# E-STOP & O2 MONITOR CONTROL

EMERGENCY STOP CONTROL SYSTEM FOR INERT SERVICE

The E-stop control system is for use on both bulk and MicroBulk installations where a remote method of automatic shutdown is required. The automatic shutdown can be initiated by a number of methods to include a manual push button, a low oxygen alarm initiated by an oxygen monitor, or a loss of ventilation. The shutdown occurs through the use of a pneumatic actuated shutoff valve, which is a requirement for the system to operate properly.

### **S**PECIFICATIONS

- 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 fail safe in the closed position
- 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** 



**Control System** 

#### **F**EATURES

## 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, a manual reset is required to resume the flow of inert gas. System will not restart on its own.



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The E-Stop **Control System** interfaces with the RAD-0002 **Remote Oxy**gen Storage Safety Alarm.

RAD-0002

The Remote Oxygen Depletion Safety Alarm is designed to protect employees and visitors near stored inert gases like nitrogen, argon and others. Easy to install and operate.

- New faster-responding sensor uses the latest oxygen sensing technology
- Can remote up to 300 feet from the main unit
- Reliable connection with standard Ethernet cable-25 ft included
- Large display clearly indicated current O<sub>2</sub> level and temperature
- Three relays automatically control fans, shutoff valves, and other devices
- 4-20 mA output to allow for remote display of values
- 88db audible and visual alarms on both units
- IP54 enclosure

CHART P/N	DESCRIPTION
11665631	E-STOP CONTROL MODULE
11682836	BOX E-STOP SECONDARY REMOTE (PUSH BUTTON)
21288211	RAD-0002 OXYGEN MONITOR – THREE ALARM
20800211	TOPWORKS FOR 1/2 INCH Y PATTERN VJ VALVE*
10623893	CVI PNEUMATIC ACTUATOR FOR TOPWORKS ABOVE*

\* Parts are compatible with most Chart Perma-Cyl® MicroBulk Storage Systems equipped with 1/2 inch VJ liquid withdrawal valves. Talk to a Chart Inside Account Representative for other types of equipment.

### SPECIFICATIONS

- Measurement Range: 0-25% Oxygen Sensor
- Alarm Relays (user configurable):
  - Relay 1:19% O<sub>2</sub>
  - Relay 2:17% O<sub>2</sub>
  - $\text{Relay} 3:15\% O_{2}^{2}$
- Alarm warm-up time: < 60 seconds
- Operating Temperature: 0-50°C (32-122°F)
- Calibration: Manual calibration with nitrogen gas
- Sensor Life Expectancy: 15 years

#### **ELECTRICAL**

- Power Supply: 110-240VAC to 6VDC Adapter
- 24VDC hard-wired power option
- Power Consumption: 3 Watts
- 6VDC battery backup connections
- Relays: Peak Current < 2A @ 30VDC or 250VAC, SPDT</li>
- Relay Color Coding:
  - Red & White: Normally Open
  - Blue & White: Normally Closed

### ADD-ONS

- CM-1026 Dual Strobe Add-on Kit
- RAD-0022 Additional Remote Display
- CM-1026-5,6 CO<sub>2</sub> Storage Safety Strobe Tower



### **TYPICAL INSTALLATION**





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