

**Phosphine Gas Detector  
Model TXL-PH3****DESCRIPTION**

The Model TXL-PH3 is a reliable, low-cost phosphine gas detector, housed in an epoxy-coated aluminum enclosure with NEMA 4 rating. Detector outputs include a two-wire loop-powered 4-20 mA analog signal, and an 8-character LCD gas level display. A magnetic, non-intrusive calibration feature and reliable electrochemical sensor round out this well-designed product. The TXL is approved for use in hazardous areas when used with an approved intrinsically-safe zener barrier.

**APPLICATION**

The TXL-PH3 is intended for life safety protection in hazardous applications including petrochemical, general industrial, municipal, and commercial facilities. The output signal is compliant with industry standards and can be routed to any standard 4-20 mA analog input receiver or controller. The TXL product family provides extremely low power consumption, and can be installed with or without zener diode barriers depending upon installation area requirements.

**FEATURES**

- Low-cost
- Easy to install
- Intrinsically-safe
- NEMA 4 aluminum enclosure
- 8-character LCD gas level display
- Magnetic, non-intrusive calibration
- 2-wire, loop-powered 4-20 mA output
- Reliable electrochemical sensor
- 2 year warranty.

**SPECIFICATIONS****MEASUREMENT RANGE—**

0-20 PPM standard (other ranges are field selectable).

**TRANSMITTER OUTPUT—**

4–20 mA linear current signal.

**DISPLAY—**

8 character LCD.

**ACCURACY—**

±0.2 PPM or ±10% of applied gas concentration.

**LINEARITY—**

>10% full scale.

**REPEATABILITY—**

<±3%.

Table 1—Cross Sensitivity of PH<sub>3</sub> Sensor

Gas	Level	Reading
Arsine	150 ppb	120 ppb
Diborane	300 ppb	100 ppb
Sulfur Dioxide	5 ppm	1 ppm
Silane	1000 ppb	900 ppb
Germane	600 ppb	510 ppb

**RESPONSE TIME—**

T<sub>90</sub> < 20 seconds.

**SENSOR CROSS SENSITIVITY—**

See Table 1.

**TEMPERATURE RANGE—**

-20°C to +50°C (-4°F to +122°F).

**HUMIDITY RANGE—**

15 to 90% (non-condensing).

**OPERATING POWER—**

24 VDC (12 to 30 VDC). 75 milliwatts maximum.

**WIRING—**

2-conductor, stranded and shielded.

**MAXIMUM CABLE LENGTH—**

Up to 4,000 feet using 20 gauge stranded cable.

**CONNECTIONS—**

Screw terminal.

**CALIBRATION—**

1-person, non-intrusive magnetic switch on cover.

**ENCLOSURE—**

NEMA 4, epoxy-coated aluminum enclosure.

**SENSOR HOUSING—**

Aluminum standard (stainless steel option available).

**DIMENSIONS—**

4.65" W x 4.5" H x 2.2" D.

**SHIPPING WEIGHT—**

1 lb (0.5 kg).

**WARRANTY—**

2 years.

**CERTIFICATION—**

UL approved when properly installed for:

Class I, Groups A, B, C and D;

Class II, Groups E, F and G;

Class III.

CE and DEMKO approvals.

**IS BARRIER—**

V<sub>oc</sub> ≤ V<sub>max</sub> = 30 vdc,

I<sub>sc</sub> ≤ I<sub>max</sub> = 125 ma,

C<sub>a</sub> ≥ C<sub>i</sub> + C cable,

L<sub>a</sub> ≥ L<sub>i</sub> + L cable.

Suggested barrier models 9002/13-280/110/00 or 9002/13-252/121/04 manufactured by R. Stahl, Inc.

**ORDERING INFORMATION**

When ordering, please specify:

Part Number	Description
000518-006	Model TXL-PH3 Phosphine Gas Detector, 0-20 PPM Range

**REPLACEMENT PH3 SENSOR CELL**

Part Number	Description
000518-106	PH <sub>3</sub> sensor cell, 0-20 PPM range

**CALIBRATION KIT**

Part Number	Description
000518-206	Model TXL-KIT-PH3 Kit includes: Two 0.58 liter cylinders, one containing 5 PPM PH <sub>3</sub> cal gas, one containing "zero" clean air, carry case, calibration cup, 3 ft length hose, gauge/regulator, calibration magnet.



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