TrolMaster CDA-1 Sequence of Events

The TrolMaster Carbon-X system provides critical monitoring of CO2 levels for up to 13 separate zones / rooms. The system can have both high level (up to 30,000ppm) alerts, as well as low level (5,000ppm) alerts. Both high and low level limits are user-adjustable to meet local regulations for supplemental CO2 use indoors.

The Carbon-X system can also control various devices such as ventilation fans, dampers, main CO2 valves as well as to send a signal to the fire department by interfacing to the fire / alarm panel in the facility. Automatic shut-off of CO2 is accomplished by wiring the facility's main CO2 solenoid in series with one of the system control modules. The settings for each of the devices connected to the system are user-selectable for easy customization.

Sequence of Events

The CDA-1 has one purpose. To constantly measure CO2 levels within enclosed spaces and to safely alert personnel to dangerously high levels of CO2.

1) Each room or space to be monitored will have at least one MBS-K30 CO2 sensor installed.
2) The sensor will constantly measure CO2 levels using NDIR technology.
3) If a sensor detects high levels of CO2 above the alarm threshold, a number of actions will be taken automatically by the CDA-1
4) The CDA-1 will trigger an audio-visual alarm module that is normally installed inside the area. *Additional alarm modules can be installed outside the area in common / joined spaces or hallways. You can also create a "master" alarm so that if ANY of the monitored rooms exceed safe CO2 levels, the Master alarm will activate.
5) The CDA-1 will automatically shut-off the flow of compressed CO2 gas to the affected area by de-energizing the electrical solenoid attached to the CO2 gas source. *There is also an option to shut-down a "master" CO2 control solenoid for buildings using distributed CO2 from a large centralized CO2 tank.
6) If an exhaust fan is required to exhaust high levels of CO2 outdoors, the CDA-1 will also activate the exhaust fan, dampers or other ventilation equipment to automatic ventilate the area.
7) The CDA-1 can also interface with the building central alarm system so that the alarm systems can be coordinated.
8) Once the high level of CO2 has been reduced below the user's alarm setpoint, the user can then manually reset the system by pressing a button on the front of the CDA-1 which will reset the alarm condition and ready the controller to resume normal operation.

NOTE: If an alarm condition is detected in a single area being monitored, the other areas will continue to be monitored independently so that the CDA-1 is ALWAYS monitoring each area.

If you have additional questions, call TrolMaster Tech Support @ 877-420-9876

July 7th, 2022