





DUCT CARBON DIOXIDE TRANSMITTER

CDDT Series

The CO2 transmitter uses Infrared Technology to monitor CO2 levels and outputs a linear 4-20 mA or 0-5/0-10 Vdc signal. Options include an LCD, a control relay and a resistive temperature sensor. Features include a back-lit LCD and user menu for easy installation.

PRODUCT HIGHLIGHTS

* 2 available ranges
* CO2, & temperature outputs
* Optional slide-pot and/or override
* Optional on-board relay
* Polycarbonate weatherproof hinged enclosure

ENGINEERING SPEC’S

* Shall be IP65 (NEMA 4X) with a UL94-V0 rated enclosure
* External mounting tabs must be slotted & tapered away from enclosure to ease field installation
* Enclosure shall be complete with neoprene gasket for duct to enclosure seal
* Enclosure shall be complete with threaded (1/2 NPT and/or M16) conduit connection
* Cover must be hinged and securely attached in the open position
* Cover must contain security screw as extra protection from opening
* Product shall be CE approved







SPECIFICATIONS

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| DESCRIPTION | ENGINEERING SPEC |
| POWER SUPPLY | 20 – 28 Vac/dc (non-isolated half-wave rectified) |
| CONSUMPTIONS | **Current:** 120 mA max @ 24 Vdc, 212 mA max @ 24 Vac  **Voltage:** 79 mA max @ 24 Vac, 129 mA max @ 24 Vac |
| OUTPUT SIGNALS | 4-20 mA active (sourcing) or 0-5 Vdc / 0-10 Vac (field selectable) |
| OUTPUT DRIVE CAPABILITY | **Current:** 550 Ω maximum  **Voltage:** 5 KΩ minimum |
| OUTPUT RESOLUTION | 10 bit PWM |
| INPUT VOLTAGE EFFECT | Negligible over specified operating range |
| PROTECTION CIRCUITRY | Reverse voltage protected, overvoltage protected |
| WIRING CONNECTIONS | Screw terminal block (14 to 22 AWG) |
| EXTERNAL DIMENSIONS | 116.5mm W x 112.5mm H x 53.7mm D (4.585” x 4.43” x 2.11”) |
| ENCLOSURE | IP65 (NEMA 4X) |
| LCD | **Resolution:** 1ppm CO2  **Size:** 35mm W x 15mm H (1.4” x 0.6”)  **Backlight:** Enable or disable via keypad |
| MEASUREMENT TYPE | Non-Dispersive Infrared (NDIR), diffusions sampling |
| MEASUREMENT RANGE | **Sensor 1:** 0-2000 ppm  **Sensor 2:** 0-20,000 ppm, programmable span |
| STANDARD ACCURACY | +30 ppm +3% of reading  (Sensor 1) 0-2000 ppm range with Auto Cal  +75 ppm or 10% of reading (whichever is greater)  (Sensor 2) 0-20,000 ppm range with dual channel |
| TEMPERATURE DEPENDENCE | 0.2% FS per °C |
| STABILITY | **Sensor 1:** (0-2000ppm) 2 %FS over life of sensor (15 years typical)  **Sensor 2:** (0-20,000ppm) <5 %FS over life of sensor |
| PRESSURE DEPENDENCE | 0.13% of reading per mm Hg |
| ALTITUDE CORRECTION | Programmable from 0-5000ft via keypad |
| RESPONSE TIME | <2 minutes for 90% step change typical |
| WARM-UP TIME | <2 minutes |
| TEMPERATURE SENSING ELEMENT | See chart below |
| CONTACT RATINGS | Form A contact (N.O.), 2 Amps @ 140 Vac, 2 Amps @ 30 Vdc |
| OPTIONAL RELAY | **Trip Point:** Programmable via keypad  **Hysteresis:** Programmable via keypad |
| APPROVALS | CE, RoHS |
| COUNTRY OF ORIGIN | Canada |

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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% |