Wet H_2S Gas Monitor

The Gas Monitor for the detection of hydrogen sulfide (H_2S) shall be provided to monitor the gas concentration in wet 100% moisture saturated atmosphere in the _____(Specify Location)_____. Each Gas Monitor shall consist of a special hydrogen sulfide sensor, 25 feet of sensor interconnect cable with quick disconnect plug, and an electronic monitor housed in a NEMA 4X enclosure suitable for wall, pipe, or panel mounting. The special sensor shall be configured for either duct insertion or flowcell use.

An optional air-purge system that is controlled by the monitor shall be provided to remove condensation from the face of the special sensor.

The sensor shall connect to the monitor via a 25 foot 5-conductor cable with quick disconnect connector. The sensor shall be electrochemical, polarographic with a special membrane to isolate the electrodes from the gas stream and allow gas to diffuse into the sensor resulting in a reaction between the electrodes and resulting in signal to be amplified by the monitor.

The Hydrogen Sulfide Monitor electronic assembly shall be: **(select one version below)**

A. An AC powered instrument for operation on (specify either 115 VAC or 230 VAC) single-phase line power. The monitor shall provide two isolated 4-20 mA outputs configurable for hydrogen sulfide. Analog outputs shall be both ground isolated and isolated from each other. AC powered monitors shall also contain two SPDT relays.

B. A battery operated data logging monitor capable of operating from an internal 9 VDC battery. The monitor shall provide two 0-2.5 VDC outputs suitable for use by the internal data logger. The monitor shall operate for up to 4 days continuously on an alkaline battery and up to 10 days on a lithium battery.

The hydrogen sulfide monitor electronic assembly shall provide a variety of functions as follows.

1. Provide user display of PPM hydrogen sulfide on the main display. Main display parameter shall be indicated with a minimum character height of 0.75” to allow easy readability up to 20 feet away.

2. Allow selection of operating ranges of 0-2.000 PPM, 0-20.00 PPM, or 0-200.0 PPM.

3. When operated on AC power, provide two isolated 4-20 mA outputs, with output spans programmable by the user for any segment of a display range.

4. Provide output hold and output simulate functions to allow for testing or remote receiving devices or to allow maintenance without disturbing control systems.

5. When operated on AC power, provide two SPDT relays. Relays shall be programmable for either control or alarm function, or relays may be assigned to diagnostic functions for use in indicating trouble conditions at a remote location.

6. Diagnostic functions shall be incorporated into the transmitter. The 4-20 mA output shall be capable of being assigned to safely rise to 20 mA, fall to 4 mA, or be left alone, during diagnostic failures. Diagnostic error messages shall be displayed in clear language; no confusing error codes shall be displayed.

7. When operated from a 9 VDC battery, provide data logging of hydrogen sulfide. Provide software with the data logger for easy data download to standard computers, with graphical and tabular viewing of data. Software shall allow export of data to standard spreadsheet programs.

The complete Hydrogen Sulfide Monitor shall be Series Q45S as manufactured by Analytical Technology, Inc. or approved equal.