, standard dry contact relay (2 amps @ 30 V SPDT), automatic thermal resetting fuse, temperature compensation, back lit LCD digital display, and audible alarm, all in a RoHS compliant package. All models in the LPT Family of Transmitters come standard with a water / dust tight, corrosion resistant ABS / polycarbonate enclosure with a hinged, secured door. With the optional splash guard installed, the enclosure is IP54 rated and ideal for use in water spray or wash down applications.

Automated calibration and other maintenance procedures are simple and easily performed in the field. For parking garage applications, our proprietary Calibration Extending Firmware (CEF) takes into account the aging of the sensors so that less frequent calibrations are required.

## KEY FEATURES

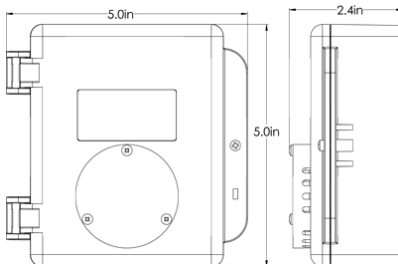
- » Linear 4 - 20 mA or 0 - 10 volt output signal
- » 3-wire VDC or 4-wire VAC power
- » 24 volt DC or AC power (nominal)
- » Graphic LCD display (user selectable function)
- » 1 dry contact relay, 30 volt 2 amp maximum
- » Internal audible alarm
- » Standard water / dust tight, corrosion resistant enclosure (drip proof); IP54 certified with optional splash guard installed
- » Available with an internal electrochemical sensor, or catalytic for combustibles (internal or remote) or solid state for refrigerants or TVOCs (internal or remote)
- » Optional heater for the display

## APPLICATIONS

- » Parking garages and auto repair shops
- » Arenas and swimming pool recreation facilities
- » Cold storage and freezer rooms
- » ... and many more

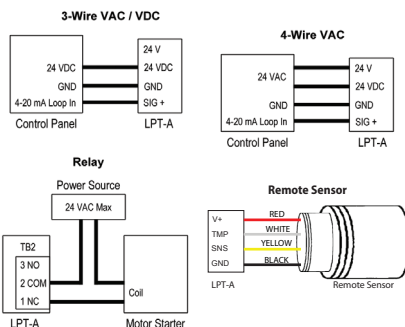


## TECHNICAL DRAWING



Note: Drawings above are shown with an optional splash guard. Without splash guard, thickness of unit is 2.1" (53.34 mm).

## WIRING



## TECHNICAL SPECIFICATIONS

MECHANICAL	
Enclosure	ABS / Polycarbonate, NEMA 4X/IP54 certified with splash guard installed
Weight	400 g (14 oz)
Size	5.0" x 5.0" x 2.24" (127 mm x 127 mm x 57 mm)

## USER INTERFACE

Indicator	Graphic LCD. Text prompting for calibration operation and fault indications. Installer configurable to suppress all other displays.
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## ENVIRONMENTAL

Operating Temperature	-20°C to 40°C (-4°F to 104°F) Low temperature option available to -40°C (-40°F) (sensor dependant)
Humidity	15 - 90% RH non-condensing

# LPT-A Analog Transmitter

## TECHNICAL SPECIFICATIONS continued

### ELECTRICAL

Power Requirement	
3-wire mode	16-30 VDC, 3 W, Class 2
4-wire mode	12-27 VAC, 50-60 Hz, 3 VA, Class 2
Outputs	Linear 4 - 20 mA
	Maximum 216 $\Omega$ load (wiring plus termination resistor) @ 12 VDC
	Maximum 316 $\Omega$ load (wiring plus termination resistor) @ 12 VAC
	Voltage 0 - 10 volt Minimum 1k ohm load
Wiring	VDC (or ground referenced AC) three conductor shielded 18 awg stranded
	VAC four conductor shielded 18 awg stranded
Fuse	Automatic resetting thermal

## PRODUCT CODES

Internal Electrochemical Sensor	Lifespan
<b>LPT-A-NH3</b> Ammonia (NH <sub>3</sub> ) sensor (0 - 500 ppm)	2 yrs
<b>LPT-A-COA</b> Carbon Monoxide (CO) sensor (0 - 200 ppm)	3 yrs
<b>LPT-A-COB</b> Carbon Monoxide (CO) sensor (0 - 200 ppm)	6 yrs
<b>LPT-A-CL2</b> Chlorine (Cl <sub>2</sub> ) sensor (0 - 5 ppm)	3 yrs
<b>LPT-A-C2H4</b> Ethylene (C <sub>2</sub> H <sub>4</sub> ) sensor (0 - 1,500 ppm)	2 yrs
<b>LPT-A-EETO</b> Ethylene Oxide (C <sub>2</sub> H <sub>4</sub> O) sensor (0 - 20 ppm)	2 yrs
<b>LPT-A-CH2O</b> Formaldehyde (CH <sub>2</sub> O) sensor (0 - 10 ppm)	2 yrs
<b>LPT-A-EH2</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 2,000 ppm)	2 yrs
<b>LPT-A-H2S</b> Hydrogen Sulphide (H <sub>2</sub> S) sensor (0 - 50 ppm)	2 yrs
<b>LPT-A-HCL</b> Hydrogen Chloride (HCl) sensor (0 - 20 ppm)	2 yrs
<b>LPT-A-HCN</b> Hydrogen Cyanide (HCN) sensor (0 - 100 ppm)	2 yrs
<b>LPT-A-NO</b> Nitric Oxide (NO) sensor (0 - 100 ppm)	2 yrs
<b>LPT-A-NO2A</b> Nitrogen Dioxide (NO <sub>2</sub> ) sensor (0 - 10 ppm)	3 yrs
<b>LPT-A-NO2B</b> Nitrogen Dioxide (NO <sub>2</sub> ) sensor (0 - 10 ppm)	6 yrs
<b>LPT-A-O2</b> Oxygen (O <sub>2</sub> ) sensor (0 - 25% volume)	3 yrs
<b>LPT-A-O3</b> Ozone (O <sub>3</sub> ) sensor (0 - 2 ppm)	2 yrs
<b>LPT-A-PH3</b> Phosphine (PH <sub>3</sub> ) sensor (0 - 5 ppm)	2 yrs
<b>LPT-A-SiH4</b> Silane (SiH <sub>4</sub> ) sensor (0 - 20 ppm)	2 yrs
<b>LPT-A-SO2</b> Sulphur Dioxide (SO <sub>2</sub> ) sensor (0 - 20 ppm)	2 yrs

Internal Solid State Sensor	Lifespan
<b>LPT-A-SR22</b> Refrigerants (R22) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR134A</b> Refrigerants (R134A) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR402A</b> Refrigerants (R402A) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR404A</b> Refrigerants (R404A) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR407C</b> Refrigerants (R407C) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR410A</b> Refrigerants (R410A) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-SR422D</b> Refrigerants (R422D) sensor (0 - 2,000 ppm)	5 yrs

## PRODUCT CODES continued

<b>LPT-A-SR507A</b> Refrigerants (R507A) sensor (0 - 2,000 ppm)	5 yrs
<b>LPT-A-STVOC</b> TVOCs sensor (0 - 500 ppm)	5 yrs

Internal Catalytic Sensor	Lifespan
<b>LPT-A-CH2</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 50% LEL)	5 yrs
<b>LPT-A-CCH4</b> Methane (CH <sub>4</sub> ) sensor (0 - 50% LEL)	5 yrs
<b>LPT-A-CC3H8</b> Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 50% LEL)	5 yrs

### Remote Sensors

#### LPT-A-R + Remote Solid State OR Remote Catalytic Sensor Head

Remote Solid State Sensor Head	Lifespan
<b>ESH-SR22</b> Refrigerants (R22) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR134A</b> Refrigerants (R134A) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR402A</b> Refrigerants (R402A) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR404A</b> Refrigerants (R404A) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR407C</b> Refrigerants (R407C) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR410A</b> Refrigerants (R410A) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR422D</b> Refrigerants (R422D) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-SR507A</b> Refrigerants (R507A) sensor (0 - 2,000 ppm)	5 yrs
<b>ESH-STVOC</b> TVOCs sensor (0 - 500 ppm)	5 yrs

Remote Catalytic Sensor Head	Lifespan
<b>ESH-CH2</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 50% LEL)	5 yrs
<b>ESH-CCH4</b> Methane (CH <sub>4</sub> ) sensor (0 - 50% LEL)	5 yrs
<b>ESH-CC3H8</b> Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 50% LEL)	5 yrs

### OPTION (To be added at the end of the "Part Number" above. $\geq 1$ "Option" can be selected.)

<b>H</b> Heater (for -40°C to 50°C (-40°F to 122°F))
<b>S</b> Splash guard (not available for O <sub>2</sub> or Cl <sub>2</sub> sensors)

### ACCESSORIES

<b>CET-715A-CK1</b> Calibration kit for 17, 34, 58, 74, 103 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder
<b>SCS-8000-RSG</b> Metal protective guard, small, 16 gauge, galvanized metal guards for transmitters

### CERTIFICATION

Conforms to: CSA-C22.2 No. 205-M1983 (R2009)  
UL508 (Edition 17):2007

Conforms to: EMC Directive 2004/108/EC  
EN 50270:2006, Type 1, EN61010

Conforms to: FCC. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.