

**Combustible Gas Detector
Transmitter Model 505 with
Combustible Gas Sensor Model CGS**



DESCRIPTION

The Model 505 Transmitter is used with one constant voltage catalytic gas sensor to provide a linear 4 - 20 mA output signal corresponding to a 0 to 100% LFL gas concentration. Intrusive calibration and sensor sensitivity checks are performed using a standard digital voltmeter (not provided).

An explosion-proof junction box with removable cover is included with all Model 505 Transmitters. Options include junction box material (aluminum or stainless steel), number of conduit entry ports (up to five), conduit entry threads (NPT or Metric), orientation of entries (180 degree straight-through or 90 degree "L"), and signal output load impedance (125 or 500 ohms).

The Model 505 with signal loop impedance option "A" directly replaces the Det-Tronics K-Series Transmitter (125 ohms) and the Model 505 with signal loop impedance option "B" replaces the Det-Tronics Model 500 Transmitter (500 ohms).

FEATURES AND BENEFITS

- Linear 4 - 20 mA output.
- Current level indicates fault condition and calibrate mode.
- Sensor sensitivity check.
- Suitable for use in a wide variety of combustible gas detection applications.
- Compatible with all Det-Tronics catalytic sensors.
- Direct field replacement for Det-Tronics K Series and Model 500 Transmitters utilizing existing wiring and junction boxes.
- Explosion-proof junction box available in aluminum or stainless steel with up to five ports — two port model available in 90° or 180° configuration.
- FM, CSA, ATEX/CE and IECEx Certified.
- Accessories Include:
 - Sensor Separation Kit to enable remote sensor mounting.
 - Sensor Rain Shield and Dust Cover for sensor protection.
 - Duct Mount Assembly for sensor mounting to duct.
 - Sample Draw Assembly for extractive systems.
 - Calibration Kits in various gas types and concentrations.

SPECIFICATIONS

Input Voltage	With loop resistance option A: 10 to 30 Vdc With loop resistance option B: 17 to 30 Vdc Linear, regulated, filtered 24 Vdc power source is recommended.
Power Consumption	4.0 watts maximum.
Peak Startup Current	Less than 0.5 ampere for < 0.2 second at 10 Vdc input Less than 0.2 ampere for < 0.2 second at 24 Vdc input.
Output Current	Linear 4 - 20 mA.
Current Level	Fault: < 2.0 mA Cal. Mode: 3.5 mA (non-adjustable).
Load Resistance	Option A: 125 ohms maximum Option B: 500 ohms maximum.
Temperature Range	Operating: -40°C to +75°C (-40°F to +167°F) Storage: -55°C to +85°C (-67°F to +185°F).
Humidity Range	0 to 99% RH, non-condensing.
RFI/EMI Immunity	Output varies ± 0.5 mA with a 5 watt 157 MHz or 451 MHz walkie-talkie keyed at distances > 1 foot from the Model 505 with junction box cover installed.
Shipping Weight	Aluminum: 3.8 lbs. (1.7 kg) Stainless Steel: 8.7 lbs. (4.0 kg).

Certification



FM / CSA: Class I, Div. 1, Groups B, C & D.
Class II, Div. 1, Groups E, F & G
Class III; NEMA Type 4X.



ATEX/CE: \llcorner 0539 \oplus II 2 G
Ex d IIC T5-T6 Gb
DEMKO 02 ATEX 131329X
T6 (Tamb = -55°C to +60°C)
T5 (Tamb = -55°C to +75°C)
IP66

EN Standards: EN 50270: 2006
EN 60079-0: 2009
EN 60079-1: 2007
EN 60529: 1991+A: 2000
EN 60079-29-1: 2007.



IECEX: IECEx ULD 10.0008X
Ex d IIC T5-T6 Gb
T6 (Tamb = -55°C to +60°C)
T5 (Tamb = -55°C to +75°C)
IP66.

IEC Standards: IEC 60079-0: 2007
IEC 60079-1 2007
IEC 60529, 2.1.ed.+Corr. 1:2003+2:2007.

Dimensions

See Figure 1.

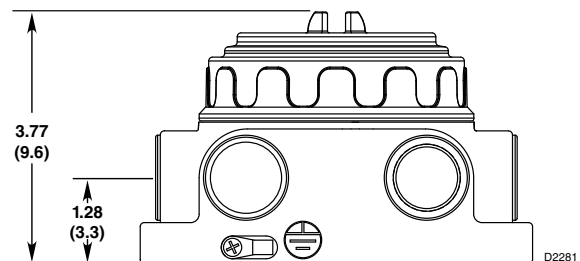
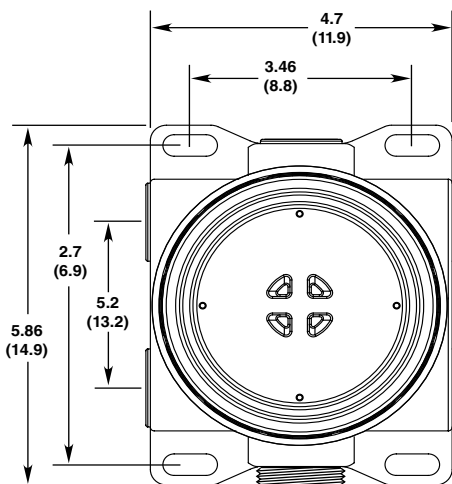


Figure 1—Dimensions of Transmitter Junction box in Inches (cm) Multiport Model

Specifications subject to change without notice.

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