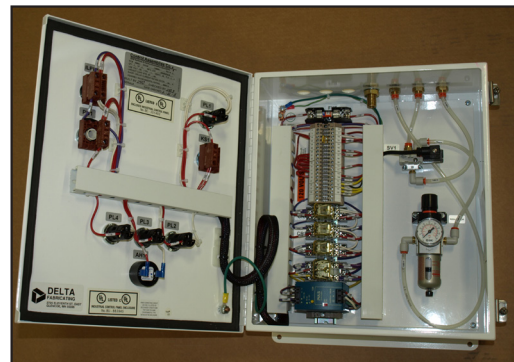


# E-STOP & O<sub>2</sub> MONITOR CONTROL

## EMERGENCY STOP CONTROL SYSTEM FOR INERT SERVICE

The E-Stop Control System is for use with remote, pneumatically actuated valves and oxygen monitors. This control system was developed to assist in monitoring automated cryogenic systems that use inert gas such as nitrogen to assure an oxygen deficient atmosphere does not occur. With the E-Stop Control System, you can be confident the cryogenic system is operating safely.



**Control System**

### SPECIFICATIONS

- Power – 120 VAC
- Air Supply – 20-145 psig max., 1/4" fpt connection
- Dimensions – 16"H x 14"W x 6"D
- Designed to work with pneumatic actuated valves, which require air pressure to open and close in the absence of air pressure
- Air to actuator – 1/4" fpt connection (fittings are supplied to accommodate 1/4" copper or 1/4" flexible poly tube)
- Internal pressure regulator to accommodate different actuator requirements



**Display Panel**

### FEATURES

#### The E-Stop Control System Interfaces with Chart's Oxygen Monitor/Alarm.

The remote actuated liquid nitrogen supply valve will close if any of the following conditions occur:

- Oxygen monitor goes into a low oxygen alarm state.
- Oxygen monitor loses its power or detects an internal fault.
- The red mushroom E-Stop button is pushed.
- An auxiliary alarm condition occurs.
- Power is lost to the E-Stop control system.

#### The E-Stop Control System Provides Positive Indication:

- When the power is on and all conditions are safe, the system has a green indicating light illuminated.
- When any alarm happens, a red indicating light becomes illuminated, which will identify which alarm condition exists.
- When the alarm condition exists, an audible horn sounds to alert personnel in the area.
- After an alarm occurs, the liquid nitrogen supply valve will not open immediately when the alarm condition goes away. The latching alarms, requiring acknowledgement by personnel to be sure the system is safe again to resume operation. The need for acknowledging the alarm is indicated by the illuminated RESET button. When the RESET button is pressed, and the alarm condition no longer exists, the system will re-open the liquid nitrogen supply valve and the RESET button will lose its illumination.



Innovation. Experience. Performance.®

# E-STOP & O<sub>2</sub> MONITOR CONTROL

EMERGENCY STOP CONTROL SYSTEM FOR INERT SERVICE



## The E-Stop Control System Interfaces with the Toxgard II Oxygen Monitor

### Oxygen Monitor

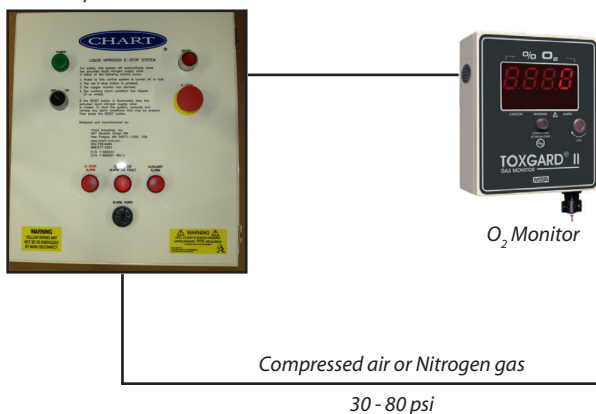
The Toxgard II O<sub>2</sub> monitor detects toxic gases, combustible gases or oxygen deficiency. The monitor is ideal for areas where harmful gases are stored or where a build-up of harmful gases may threaten worker or patient safety. Easy to install and operate.

- O<sub>2</sub> monitor can safely and accurately monitor safe levels of oxygen
- If an oxygen deficiency is detected (19.5% or less), the alarm will sound
- Large LED display
- Multiple alarm modes
- Automatic calibration
- Battery backup allows the monitor to detect O<sub>2</sub> levels for up to 24 hours in the event of a loss of power

### Oxygen Monitor Specifications

<b>Gas types</b>	Combustibles; oxygen; toxics
<b>Temperature Range:</b> Toxics and oxygen <i>(range on some models may differ)</i>	-20° to +50°C -4° to +122°F
<b>Temperature Range:</b> Combustibles	-40° to +90°C -40° to +194°F
<b>Zero Drift</b>	< 5%/Yr, typically
<b>Span Drift</b>	< 10%/Yr, typically
<b>Noise</b>	Less than 1% FS
<b>Accuracy: Repeatability</b>	±1% FS or 2 ppm
<b>Accuracy: Linearity</b>	± 2% FS (Combustible; O <sub>2</sub> ; CO) ± 10% FS or 2 ppm (others)
<b>Step Change Response</b> T20 O <sub>2</sub> and toxics T20 O <sub>2</sub> and toxics T50 combustibles T90 combustibles	< 12 sec. (Typ. 6 sec.) < 30 sec. (Typ 12 sec.) < 8 sec. < 20 sec.
<b>Humidity</b>	0-95% RH, non-condensing
<b>Sensor Life</b> Combustibles Toxics and O <sub>2</sub> Full replacement warranty	3 years typically 2 years typically 1 year
<b>Hazardous Area Rating</b>	General Purpose; XP Remote Sensor. Assembly can be installed in Class I, Div 1 areas.
<b>Power Input</b>	110-220 VAC power input
<b>Signal Output</b>	4-20 mA: 2-wire current source

E-Stop Control Panel



E-Stop control system with integrated actuated valve