

Brasch GSE-CM-OG "ONGUARD" Carbon Monoxide Detector Operation Sequence

- Normal Operation:

If the carbon monoxide (CO) concentration is below the field adjustable alert level setting, the detector will be in the Normal Operation mode. In this mode, only the green, front panel power lamp will be on. Both the alert relay and the alarm relay contacts will be open.

- Alert Operation:

If the CO concentration rises above the alert level setting, the detector's ALERT front panel lamp will flash. After a fixed delay period of 3 minutes, if the CO concentration has continuously remained above the alert level setting, the alert relay contacts will close and the ALERT lamp will illuminate steadily. This contact closure can be used to actuate exhaust fans and clear the area of the CO gas. Once the CO concentration drops below the alert level setting, the delay period will begin again and the ALERT lamp will flash. If the CO concentration remains below the alert level setting continuously to the end of the delay period, the relay contacts will open, turning the fans off; the ALERT lamp will extinguish and the detector is now back to the Normal Operation mode.

The CO concentration at which the unit will enter the Alert Operation mode can be set for one of two levels. The detector is shipped at a default level of 35 PPM. By opening the front housing cover and moving a wire jumper one position on terminal T3, the alert level can be reduced to 25 PPM.

- +100 PPM Operation:

If the detector goes into the Alert Operation mode and the CO concentration continues to rise, at 100 PPM the detector will actuate the +100 PPM front panel lamp. Once the CO concentration drops below 100 PPM, the +100 PPM lamp will extinguish and the detector will return to the Alert Operation mode described above.

Should the CO concentration rise above 100 PPM during the alert delay period, the +100 PPM lamp will flash for the remainder of the delay interval. If the CO concentration remains continuously above 100 PPM for the remainder of the alert delay period, the unit will enter the +100 PPM Operation mode and the +100 PPM lamp will be on steadily.

In the +100 PPM Operation mode, both the ALERT and the +100 PPM lamps will be illuminated.

- Alarm Mode Operation:

If the CO concentration remains above 100 PPM for longer than 15 minutes, the ALARM front panel lamp will light, a second set of relay contacts will close and an internal buzzer will sound. This second set of

contacts can be used to actuate an external alarm bell. Once the CO concentration drops below 100 PPM, the internal alarm will reset, the ALARM lamp will extinguish and the alarm relay contacts will open. The internal alarm can also be silenced by pressing a front panel mounted push button switch labeled TEST/ALM. OFF/MAN. FAN.

- Self Test Mode:

If the push button of the front panel switch is momentarily actuated within the first five minutes after power is applied to the detector, the unit will enter the self testing mode. After a brief delay, the ALERT lamp will turn on and the alert relay contacts will close. Any fans contacted to these contacts with their power supplies active will operate. This condition will continue for approximately 30 seconds. At the end of this 30 second period, the +100 PPM lamp will turn on. The ALERT lamp will remain on and the alert relay contacts will remain closed. This condition will also continue for approximately 30 seconds. At the end of this period, the ALARM lamp will turn on and the alarm relay contacts will close for approximately 3 seconds. The ALERT and +100 PPM lamps will remain on and the alert relay contacts will remain closed. At the end of this 3 second period, the unit will enter the Normal Operation mode and begin monitoring the CO level.

- Manual Fan Mode:

Once five minutes passes after power is first applied, the front panel switch only functions as an internal alarm buzzer silence switch or as a switch to manually turn the fans on and off. Anytime the alarm buzzer is not sounding, the fans can be manually energized by pressing and holding the switch for approximately 3 seconds. Once the switch is released, the next 3 second switch actuation will de-energize the fan. This manual fan mode serves the same function as an externally mounted manual/auto fan switch.