

GDS-68XP Process Gas Monitor for Low Oxygen Applications

- * Designed for use in Class I, Div 1 Hazardous Locations
- * Periodic measurement on intervals from 5 minutes to six hours
- * Reliable electrochemical sensor technology for accurate readings
- * Automatic overrange detection lengthens sensor life
- * Built-in flow meter provides visual confirmation of sample flow rate
- * Prompted calibration procedure and cal port for easy maintenance
- * Accepts sample lines up to 100 ft in length
- * Optional 3x alarm relays and MODBUS slave interface
- * GASMAX auto-recognition of Smart Sensors
- * High quality diaphragm pump with 24VDC brushless motor
- * Calibration in hazardous area requires simple magnetic wand
- * Manufactured in USA

GDS-68XP Process Gas Monitor

The GDS-68XP H₂S Monitor for Low Oxygen Applications uses sequencing technology to directly measure hydrogen, hydrogen sulfide, mercaptans or other gases in a stream that contains low levels of oxygen. By alternatively applying sample gas and clean purge air to the sensor, the GDS-68XP delivers longer sensor life and significantly reduces the amount of sample gas released to the atmosphere.

Today, most H₂S measurements are monitored either by lead acetate tape analyzers or once-a-day colorimetric gas detector tubes. "Pull tubes" are easy to use, but require on-site personnel and can be notoriously inaccurate. In addition, one sample per day may not be sufficient to track changes in the levels of H₂S or other gases brought on by variations in temperature or process. Tape units are more accurate, but require continuous maintenance and monthly tape replacement.

The GDS-68XP offers an alternative to expensive analyzers while providing up to 96 samples per day. Programmable sample and purge intervals allow the user to determine the optimum balance between sample rate, sensor life and sample gas released to ambient air.

The GDS-68XP contains a microprocessor controlled sequencer that manages the sample / purge cycle and maintains the sampled output during purge air operation. An integrated dual-channel GASMAX II gas monitor provides the sensor interface and signal conditioning, calibration, continuous reading display and optional



GDS-68XP in NEMA 4X Enclosure

alarm relays with MODBUS slave interface.

An internal real-time clock and event log time-stamps calibration and alarm events for later review, while the menu-driven operator interface eliminates all analog potentiometers and allows setup and calibration without hazardous area declassification.

The GDS-68XP can be configured for 'draw from ambient' or 'positive pressure' modes of operation. An integrated Run / Cal valve and user prompted calibration procedure make routine maintenance and field 'bump tests' quick and easy.

Reliability in Hostile Environments

Utilizing a long-life brushless DC pump, the GDS-68XP H₂S Monitor is designed for installation in hazardous areas rated Class I, Div 1. For low temperature applications where highest accuracy and response are needed, an optional AC heater can be included if an enclosure is specified.

Applications:

- Gas Pipeline Monitoring
- Water / Wastewater Treatment
- Custody Transfer Compliance
- Scrubber Breakthrough
- BioGas Digesters

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Gas and Flame Detection

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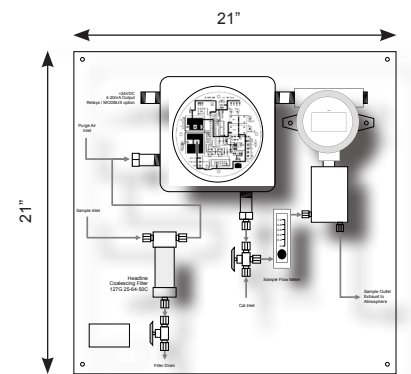
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GDS-68XP SPECIFICATIONS	
Power Input	24VDC +/- 5% at < 10 watts. Optional 110/220VAC power supply in separate enclosure. Heater requires 110/220VAC at 200 watts max
Display	Backlit 64 x 128 pixel LCD with 30-minute trend
Sensor	Highly sensitive electrochemical sensor for Hydrogen, Hydrogen Sulfide, Mercaptans or THT.
Standard Output	Standard 3-wire 4-20mA current source. Max loop R is 750 ohms with nominal 24VDC power supply.
Optional Output	Three Form C Relays 5A @ 30VDC / 240VAC plus RS-485 2-wire MODBUS® slave interface. Fault relay indicates sensor FAULT or LOW FLOW FAULT
Sample / Purge Pump	Long life 1.6 diaphragm pump with brushless 24VDC motor. Pull from vacuum up to 6" Hg (3 psig)
Sample Conditioning (Type 1)	For ambient pressure applications with clean & dry sample. Inlet pressure range +/- 3" water column. No inlet filter included. Sample pump configured to pull both sample and purge air.
Sample Conditioning (Type 2)	For low pressure applications with clean sample. Required inlet pressure fixed at 2 psig. Stainless steel coalescing filter with Pyrex bowl. Filter element PVDF fluorocarbon for removal of liquid aerosols, 99.99% removal of 0.1 micron particles.
Sample Conditioning (Type 3 Pressure)	High pressure applications with medium levels of entrained moisture and particulate. Max pressure 2000 psig. High pressure stainless steel inlet filter with stainless steel regulator. Filter element PVDF fluorocarbon for removal of liquid aerosols, 99.99% removal of 0.1 micron particles.
Sample Conditioning (Type 4 Pressure)	High pressure applications with high levels of entrained moisture and particulate. Max inlet pressure 1500 psig. Dual coalescing and membrane filter with bypass port. Coalescing filter element PVDF fluorocarbon for removal of liquid aerosols, 99.99% removal of 0.1 micron particles.
Sample Temp	+5°C (+41°F) to +50°C (+122°F)
Operating Temp	0°C (32°F) to +50°C (+122°F)
Construction	XP enclosure: Cast aluminum. GASMAX II: Aluminum housing with epoxy paint standard; Exterior stainless steel tubing and fittings. Backplate epoxy painted steel
Dimensions (Plate only)	21" x 21" x 8" 11.3 Kg / 25 pounds
Dimensions (NEMA 4X)	24" x 24" x 8" Non-metallic or Stainless Steel Enclosure 20 Kg / 45 pounds
Inlet / Outlet	1/4" compression, stainless steel
Approvals	GASMAX II CSA Certified for Class I, Div 1, Grps B, C, D. Suitable for XP installations
Warranty	Electronics - 2 years from date of purchase Sensor - 1 year from date of purchase. Note: Electrochemical sensor must be powered within three months of shipment or sensor life may be adversely affected.

GDS-68XP Order Guide	
GDS-68XP X-A-B-C / D-E-F [SS]	
"X"	SAMPLE CONDITIONING 1 = Ambient Sample Draw 2 = Coalescing Filter 3 = Filter + Regulator 4 = Dual Filter + Regulator
"A"	INPUT TYPE 1 = Standard Sensor Head 2 = Reactive Gas Sensor Head
"B"	SENSOR TYPE 14 - Hydrogen 15 - Hydrogen Sulfide 30 - Mercaptan 31 - THT
"C"	RANGE (H2S) (Depends on target gas)
"D"	OUTPUT 0 = Standard 4-20mA output 1 = 3X relays & MODBUS 2 = Isolated 4-20mA output 3 = MODBUS (no relays)
"E"	ENCLOSURE 0 = 21" x 21" painted steel plate 1 = 24" x 24" NEMA 4X non-metallic enclosure 2 = 24" x 24" NEMA 4X stainless steel enclosure
"F"	ENCLOSURE HEATER 0 = None 1 = 110VAC rated heater



No Enclosure - Backplate Only



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