



ULTIMA[®] MOS-5E

Gas Transmitter

Hydrogen Sulphide Addressable Transmitter

Description

The ULTIMA MOS-5E Hydrogen Sulphide Addressable Transmitter is a highly reliable, self contained, microprocessor-controlled single point monitor with integral 3 digit readout. It is designed to measure and display concentrations of H₂S in three ranges: 0-20 ppm, 0-50 ppm or 0-100 ppm, but will continue to display concentrations up to 120 % FSD. The sensing element may be incorporated in the transmitter housing or remotely mounted at distances in excess of 600 m.

The ULTIMA MOS-5E will record the number of successful calibrations and compute the sensor resistance in Kohms during calibration and store sensor condition data in a non-volatile memory, together with calibration and set-up parameters.

The ULTIMA MOS-5E user interface is menu driven. In addition the instrument may be addressed via the Dual ModBus RTU interface which is based on the RS-485 standard. The ModBus output provides status, alarm, fault and other information for operation, trouble-shooting or configuration of the unit.

A1 and A2 Alarm Trip levels are user selectable in 1 ppm increments from 1-19 ppm for 0-20 ppm, 5-45 ppm for 0-50 ppm or 10-95 ppm for 0-100 ppm measuring range. Calibration level is 50 % of selected measuring range.

Applications

- Refineries
- Drilling Platforms and Rigs
- Gas and Oil Production Platforms
- Mud Logging Operations
- Desulphurisation Facilities
- Heavy Water Nuclear Facilities
- Wastewater Treatment Plants
- Chemical Plants
- Well Head Sites
- Oil Recovery/Reinjection Sites



Features and Benefits

RS-485 Dual ModBus Serial Interface in addition to 4-20 mA provides measurement, set-up and status of up to 247 nodes

18.5-35 VDC operation allows longer cable runs and lower cost installation

User changeable H₂S range enables convenient, flexible operation

3 digit display shows over-scale readings and alarm status

Single-point calibration provides easy, fast and simple one-man calibration

Fully adjustable and configurable open collector outputs result in lower wiring cost and flexible operation

System Specifications			
Sensor Type		Continuous diffusion, Thin-film MOS, adsorption type	
Sensor Life		3 to 5 years typical	
Measuring Ranges*		0-20 ppm, 0-50 ppm, 0-100 ppm	
Resolution		1 ppm	
Over-range Indication		Flashing readings in 99% - 120% of selected measuring range	
Calibration Level		50% of selected measuring range	
A1, A2 Trip Levels*			
Range	Adjustable	A1 Default	A2 Default
0-20 ppm	1-19 ppm	5 ppm	10 ppm
0-50 ppm	5-45 ppm	10 ppm	25 ppm
0-100 ppm	10-60 ppm	25 ppm	50 ppm
A1, A2 Open Collector Outputs*		Energised/de-energised and latching/non-latching	
Fault Open Collector Output		Normally energised	
Serial Communications Interface		Dual RS485 ModBus, 2400 - 19200 Baud	
Long Term Stability		± 4 ppm or 10% of applied gas (over 21 days)	
Accuracy		± 2 ppm or 10 % of applied gas (10°C to 50°C)	
Response Time		T ₅₀ < 2 minutes	
Approvals		ATEX II2G EEx d e m II B+H2 T5 (-50°C to + 55°C) & T4 (-50°C to + 70°C) IP 66/67 SIL 3 suitable	

* User selectable

Mechanical Specifications			
Height	150 mm (6 inches) excl. sensor 200 mm (8 inches) incl. sensor		
Width	150 mm (6 inches)		
Depth	95 mm (3.75 inches)		
Weight	2.5 kg (5.5 lbs) incl. sensor		
Mounting Holes	4 x 7 mm (0.28 inches) dia holes		
Termination	EEx e II Terminal Block		
Environmental Specifications			
Operating Temperature Range (continuous)	–50 °C to +70 °C		
Storage Temperature Range	–50 °C to +85 °C		
Relative Humidity	5% to 100% non-condensing		
Electrical Specifications			
Supply Voltage min./max.	18.5 – 35 VDC		
Electrical Connection	3 wires, screened and armoured cable		
Current Consumption	max. 200 mA at 24 VDC max. 360 mA at 12 VDC		
Supply Fuse Rating	18 VDC – 35 VDC operation 500 mA Char 'T' PC ≥ 1500A		
Analog Output	4–20 mA		
Output Resistance	max. 750 ohms		
Analog Output Fuse Rating	63 mA Char 'F' PC ≥ 1500A		
Ordering Information			
ULTIMA MOS-5E	Measuring Range 0-20 ppm	0-50 ppm	0-100 ppm
4 – 20 mA, ModBus	MOS5E-1501	MOS5E-1301	MOS5E-1101



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.