



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 stand-alone 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, one dry contact relay, thermal resetting fuses, temperature compensation, back lit LCD display and audible alarm, all in a RoHS compliant package. It comes 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 sensor so that less frequent calibrations are required. For use in non-hazardous, non-explosion rated commercial and light industrial applications.

## KEY FEATURES

- » Single channel, with an internal electrochemical sensor or catalytic for combustibles (internal or remote) or solid state for refrigerants (internal) or PID TVOC (remote)
- » One 2A SPDT dry contact relay
- » Internal audible alarm
- » LCD display (with user selectable function)
- » 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)
- » Optional heater for cold environment applications
- » Standard water / dust tight, corrosion resistant enclosure (drip proof); IP54 rated with optional splash guard installed.

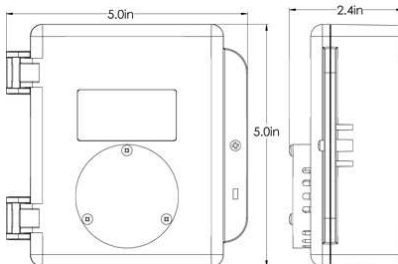
## APPLICATIONS

- » Parking Garages/Car Parks
- » Vehicle Repair Shops
- » Ice Arenas
- » Ice Cleaning Machine Rooms
- » Commercial Indoor Swimming Pools
- » Manufacturing Plants
- » Maintenance Facilities
- » Cold Storage / Freezer Rooms
- » Chiller Rooms
- » ... and many more

# ANALOG GAS DETECTORS DATASHEET

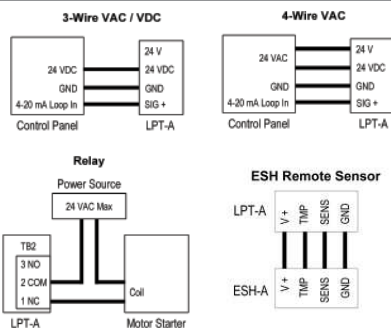
## LPT-A Analog Transmitter

## TECHNICAL DRAWING



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

## WIRING



## TECHNICAL SPECIFICATIONS

### MECHANICAL

|           |                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------|
| Enclosure | ABS / Polycarbonate, IP54 rated with splash guard installed. Copper coated interior to reduce RF interference. |
| Weight    | 400 g (14 oz)                                                                                                  |
| Size      | 127 x 127 x 53 mm (5.0 x 5.0 x 2.1 inches)                                                                     |

### USER INTERFACE

|                  |                                                                           |
|------------------|---------------------------------------------------------------------------|
| Display          | Graphic LCD, grey border                                                  |
| Magnetic Sensors | Using a magnetic wand, initiate calibration without opening the enclosure |

### INPUT / OUTPUT

|        |                                                                                                                                                                                                                                                                                                                                   |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output | <ul style="list-style-type: none"> <li>- Linear 4 - 20 mA analog</li> <li>- Maximum 216 <math>\Omega</math> load (wiring plus termination resistor) @ 12 VDC</li> <li>- Maximum 316 <math>\Omega</math> load (wiring plus termination resistor) @ 12 VAC</li> <li>- Voltage 0 - 10 volt</li> <li>- Minimum 1k ohm load</li> </ul> |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### TECHNICAL SPECIFICATIONS continued

|               |                                                |
|---------------|------------------------------------------------|
| Relay         | 1 SPDT dry contact, rated 30 volts, 2 amps max |
| Audible Alarm | Standard internal buzzer; enable/disable       |

### ELECTRICAL

|                   |                                                                                                                         |
|-------------------|-------------------------------------------------------------------------------------------------------------------------|
| Power Requirement | 3-wire mode 16-30 VDC, 3 W, Class 2<br>4-wire mode 12-27 VAC, 50-60 Hz, 3 VA, Class 2                                   |
| Wiring            | -VDC (or ground referenced AC) three conductor shielded 18 awg stranded<br>-VAC four conductor shielded 18 awg stranded |
| Fuses             | Thermal, resetting                                                                                                      |

### ENVIRONMENTAL

|                       |                                                                   |
|-----------------------|-------------------------------------------------------------------|
| Operating Temperature | -20°C to 40°C (-4°F to 104°F), lower temperature option available |
| Humidity              | 15 - 90% RH non-condensing                                        |

### 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.

### PRODUCT CODES

| Internal Electrochemical Sensors                                                       | 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-CL2-10</b> Chlorine (Cl <sub>2</sub> ) sensor (0 - 10 ppm)                    | ~3 yrs   |
| <b>LPT-A-CL2</b> Chlorine (Cl <sub>2</sub> ) sensor (0 - 5 ppm)                        | ~3 yrs   |
| <b>LPT-A-CLO2</b> Chlorine Dioxide (ClO <sub>2</sub> ) sensor (0 - 1 ppm)              | ~2 yrs   |
| <b>LPT-A-C2H4</b> Ethylene (C <sub>2</sub> H <sub>4</sub> ) sensor (0 - 200 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-F2</b> Fluorine (F <sub>2</sub> ) sensor (0 - 1 ppm)                          | ~2 yrs   |
| <b>LPT-A-CH2O</b> Formaldehyde (CH <sub>2</sub> O) sensor (0 - 5 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-H2SB</b> Hydrogen Sulphide (H <sub>2</sub> S) sensor (0 - 50 ppm)             | ~5 yrs   |
| <b>LPT-A-HCL</b> Hydrogen Chloride (HCl) sensor (0 - 30 ppm)                           | ~2 yrs   |
| <b>LPT-A-HCN</b> Hydrogen Cyanide (HCN) sensor (0 - 100 ppm)                           | ~2 yrs   |
| <b>LPT-A-HF</b> Hydrogen Fluoride (HF) sensor (0 - 10 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 - 1 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   |

### PRODUCT CODES continued

| Internal Solid State Sensors                                                         | 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   |
| <b>LPT-A-SR438A</b> Refrigerants (R438A) sensor (0 - 2,000 ppm)                      | ~5 yrs   |
| <b>LPT-A-SR507A</b> Refrigerants (R507A) sensor (0 - 2,000 ppm)                      | ~5 yrs   |
| <b>LPT-A-SR513A</b> Refrigerants (R513A) sensor (0 - 2,000 ppm)                      | ~5 yrs   |
| <b>LPT-A-SR514A</b> Refrigerants (R514A) sensor (0 - 2,000 ppm)                      | ~5 yrs   |
| <b>LPT-A-STVOC</b> TVOCs sensor (0 - 500 ppm)                                        | ~5 yrs   |
| Internal Catalytic Sensors                                                           | Lifespan |
| <b>LPT-A-CH2-100</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 100% LEL)                | ~5 yrs   |
| <b>LPT-A-CCH4-100</b> Methane (CH <sub>4</sub> ) sensor (0 - 100% LEL)               | ~5 yrs   |
| <b>LPT-A-C3H8-100</b> Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL) | ~5 yrs   |
| ESH-A Remote PID Sensors                                                             | Lifespan |
| Part number is <b>LPT-A-R</b> + ESH-A part number listed below                       |          |
| <b>ESH-A-SPL</b> TVOC PID sensor (0 - 30 ppm)                                        | **       |
| <b>ESH-A-SPH</b> TVOC PID sensor (0 - 300 ppm)                                       | **       |
| ESH-A Remote Catalytic Sensors                                                       | Lifespan |
| <b>ESH-A-CH2-100</b> Hydrogen (H <sub>2</sub> ) sensor (0 - 100% LEL)                | ~5 yrs   |
| <b>ESH-A-CCH4-100</b> Methane (CH <sub>4</sub> ) sensor (0 - 100% LEL)               | ~5 yrs   |
| <b>ESH-A-C3H8-100</b> Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL) | ~5 yrs   |
| ESH-A Remote Infrared Sensors                                                        | Lifespan |
| <b>ESH-A-JET</b> Propane (C <sub>3</sub> H <sub>8</sub> ) sensor (0 - 100% LEL)      | ~8 yrs   |

\*\* usage and application dependent

### OPTIONS (Factory installed) Add at the end of the "Part Number" above.

|           |                                                                                                                                    |
|-----------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>H</b>  | Internal heater for cold environment applications down to -40°C / 40°F                                                             |
| <b>S</b>  | Splash Guard for non sticky gases                                                                                                  |
| <b>SN</b> | Splash Guard for sticky gases (Cl <sub>2</sub> , ClO <sub>2</sub> , HCl, HCN, NO <sub>2</sub> , O <sub>3</sub> , PH <sub>3</sub> ) |

### ACCESSORIES

|                     |                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------|
| <b>CET-SGC</b>      | Calibration clip for splash guard (Option 5)                                                                 |
| <b>CET-715A-CK1</b> | Calibration Kit for 17, 34, 58, 74, 100 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                            |
| <b>SCS-8000-WSG</b> | Small galvanized metal, 16 gauge protective guard with splash cover for transmitters with sticky gas sensors |

