

GDS-49 Sensor Transmitter

Toxic / O₂ Gas Detection

- ◆ CSA Certified for Explosion Proof and Intrinsically Safe Installations
- ◆ Accepts over twenty different GDS Corp toxic sensors
- ◆ Standard 2-wire 4-20mA non-polarized output wiring eliminates installation errors
- ◆ Field-replaceable Toxic & O₂ sensor modules
- ◆ Aluminum sensor head available for reactive gases
- ◆ Improves system noise immunity by enclosing sensor output signals within metallic sensor head
- ◆ Missing or failed sensor forces output to 2.0mA FAULT output
- ◆ Easy interface to all GDS Corp. *Protector* series controllers

The GDS-49 2-wire sensor transmitter accepts GDS Corp. oxygen or toxic gas sensors and provides a scaled 4-20mA current sink output suitable for long distance transmission to an appropriate receiver device such as a C1 or C2 *Protector* series controller or GASMAX transmitter.

The GDS-49 is compatible with over 20 different GDS Corp. electrochemical sensors that cover a wide range of target gases and concentrations (see GDS-49 Order Guide on back).

Calibration of the monitored gas value is performed at the receiver device; no calibration controls exist within the GDS-49. GDS Corp. offers single, dual, four, eight and sixteen channel controllers suitable for calibration, alarm, display and retransmission of monitored gas values.

The GDS-49 is enclosed in a rugged stainless steel enclosure approved for Div. 1 & 2 hazardous environments. It can be installed intrinsically safe (IS) with an approved IS barrier, or explosion-proof in NEMA 7 installations. An IS only aluminum GDS-49IS model is available, without the flame arrestor, for use with highly reactive gases such as chlorine that do not diffuse well through stainless steel. A standard junction box is supplied with the GDS-49 for connection to field wiring.

Missing or defective sensors are indicated by transmitting a value of less than 2mA to the receiver. Sensor elements are interchangeable with other GDS Corp. Smart Sensor products to help reduce spare sensor inventory requirements.

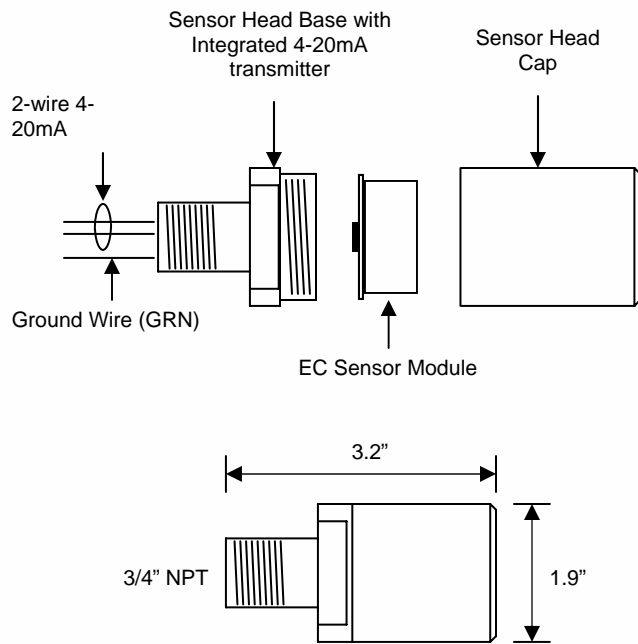
The GDS-49 functions with loop voltages ranging from 10-30VDC; voltage drop across the GDS-49 is less than 9 volts. An integral "transient voltage suppressor" protects the GDS-49 against lightning or other electrical transients.

The GDS-49 includes an XP junction box with 3x 3/4" NPT fittings for easy wiring.



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GDS CORP



- Power** 10-30VDC at 25mA
- Input** Accepts micro-amp signals from standard GDS Corp. toxic / O₂ sensors
- Output** Standard 2-wire non-polarized 4-20mA current sink output. Max loop R is 500 ohms with nominal 24VDC power supply. Less than 2mA output in case of missing or failed sensor
- Temp Range** -40°C to +65°C operating
- Housing** 10-0248 - 316 Stainless steel enclosure approved for Class 1, Groups B, C, D; Class 2, Groups E, F, G
10-0248IS - Aluminum enclosure approved for Class 1, Groups A, B, C, D; Class 2, Groups E, F, G
- Approvals** CSA Certified for Div. 1 & 2 Groups B, C, D Exia. Suitable for Explosion Proof and Intrinsically Safe installations.
CSA Certified for Div. 1 & 2 Groups A, B, C, D. Suitable for Intrinsically Safe only.
IMPORTANT: Intrinsically Safe installations require IS barrier 10-0263 (MTL 7787P+) or equivalent.
- Warranty** Two years on electronics and one year on sensors from date of purchase



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GDS-49 Order Guide ¹

GDS49 A - B - C

Suffix "A" - Sensor Head Type ²

- 1 Stainless Steel Explosion-Proof (XP) & Intrinsically Safe (IS)
- 2 Stainless Steel XP & IS with splash guard
- 3 Aluminum (IS ONLY) ²
- 4 Aluminum (IS ONLY) with splash guard ²

Suffix "B" - Sensor Type ^{3, 4}

- | | |
|-----------------------------------|--------------------|
| 10 Oxygen | 0 - 25% V/V |
| 11 Carbon Monoxide | 0 - 300 / 1000 ppm |
| 12 Chlorine ⁴ | 0 - 5 / 50 ppm |
| 13 Chlorine Dioxide ⁴ | 0 - 1 ppm |
| 14 Hydrogen | 0 - 2000 ppm |
| 15 Hydrogen Sulfide | 0 - 50 / 100 ppm |
| 16 Hydrogen Cyanide | 0 - 50 ppm |
| 17 Hydrogen Chloride ⁴ | 0 - 30 ppm |
| 18 Hydrogen Fluoride ⁴ | 0 - 10 ppm |
| 19 Sulfur Dioxide | 0 - 20 / 100 ppm |
| 20 Ammonia NH ₃ | 0 - 100 ppm |
| 21 Ozone | 0 - 1 ppm |
| 22 Ethylene Oxide | 0 - 20 ppm |
| 23 Arsine | 0 - 1 ppm |
| 24 Silane | 0 - 50 ppm |
| 25 Fluorine | 0 - 1 ppm |
| 26 Phosgene | 0 - 1 ppm |
| 27 Hydrazine | 0 - 1 ppm |
| 28 Nitric Oxide | 0 - 100 / 500 ppm |
| 29 Nitrogen Dioxide | 0 - 5 / 50 ppm |
| 30 Mercaptane TBM | 0 - 14 ppm |
| 31 Tetrahydrothiophene | 0 - 100 ppm |

Suffix "C" - Target Gas Range ³

- | | | |
|----------|---------|----------|
| 1 0-1.00 | 4 0-25 | 7 0-500 |
| 2 0-5.00 | 5 0-50 | 8 0-1000 |
| 3 0-10.0 | 6 0-100 | 9 Other |

Note 1: No calibration capability exists within the GDS-49; Zero and Span calibration MUST be performed by the receiving device.

Note 2: Aluminum sensor heads require IS installation and IS barrier #10-0263

Note 3: Standard ranges are shown; contact factory for additional ranges.

Note 4: Highly reactive gases REQUIRE aluminum sensor heads and IS installation in hazardous areas.

Represented by: