GCK-200CO-2000CO2, Dwyer’s gas sensing transmitters

Nitrogen gas cylinder for calibrating the zero point and a 200 PPM CO / 2000 PPM CO2 gas cylinder for calibrating the span point on humidity only, CO2 only, CO2 and humidity, or CO2 and temperature. Push buttons the transmitter. The display can be configured to display temperature only, relative structure, but wall mount configurations can be ordered without the buttons. To mount configuration or a wall mount configuration without the display, the Model A-Series CDTR can be ordered with an integral LCD display. When ordering a duct are standard on all configurations of the transmitters for access to the menu which allows it or the temperature to be replaced at a fraction of the cost of a new CO2 transmitter.

Like our popular Series CDT Carbon Dioxide Transmitter, a single-beam dual-wavelength non-dispersive infrared (NDIR) sensor is used to automatically correct the measurement in both occupied* and unoccupied buildings against light source aging effects. The single-beam dual-wavelength sensor technology provides a higher level of accuracy compared to Automatic Baseline Correction methods which can unintentionally shift the calibration based on CO2 levels and barometric pressure conditions. In order to achieve the best possible accuracy, the Series CDTR also includes digital barometric pressure adjustment and the ability to field-calibrate the sensor.

Universal outputs for both carbon dioxide and relative humidity allow users to select the transmitter output to be 4 to 20 mA, 0 to 5 VDC, or 0 to 10 VDC to work with virtually any building management controller. Additionally, passive thermistor or RTD sensor can be ordered for a temperature output. An optional relay for the carbon dioxide measurement can be used to control exhaust fans, open actuated windows or dampers, or signal a light or horn.

For applications that require visual indication, the wall mount configurations of the Series CDTR can be ordered with an integral LCD display. When ordering a duct mount configuration or a wall mount configuration without the display, the Model A-449 or A-449A remote LCD display can plug into the miniature connector port on the transmitter. The display can be configured to display temperature only, relative humidity only, CO2 only, CO2 and humidity, or CO2 and temperature. Push buttons are standard on all configurations of the transmitters for access to the menu structure, but wall mount configurations can be ordered without the buttons. To prevent tampering, the action of the buttons can be locked out using an internal jumper selection. Menu items that can be accessed via the push buttons include: engineering units, relay output set points, display configuration, transmitter output scaling, ambient barometric pressure, and field calibration of the transmitter.

*For buildings occupied 24 hours per day, it is recommended that calibration be verified every 6 to 12 months depending on application.

**Series CDTR Carbon Dioxide, Relative Humidity and Temperature Transmitters** reduce the number of sensors mounted on a wall or in a duct. By combining CO2, RH, and temperature in one device, system integrators are able to lower installation time of mounting multiple housings, while lowering material cost at the same time. Even with the three sensors combined into a single unit, replacement cost is not increased due to the pluggable nature of the humidity sensor, which allows it or the temperature to be replaced at a fraction of the cost of a new CO2 transmitter.

**Calibration Gas Kit includes a 99.99% NDIR CO2 Sensor, Universal CO2/RH Outputs, Optional Relay**

**Specifications**

- **Range:**
  - CO2: 0 to 2000 or 0 to 5000 ppm (depending on model);
  - Relative Humidity: 0 to 100%;
  - Temperature: 32 to 122°F (0 to 50°C).

- **Accuracy:** ±40 ppm + % of reading (CO2); ±2% (RH).

- **Temperature Dependence:** ±8 ppm / °C at 1100 ppm.

- **Non-Linearity:** 16 ppm.

- **Pressure Dependence:** 0.13% of reading per mm of Hg.

- **Response Time:** 2 minutes for 99% step change.

- **Temperature Limits:** 32 to 122°F (0 to 50°C).

- **Humidity Limits:** 10 to 95% RH (non-condensing).

- **Power Requirements:** 16 to 35 VDC / 19 to 28 VAC.

- **Power Consumption:** Average: 2 watts; Peak: 3.75 watts.

- **Sensor:** Single-beam, dual-wavelength NDIR.

**Outputs:**

- **Current:** 4 to 20 mA (max 500 Ω);
- **Voltage:** 0 to 5 VDC or 0 to 10 VDC (min 500 Ω);
- **Relay:** SPST NO 2A @ 30 VDC; RTD or thermistor per r-t curves (depending on model).

**Weight:** 5.6 oz (158.6 g).

**Agency Approvals:** CE.

**Accessories**

**A-449, Remote LCD Display allows remote indication of select Dwyer® Wall Mount Transmitters for validation or certification purposes**

**A-449A, Remote LCD Display with buttons allows remote indication and calibration of select Dwyer® Wall Mount Transmitters for validation and certification purposes**