SAMPLE SPECIFICATION **GSE-NCM-xxx**

Stand-Alone Gas Detector (Combined)
Nitrogen Dioxide - Electro-Chemical Sensor
Carbon Monoxide - Electro-Chemical Sensor

The combination Nitrogen Dioxide & Carbon Monoxide detectors shall be as manufactured by Brasch Manufacturing Company, Inc. with specifications and input / output ratings as scheduled.

General:

1. The detector shall be an ETL listed unit containing a control board and sensor board that conforms completely to the UL 61010B-1 standard.
2. The NEMA 1 enclosure shall be constructed of heavy polycarbonate plastic, which consists of two pieces, cover and chassis. The cover shall close flush with the sides of the box and shall require a special tool to open it. The sensor module shall be protected from damage inside the enclosure and the cover shall contain screened openings to allow proper sensing. The openings shall conform to the UL 61010B-1 standard.
3. The detector shall contain an electro-chemical carbon monoxide (CO) sensor with temperature compensation circuits and an electro-chemical nitrogen dioxide (NO_2) sensor.
4. The enclosure shall be provided with four, ½" pre-punched openings for connection of field conduit. The detector shall include factory-installed wiring that exits the enclosure and allows for installation without the detector being opened.
5. The detector shall be protected against static discharge, excessive electrical noise, and tested for safety in accordance with the UL 61010B-1 standard.
6. The detector shall have a 0.5" minimum height, liquid crystal display (LCD) that will continually display the current nitrogen dioxide (NO_2) and carbon monoxide (CO) level, in parts per million. The detector shall have a green "power" LED, a yellow "sensor-active" LED, a red "low-alert" LED, a red "high-alert" LED and a red "alarm" LED.

Overcurrent Protection:

7. The detector shall contain a power supply fuse rated for 0.400 amp at 250 VAC, (if 24 VAC powered), or 0.125 amp at 250 VAC, (if 120 VAC powered). Each output relay shall have a fuse rated for 5 amp at 250 VAC. Fuses shall be of the time-lag type.

Switches and Controls:

8. The detector shall provide a 4–20 ma DC, 0–1 VDC, 0–5 VDC or 0–10 VDC signal in direct relationship to the nitrogen dioxide (NO_2) and carbon monoxide (CO) gas concentrations. The signal types can be selected at time of order or changed in the field. The detector shall have separate proportional outputs for NO_2 and CO levels. This signal shall be compatible with building and energy management systems.
9. An external push button on the front of the enclosure shall be provided to silence the 106 dB internal alarm. The alarm circuit shall become active again, once the detector is no longer at alarm levels.
10. Output relays providing a normally closed set of contacts for the low-alert and for the alarm shall be provided. These relays shall provide a fail-safe that will automatically activate ventilation equipment upon power loss to the sensor. The low-alert and high-alert relays shall be capable of being configured in the field for a two speed fan or for 50%/100% fan control operations. These relays shall be suitable for the connection of 24 VAC, 24 VA inductive circuits.
11. Switches shall be provided for field adjustment of the gas detection level for the low-alert, and of the on/off time delay for the low-alert and high-alert. Selectable CO detection levels shall range from 20 to 55 ppm and the NO_2 detection levels shall range from 0.3 to 4.0 ppm. Selectable time delays shall range from 0 to 7 minutes, in 1 minute increments.

Brasch Manufacturing Company, Inc. -- 2310 Millpark Drive -- Maryland Heights, MO 63043 USA
314-291-0440 -- 314-291-0646 fax -- braschmfg@braschmfg.com -- www.braschmfg.com