

### Digital Transmitter with Electrochemical Carbon Monoxide (CO) Sensor (standard range)

|                                                                     |               |                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dimensions:</b>                                                  | Size          | 5.0 x 5.0 x 3.0 in (127 x 127 x 76 mm) without optional splash guard (Option –S)                                                                                                                                                              |
|                                                                     | Weight        | 14 oz / 400 g                                                                                                                                                                                                                                 |
| <b>Construction:</b>                                                |               | Black ABS / Polycarbonate blend, water/dust tight, corrosion resistant                                                                                                                                                                        |
| <b>Sensor:</b>                                                      | Type          | Electrochemical                                                                                                                                                                                                                               |
|                                                                     | Life Span     | Approximately 3 years (application dependent)                                                                                                                                                                                                 |
|                                                                     | Complies With | UL2075, 2 <sup>nd</sup> Edition, Standard for Gas and Vapour Detectors and Sensors                                                                                                                                                            |
| <b>Gases Detected:</b>                                              |               | Carbon Monoxide (CO)                                                                                                                                                                                                                          |
| <b>Sensor Range:</b>                                                |               | 0 – 200 ppm (standard)                                                                                                                                                                                                                        |
| <b>System Power:</b>                                                |               | 4-wire: 16-30 VDC, 3W, Class 2      Peak Power Draw: 1.2 watts*<br>4-wire: 12-27 VAC, 50-60 Hz, 3 VA, Class 2      *add 0.15 watts for relay if installed                                                                                     |
| <b>Operating Temperature:</b>                                       |               | 0°C to +40°C (32°F to 104°F), -40°C (-40°F) with low temperature Option -LT                                                                                                                                                                   |
| <b>Operating Humidity:</b>                                          |               | 15 to 90% non-condensing                                                                                                                                                                                                                      |
| <b>Indicators:</b>                                                  |               | LCD digital display, 2 line x 16 character, backlit                                                                                                                                                                                           |
| <b>Communication</b>                                                |               | BACnet® MS/TP (version 1 rev 14) RS-485, or<br>Modbus® RTU (version 1.1b3) RS-485                                                                                                                                                             |
| <b>Relay (Option RLY) or<br/>Relay and Audible<br/>(Option RBZ)</b> |               | Internal 1 SPDT relay rated 30 volts, 2 amp max<br>Internal buzzer rated 90 dB @ 10 cm / 4 in, enable/disable                                                                                                                                 |
| <b>Minimum Detection:</b>                                           |               | 2 ppm (with regular calibration maintenance of sensor)                                                                                                                                                                                        |
| <b>Accuracy:</b>                                                    |               | <1ppm                                                                                                                                                                                                                                         |
| <b>Repeatability:</b>                                               |               | < ±3% CO equivalent                                                                                                                                                                                                                           |
| <b>Sensitivity Drift:</b>                                           |               | <5 % per year                                                                                                                                                                                                                                 |
| <b>Response Time (T<sub>90</sub>):</b>                              |               | <30 seconds                                                                                                                                                                                                                                   |
| <b>Resolution:</b>                                                  |               | Display resolution 1 ppm    Sensor resolution: <1 ppm                                                                                                                                                                                         |
| <b>Warm Up Time:</b>                                                |               | 3 minutes after power up (to full operation)                                                                                                                                                                                                  |
| <b>Cross Sensitivity:</b>                                           |               | H <sub>2</sub> @1000 ppm = <35ppm, NO@50ppm = <10ppm, C <sub>2</sub> H <sub>6</sub> O@200ppm = <1ppm,<br>CL <sub>2</sub> @15 = <1ppm, C <sub>2</sub> H <sub>4</sub> @100ppm = <96ppm, C <sub>2</sub> H <sub>2</sub> @100ppm = <90ppm          |
| <b>Safety:</b>                                                      |               | Automatic resetting thermal overload fuse (reset capabilities to 500 times)                                                                                                                                                                   |
| <b>Wiring:</b>                                                      |               | VDC or VAC (ground referenced) 4-conductor shielded, 16 AWG stranded within<br>conduit, network wiring (daisy-chain)                                                                                                                          |
| <b>Sensor Mounting:</b>                                             |               | Breathing Zone - slightly lighter than air<br>4 to 6 ft (1.2 to 1.8 m) from finished floor                                                                                                                                                    |
| <b>Monitoring Area:</b>                                             |               | 7,000 to 10,000 ft <sup>2</sup> / 464 to 929 m <sup>2</sup><br>40 to 56 foot / 12 to 17 meter radius, application dependent                                                                                                                   |
| <b>Suggested Alarm Setpoints</b>                                    |               | Low Alarm: 25 ppm / Mid Alarm: 50 ppm / High Alarm: 100 ppm                                                                                                                                                                                   |
| <b>Certifications:<br/>(tested to)</b>                              |               | CSA: C22.2 NO.205-12    UL: UL508 (Edition 18): 2018<br>CE: EMC Directive 2014/30/EU, EN50270:2015, Type 1, EN61010<br>UL 2075 Listed<br>Listed by BTL<br>RoHS compliant circuit boards<br>This device complies with part 15 of the FCC Rules |
| <b>Note:</b>                                                        |               | Never install gas detectors in the direct path of moving air.                                                                                                                                                                                 |

**Conditions Affecting Electrochemical Sensors:**

- Typically designed to operate between -10°C and +50°C, do not exposed to extreme temperatures for prolonged periods of time. Repeated or prolonged exposure to temperatures like 60-65°C / 140-149 can lead to evaporation of the electrolyte and shifts in baselines readings.
- Do not expose to high moisture for extended periods of time.
- Prolonged exposure to extremely high gas concentrations can compromise sensor performance.
- Paint fumes, cleaning products, dust, sand, water, insects can reduce lifespan and compromise performance. Avoid exposure to high concentrations of solvent vapours both during storage and operation.
- Before initial use after production may be stored at room temperature ideally at 20°C / 68°F and 60%RH or preferably in the fridge for up to 6 months. Beyond this period, the sensor performance is likely to deteriorate, such as with longer response time and lower sensitivity regardless of whether sensor has been used or not.
- The more exotic gases (chlorine, ozone etc.) tend to have shorter life spans than the more common gases (CO, nitrogen dioxide)
- Install gas detector vertically so the display is over top of the sensor vent and device is flat against a wall or column. Never install gas detectors in the direct path of moving air.