



sierra monitor corporation

Model 1400-00

Hydrogen Sulfide Gas Detector System

The Model 1400 H₂S Gas Detector System provides a fixed capability to detect H₂S gas in shipboard spaces containing sanitary waste equipment—in particular, the Collection, Holding and Transfer (CHT) rooms. Each Model 1400-00 Hydrogen Sulfide (H₂S) Gas Detector System consists of one (1) Model 1400-04 Control Unit and four (4) Model 1401-05 Detector Heads.

Each detector head continuously monitors the concentration of H₂S over the range of 0 to 100 parts per million (ppm). Sensor outputs are sent to the control unit via separate 4-20 mA channels. The control unit provides a Warning signal and indication when one or more of the detector heads indicates H₂S concentrations above 10 ppm, and it provides a Danger signal and indication when concentrations above 50 ppm are detected.

In a typical installation each of the four detector heads is mounted in the CHT room and the control unit is mounted in the passageway outside the CHT room. The detector heads monitor the air for H₂S gas and send continuous signals to the control unit. If the gas concentration at any of the detector heads reaches the preset Warning or Danger levels, the control unit immediately senses that condition.

The control unit then activates the indicator lights on its control panel plus it activates relay contacts which can



be used to turn on lights, buzzers and bells to alert personnel. The audible and visual devices can be located within the protected space, outside the protected space or at other remote locations. *[Figure 1 illustrates a typical installation.]*

The stainless steel control module includes a display panel with LED indicators for sensor and system status. Each detector head is in a stainless steel housing with a fully encapsulated electronic transmitter assembly and electrochemical sensor. The Model 1400 has been designed, tested and approved to meet MIL Spec requirements for shipboard use.

System Specifications

Input Power 115 Volts AC, 60 Hz, 1 Phase, 5 Watts (Type I)

Operating Temperature -40 to +120°F (-40 to 49°C)

Electrical Output:
Warning 115 VAC, 60 Hz, 1-Phase
Danger 115 VAC, 60 Hz, 1-Phase, and closes a normally open dry relay.

Overall Dimensions:
Control Unit 6.5" W x 10" H x 4.5" D (16.5 x 25.4 x 11.4 cm)
Detector Heads 5" W x 3.7" H x 3" D (12.7 x 9.4 x 7.6 cm)

Relay Contact Rating 5 A, 115 VAC, Non-Inductive Load

Weights:
Control Unit 11 lbs (49.7 Kg)
Detector Head 2 lbs each (9.0 Kg)

Signal from Sensor 4-20 mA = 0-100 ppm H₂S

Model 1400-00

Hydrogen Sulfide Gas Detector System

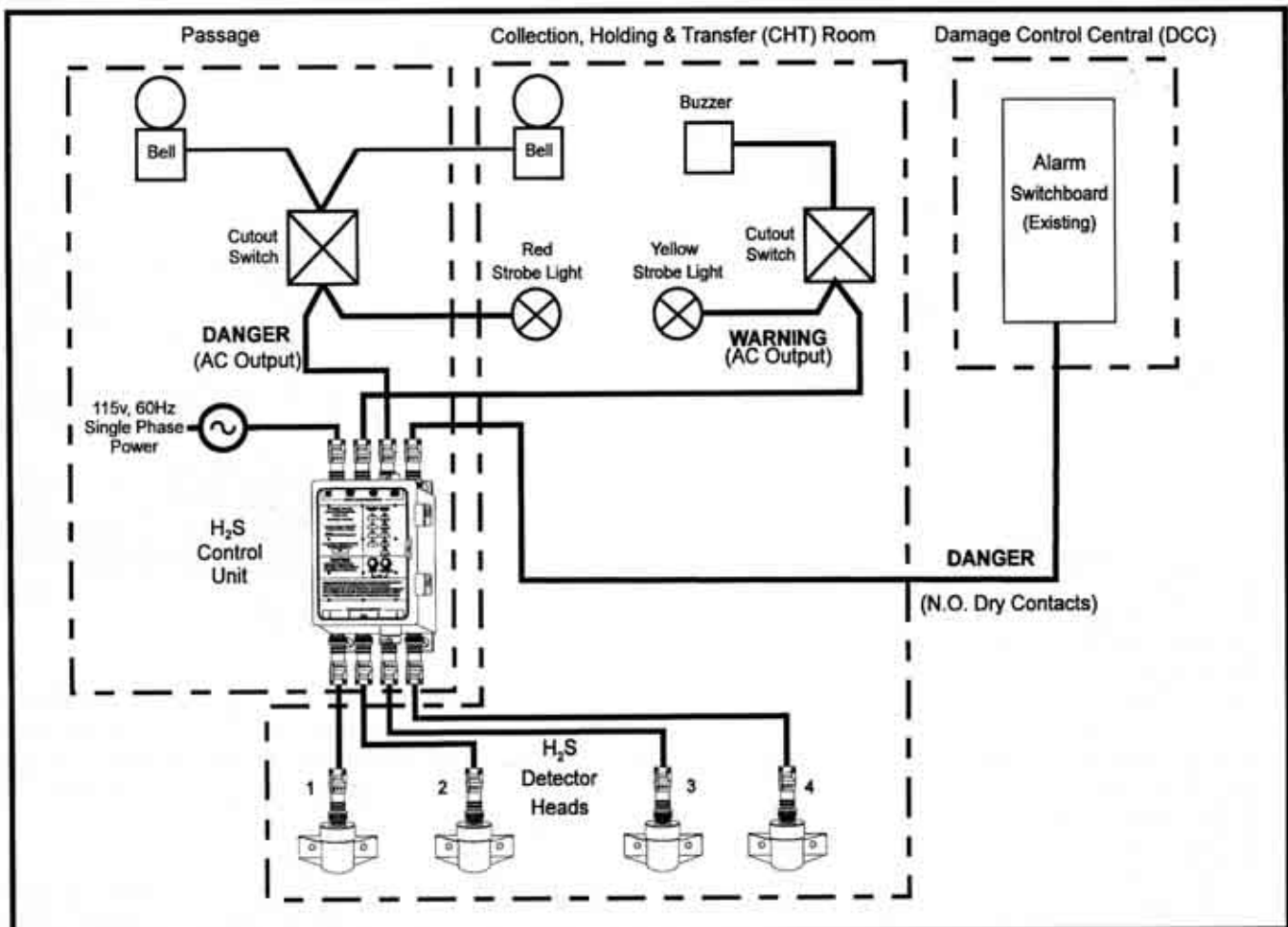


Fig 1: Typical Model 1400 Installation

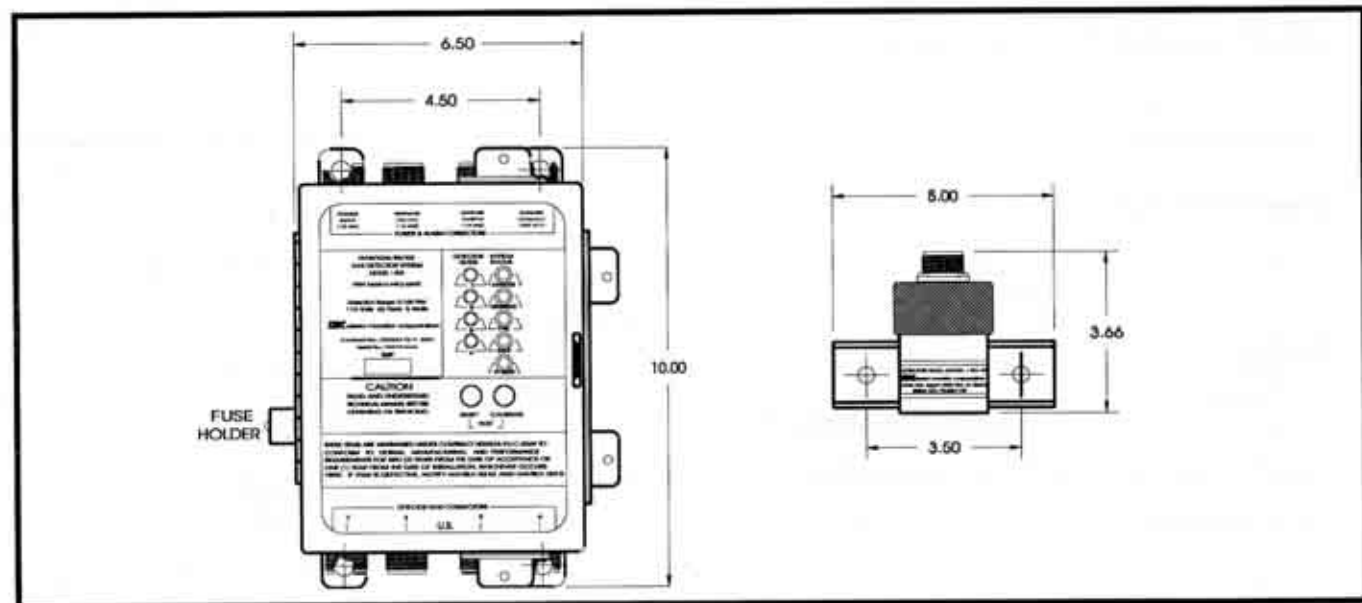


Fig 2: Model 1400 Dimensions