



ROOM CO2 SENSOR

# CERMC Series

The CERMC series uses a highly accurate and reliable nondispersive infrared (NDIR) sensor in an attractive, low-profile enclosure to monitor ambient CO2 levels for room applications. The compact dual wavelength CO2 sensor achieves excellent performance characteristics, including high accuracy and low power consumption to ensure stable long term operation. The CERMC features both 4-20 mA and voltage outputs (0-5 / 0-10 Vdc) for simple integration into any building automation system for the improvement of energy savings and to assure good indoor air quality. The device is also available with an optional resistive temperature sensor.

# PRODUCT HIGHLIGHTS

* Dual wavelength Nondispersive Infrared sensor
* Selectable outputs
* Optional temperature sensor

SPECIFICATIONS

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| DESCRIPTION | ENGINEERING SPEC |
| CO2 Sensor | Dual channel nondispersive infrared (NDIR) |
| SENSOR RANGE | 0-2000 ppm |
| SENSOR ACCURACY | ± (30 ppm + 3% of measured value) |
| TEMPERATURE DEPENDENCY |  ±2.5ppm/°C |
| RESPONSE TIME | 20 seconds (T63) |
| WARM-UP TIME | 1 minute |
| SENSOR COVERAGE AREA | 100 m2 (1000 ft2) typical |
| SENSOR LIFE SPAN | > 15 years |
| POWER SUPPLY | 24 Vdc ± 15% or 24 Vac ± 10% (non-isolated half-wave rectified) |
| CURRENT CONSUMPTION (4-20 MA OUTPUT) | 80 mA max @ 24 Vdc, 160 mA max @ 24 Vac |
| PROTECTION CIRCUITRY | Reverse voltage and transient protected |
| OUTPUT SIGNAL TYPE | 4-20 mA, 0-5 or 0-10 Vdc (field selectable) |
| CURRENT DRIVE CAPABILITY | 600Ω max @ 24 Vdc |
| VOLTAGE DRIVE CAPABILITY | 10KΩ min |
| OPERATING CONDITIONS | 0 - 50°C (32 - 122°F), 0-95 %RH non-condensing |
| STORAGE CONDITIONS | -40 - 70°C (-40 - 158°F), 0-95 %RH non-condensing |
| OPTIONAL TEMPERATURE SENSOR | See below |
| ENCLOSURE MATERIAL | ABS, White |
| ENCLOSURE DIMENSION | 84 x 119 x 29 mm (3.3 x 4.7 x 1.15”) |
| ENCLOSURE PROTECTION | IP30 |
| WIRING | Screw terminal block (14 - 22 AWG) |
| 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% |