

VENTILATION CONTROL SYSTEM

MODEL ToxControl
CONTROLLER

GENERAL DESCRIPTION:

Toxalert's very flexible Model ToxControl Toxic and Combustible gas controller is micro processor based and used EEPROM memory to insure system programs are not lost during power interruptions. The ToxControl is designed to monitor analog signal values from remote sensors (See list of Toxalert's available sensors) and has two (2) levels of annunciation/control (warning stage and alarm stage). More levels are available if desired/required.

The ToxControl can monitor any number or combination of gas sensors and can be designed to operate any number of fans, depending on zoning requirements. Multiple panels may be networked together using a 2 conductor shielded cable and a single or multiple visual display panel(s) can be supplied to monitor the entire system operation.



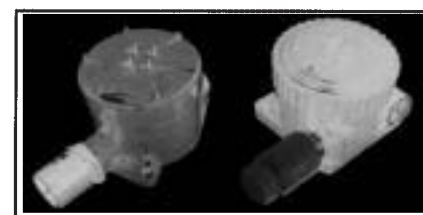
ToxControl

GENERAL DESCRIPTION OF OPTIONS:

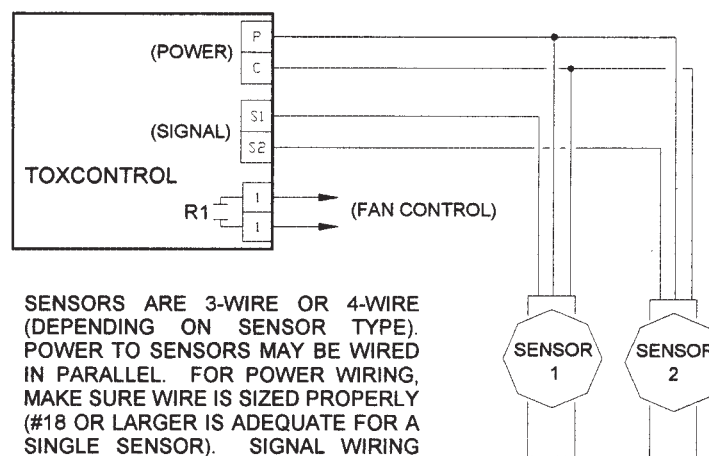
Optional labeled indicators may be provided on the face of the ToxControl panel for each sensor to indicate "Warning" level, "Alarm" level and sensor "Malfunction".

Optional audible alarm with a pushbutton silence switch may also be provided on the face of the panel.

Many customers take advantage of the optional LCD display for displaying gas concentrations in PPM (parts per million) for toxins or percent (%) LEL (lower explosive level) for combustibles. The LCD display displays the sensor with the highest gas concentration. Labeled pushbuttons are provided on the face of the controller for each sensor. When a sensor pushbutton is depressed its gas concentration is displayed in the LCD window.



Remote sensors



SENSORS ARE 3-WIRE OR 4-WIRE (DEPENDING ON SENSOR TYPE). POWER TO SENSORS MAY BE WIRED IN PARALLEL. FOR POWER WIRING, MAKE SURE WIRE IS SIZED PROPERLY (#18 OR LARGER IS ADEQUATE FOR A SINGLE SENSOR). SIGNAL WIRING SHOULD BE SHIELDED OR TWISTED PAIR RUN IN CONDUIT.

Wiring diagram

OUTPUTS:

DPDT dry relay contract outputs are provided for each warning level and the alarm level output. The contracts are rated at 5A at 120/220 VAC resistive load. Optional 0-10 VDC analog outputs area available.

SYSTEM POWER:

Controller - The controller requires 120 VAC to power the unit.
A 20 amp lighting circuit is adequate to power the system.

Sensor Power - Sensor power is generally supplied from the ToxControl controller.
Most sensors require 24 VDC but some require 24 VAC. Sensors only require a few milliwatts of power for operation. (See specific sensor data sheet for more detailed information).

ToxControl OPTIONS:

- A) One "warning level" LED may be supplied for each sensor for quick recognition of which sensor is calling for exhaust fan operation.
- B) One "alarm level" LED may be supplied for each sensor for quick recognition of which sensor is detecting an alarm condition.
- C) Sensor malfunction alarm can be supplied for the system to indicate when sensor signal has failed.
- D) The system may be programmed to automatically operate exhaust equipment on the day (s) of week and time of day basics.
- E) A printer may be added to the system to print out sensor input valves and status printouts along with time and date.
- F) Phone modem capabilities may be included for remote system monitoring and control.

The following is a list of sensors normally used in conjunction with ToxControl. This list is not meant to be all inclusive but rather a partial list of sensors manufactured and distributed by TOXALERT, INC.

| SENSOR | SYMBOL | STANDARD RANGES |
|---------------------|-------------------------------|-----------------------------|
| • Ammonia | NH ₃ | 0 to 50 PPM |
| • Carbon Monoxide | CO | 0 to 400 PPM |
| • Carbon Dioxide | CO ₂ | 0 to 2000 and 0 to 5000 PPM |
| • Chlorine | CL ₂ | 0 to 20 PPM |
| • Combustibles: | | |
| Methane | CH ₄ | 0 to 100% LEL |
| Natural Gas | | 0 to 100% LEL |
| Propane | C ₂ H ₈ | 0 to 100% LEL |
| • Hydrogen | H ₂ | 9 to 2000 PPM |
| • Hydrogen Chloride | HCl | 0 to 20 PPM |
| • Hydrogen Cyanide | HCN | 0 to 20 PPM |
| • Hydrogen Sulfide | H ₂ S | 0 to 200 PPM |
| • Nitrogen Dioxide | NO ₂ | 0 to 100 PPM |
| • Nitric Oxide | NO | 0 to 20 PPM |
| • Oxygen | O ₂ | 0 to 25% |
| • Sulfur Dioxide | SO ₂ | 0 to 100 PPM |
| • Refrigerant | | 0 to 500 PPM |