DET TRONICS

SPECIFICATION DATA

Fixed H_2S Gas Detection System

MODEL 710

APPLICATION

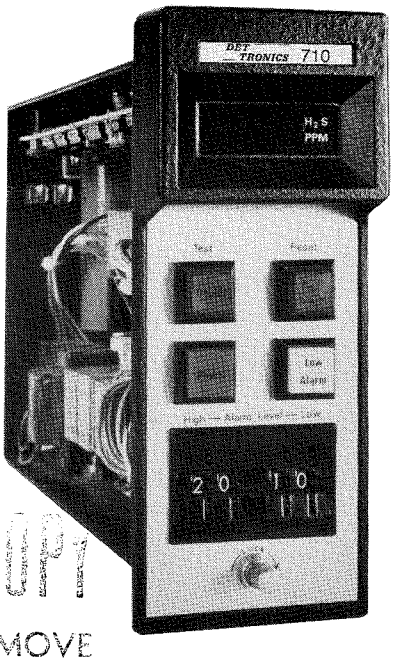
The Model 710 has both low and high alarm circuits. Each alarm level can be set by simply dialing in the desired ppm from 1 to 99 on the digit switches located on the front panel of the controller. This simple-to-set digit switch feature also allows an operator to tell at a glance where alarm levels are set. These visual alarm levels can only be changed by authorized personnel.

The sensor used in this instrument incorporates semiconductor technology combined with an electronics design that virtually eliminates response time, selectivity, saturation and drift problems found in other H_2S semiconductor sensors. A major factor in sensor stability is how accurately the sensor can be maintained at its optimum operating temperature. Under all normal operating conditions from -40°C to +85°C, the sensor temperature is thermostatically maintained at its optimum operating temperature. Because of this thermal stability, effects of ambient temperature, wind and humidity are minimal.

The sensor is highly selective to H_2S. Combustible hydrocarbons, carbon monoxide and sulfur dioxide, for example, do not give false H_2S indications even when present at concentrations well above their explosive or toxic limits. Furthermore, when concentrations of the above gases are contaminated with H_2S, the observed H_2S readings are only slightly affected. For example, with mixtures of 2.5% methane and 2% hydrogen (by volume in air) contaminated with 20 ppm H_2S the 710 system reads 21 and 27 ppm, respectively.

Line length has no effect on the performance or drift characteristics of the sensor. The sensor requires no "conditioning" and can be calibrated after the system has been operational for a short period of time. The Model 710 can be calibrated with only two simple steps in a matter of minutes.

Any combination of up to six H_2S and/or combustible detection systems can be intermixed in our standard 19 inch rack configuration.



FEATURES

Reliable . All integrated circuits are 100% temperature cycled, thermally shocked and aged before being installed in the equipment.

Modular Plug-ins. All modules are plug-in interchangeable for simple installation and maintenance. Also rack compatible with single and dual channel combustible gas detection systems.

AC/DC Operation. Provides automatic battery backup. Has built-in trickle charger.

Digital Readout. Easy to read from a distance with no chance for misinterpretation.

Digital Alarm Set Points. Both high and low alarms are adjustable at the flick of a switch. Alarm set levels are tamper-proof.

Low Power Consumption. Reduces self-heating, eliminating cooling requirements while increasing reliability and life.

Conformal Coated Boards and Specially Plated Contacts. Improves system reliability while minimizing corrosive effects.

Power Interrupt Alarm Delay. Prevents false alarms at initial startup or power interruption.

Short Circuit Protection. Sensor and analog signal circuits not damaged upon incidental short circuit.

Easy Calibration. Simple two step calibration procedure takes only minutes.

SPECIFICATIONS

Range Digital 0 to 99 ppm; Flashing indicates over 100 ppm.

Weight 3 pounds (1.36 kg)

Size (HWD) 7 x 13 x 11 inches (17.8 x 7.6 x 27.9 cm)

Power **Standard:** 105 to 130 vac, 60 Hz, 12 to 15 vdc
Optional: 215 to 245 vac, 50 Hz, 12 to 15 vdc
Consumption: 10 watts

Operating Temperature
Sensor: -40°F to +185°F (-40°C to +85°C)
Controller: +32F° to +158°F (0°C to +70°C)

Alarm Relays
Three DPDT 3 amperes 115 vac resistive (Low, High, Trouble).

Sensor Cable Requirements
Maximum resistance: 10 ohms closed loop.
Typical length/gauge: 2000 feet, 14 AWG, 3 conductor.

Recorder Output
0 to 1 vdc analog, 100 ohm output impedance standard.
0 to 1 vdc linear, 0 to 5 vdc linear, and 4 to 20 milliamperes output optionally available.

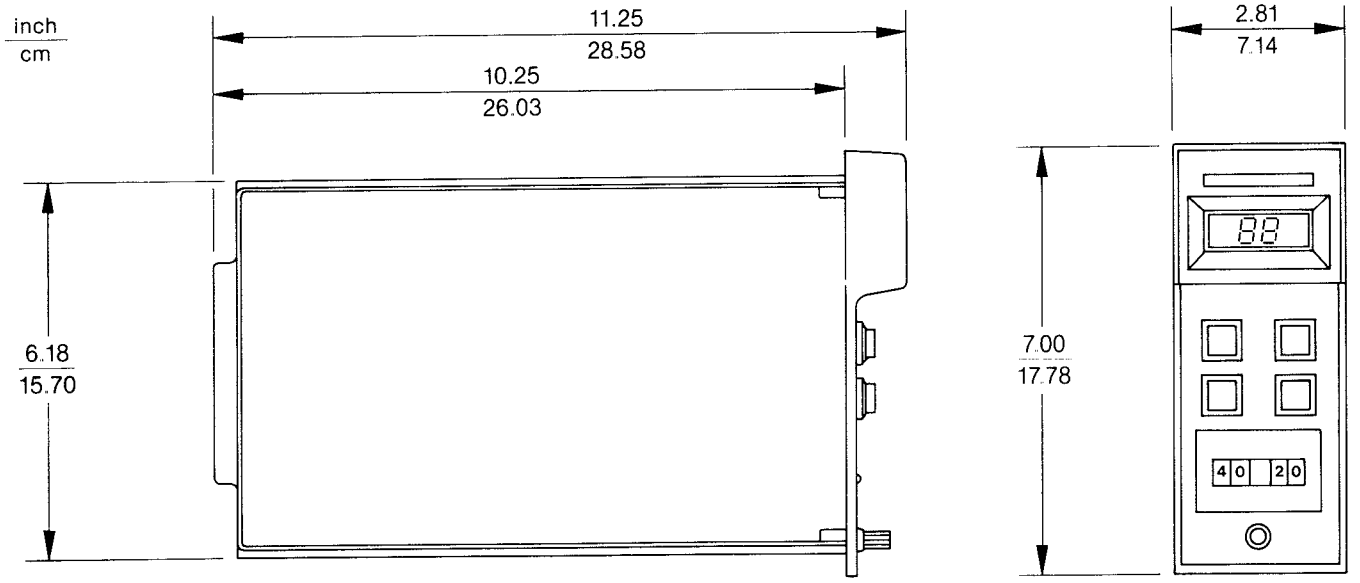
TYPICAL RESPONSE TIMES TO H_2S IN SECONDS

Sensors exposed to	Clean air background			1 ppm background		
	Time to reach			Time to reach		
	10ppm	20ppm	40ppm	10ppm	20ppm	40ppm
40ppm	30	60	120	15	30	60
80ppm	20	40	90	10	20	40

ORDERING INFORMATION

Controller	225600
H_2S Sensor	225629
Electronic Transmitter	225630
Junction Box Assembly	225693
19" Rack (6 Controllers)	225129
Panel Mount (1 Controller)	225465
Sensor Dust Cover	225312
Blank Panel	225188
Card Extender	226190
Operation Manual	95-8346

LR 52532



Detector Electronics Corporation
6901 West 100th Street • Minneapolis, Minnesota 55438 • Telephone (612) 941-5665
Facsimile (612) 829-8750 • Telex 6879043 DETEL UW • Cable DETRONICS
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