CO / NO2 Sensor

GDT Series

The GDT device uses electrochemical sensors to monitor CO and/or NO2 gas in a rugged wall mount enclosure. The sensors are installed in external Pods that mount to the main enclosure. The unit can be configured as a single CO or NO2 gas detector, a single CO with remote NO2 detector or a dual CO/NO2 detector to accommodate the optimal sensing for your application.

PRODUCT HIGHLIGHTS

* Microprocessor based menu setup with LCD
* Three configurations, CO or NO2 detector, Combo CO and NO2 or CO and Remote NO2.
* Remote NO2 mounted up to 10 feet from main unit
* 4-20 mA, 0-5 or 0-10 Vdc outputs available as options.
* Network version available with BACnet or Modbus RS-485 interface
* Reversible analog output signal direction
* Field selectable CO measurement span (100 - 500 ppm)
* NO2 measurement span (0-10 ppm)
* 24 Vac/dc power supply
* Electrochemical Sensors
* Pre-Calibrated Sensor Pods, field replaceable.
* Field Calibration kit available.
* CO accuracy of ± 5 ppm or 5% of reading
* NO2 accuracy of ± 0.2 ppm or 5% of reading
* LCD available as viewable or concealed
* Configurable LCD backlight and display information
* Silence / Test button on front cover
* Test modes for analog output, alarms and relay
* Optional integral resistive output temperature sensor (thermistor or RTD)
* Optional temperature display with selectable °C/°F units
* Optional audio/visual alarm with configurable setpoints
* Option for one or two control relays assignable for either CO or NO2
* Programmable relay setpoint, hysteresis and time delay
* Operating temperature range of -20 to 50 °C (-4 to 122 °F)

SPECIFICATIONS

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| DESCRIPTION | ENGINEERING SPEC |
| GAS TYPE DETECTED | Carbon monoxide (CO) and/or Nitrogen Dioxide (NO2) |
| SENSOR TYPE | Electrochemical, diffusion sampling |
| SENSOR ACCURACY | CO: ±5 ppm or 5% of reading  NO2: ±0.2 ppm or 5% of reading |
| MEASUREMENT RANGE | CO: 0-500 ppm, adjustable 100 – 500 ppm  NO2: 0-10 ppm |
| RESPONSE TIME | < 30 seconds typical |
| WARM-UP TIME | 1 minute |
| SENSOR COVERAGE AREA | 700 m2 (7500 ft2) or 15 m (50 ft) radius |
| SENSOR LIFE SPAN | CO: 5-7 years in air  NO2: 2 years |
| SENSOR REPRODUCIBILITY (Same Day) | ±2 % |
| LONG TERM DRIFT | CO: < 5% per year  NO2: Zero, < ± 2ppm /year  Span, <2% Signal /month |
| POWER SUPPLY | 24 Vdc ± 20% or 24 Vac ± 10% (non-isolated half-wave rectified) |
| PROTECTION CIRCUITRY | Reverse voltage and transient protected |
| INPUT VOLTAGE EFFECT | Negligible over specified operating range |
| OUTPUT SIGNAL TYPE | 4-20 mA (3-wire), 0-5 or 0-10 Vdc CO/NO2/Temp (options) |
| CURRENT CONSUMPTION | 425mA @ 24 Vac, 220 mA @ 24 Vac max (Test Mode) |
| OUTPUT DRIVE @ 24 VDC | 550Ω max (4-20 mA output), 10 KΩ min (voltage output) |
| OPERATING TEMPERATURE | -20 to 50°C (-4 to 122°F) |
| STORAGE TEMPERATURE | -30 to 60°C (-22 - 140°F) |
| OPERATING HUMIDITY | 15 to 90 %RH non-condensing |
| LCD DISPLAY UNITS | PPM (CO/NO2), °C/°F (optional temperature/setpoint) |
| DISPLAY | 2-line x 8-character, 1.4 x 0.6” (35 x 15 mm), configurable backlight |
| USER INTERFACE | Silence / Test button, Bi-color status LED, Red LED Alarm indicator, white High intensity LED strobe (Optional) |
| TEMPERATURE SENSOR (OPTIONAL) | See table below |
| TEMPERATURE SENSOR ACCURACY | See table below |
| TEMPERATURE SENSOR RANGE | -20 to 50°C (-4 to 122°F) or 0 - 50 °C / 32 - 122 °F (Field Selectable) |
| TEMPERATURE SENSOR OUTPUT | 2-wire resistive |
| RELAY (OPTIONAL) | Form C, 5 Amps @ 140 Vac / 30 Vdc, 5A @30Vdc  Adjustable setpoints, delay and hysteresis |
| AUDIO ALARM (OPTIONAL) | Buzzer, 93dB @ 30 cm |
| VISUAL ALARM (OPTIONAL) | High intensity white LED strobe |
| ENCLOSURE MATERIAL | PC, Grey, UL94 V0 |
| MAIN ENCLOSURE DIMENSION INC PROBE | 202.3 x 184 x 54.5 mm (8 x 7.24 x 2.15”) |
| MAIN ENCLOSURE WEIGHT INC PROBE | 515 grams (1.14 lbs) |
| REMOTE NO2 ENCLOSURE DIMENIONS INC PROBE | 109.5 x 83.3 x 52 mm (4.31 x 3.28 x 2.05”) |
| REMOTE ENCLOSURE WEIGHT INC PROBE | 109 grams (0.24 lbs) |
| ENCLOSURE PROTECTION | IP65 |
| WIRING | Screw terminal block (14 - 22 AWG)  Top or bottom conduit entry 0.875 inch hole |
| APPROVALS | CE |

Temperature Sensor Options

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| **Sensor**  **Code** | **Temperature Sensor Description** | **Accuracy** |
| 02 | 100Ω Platinum, IEC 751, 385 alpha, 2 wire, Class B | ± 0.3 °C (± 0.54 °F) @ 0 °C (32 °F) |
| 05 | 1,801 Ω NTC thermistor | ± 0.5 °C (± 0.9 °F) @ -20 - 50 °C (-4 - 122 °F) |
| 06 | 3,000 Ω NTC thermistor | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 07 | 10,000 Ω (type 3) NTC thermistor | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 08 | 2.252 KΩ NTC thermistor | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 12 | 1000Ω Platinum, IEC 751, 385 alpha, 2-wire, Class B | ± 0.3 °C (± 0.54 °F) @ 0 °C (32 °F) |
| 13 | 1000Ω Nickel, DIN 43760, 2-wire, Class B | ± 0.4 °C (± 0.72 °F) @ 0 °C (32 °F) |
| 14 | 10,000 Ω (Type 3) NTC thermistor c/w 11 KΩ shunt | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 20 | 20,000 Ω NTC thermistor | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 24 | 10,000 Ω (Type 2) NTC thermistor | ± 0.2 °C (± 0.36 °F) @ 0 - 70 °C (32 - 158 °F) |
| 59 | 10,000 Ω NTC thermistor | ± 1% @ 25°C (77°F), β25/85 = 3435 ± 1% |