

GDS-68XP Natural Gas Odorant Monitor for Mercaptans & THT-based Odorants

- * Designed for use in Class I, Div 1 Hazardous Locations
- * Sensors for mercaptan, THT and common odorant mixtures
- * Periodic measurement intervals from 3x per day to 12x per day
- * Reliable electrochemical sensor technology for accurate readings
- * Flow monitor function detects closed valves & blocked lines
- * Automatic overrange detection protects sensor from damage
- * Built-in flow meter provides visual confirmation of sample flow rate
- * Prompted calibration procedure and cal port for easy maintenance
- * Pounds per million cubic feet, ppm or milligrams per cubic meter units
- * Ethernet plus optional 4x relays and dual MODBUS slave interface
- * GASMAX CX 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 Gas Odorant Monitor

The GDS-68XP Natural Gas Odorant Monitor uses proven electrochemical sensor technology to directly measure levels of natural gas odorants based on mercaptan or tetrahydrothiophene such as Spotleak® by Arkema and Scentinel® from Chevron Phillips.

While federal regulations still require that human ‘sniffers’ confirm the presence of odorant at system end points in natural gas distributed to homes and businesses, gas distribution companies are starting to look for more automated and less subjective ways to measure the levels of odorant throughout their entire network.

The GDS-68XP Gas Odorant Monitor offers an alternative to expensive analyzers or constant human interaction. Using a sequencing procedure, the GDS-68XP periodically measures mercaptan or THT levels in natural gas and generates a calibrated output in pounds per million cubic feet (lbs/mmcf) or milligrams per cubic meter (mg/m³). Programmable sample and purge intervals allow the user to determine the optimum balance between sample rate, sensor life and natural 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 advanced GASMAX CX gas monitor provides the sensor interface and signal conditioning, calibration, continuous reading display and optional 4x alarm relays and dual MODBUS slave interface.



GDS-68XP in NEMA 4X Enclosure

An internal real-time clock and event log in the GASMAX CX 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.

For customers with access to an Ethernet port, the GASMAX CX provides an internal web page that makes it easy for remote users to view current readings and setup information.

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 Process 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 200W AC heater can be included if an enclosure is specified.

Applications:

- Gas Pipeline Monitoring
- Odorant Monitoring
- Custody Transfer Compliance



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GDS-68XP SPECIFICATIONS	
Power Input	24VDC +/- 5% at < 15 watts. Optional 110/220VAC power supply in separate enclosure. Heater requires 110/220VAC at 200 watts max
Display	Backlit high resolution color LCD with 30-minute trend
Sensor	Highly sensitive electrochemical sensors for Mercaptans, THT and gas odorant mixtures.
Standard Output	Standard 3-wire 4-20mA current source. Max loop R is 750 ohms with nominal 24VDC power supply. RJ-45 Ethernet interface with built-in web page
Optional Output	Four SPDT relays 5A @ 30VDC / 240VAC plus RS-485 2-wire MODBUS® slave interface.
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. <i>Sample pump configured to draw both sample and purge air.</i>
Sample Conditioning (Type 2)	For fixed low pressure applications with clean sample. Required inlet pressure 2 psig ±10%. 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)	Variable high pressure applications with medium levels of entrained moisture and particulate. Max pressure 1500 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 1000 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. Bypass port suggested for samples lines > 50 ft
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 CX: 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 (20 Kg / 45 pounds) 24" x 24" x 8" Stainless Steel Enclosure
Inlet / Outlet	1/4" compression, stainless steel
Approvals	GASMAX CX CSA Certified for Class I, Div 1, Grps A, B, C, D. Suitable for XP installations
Warranty	Electronics - 2 years from date of purchase

GDS-68XP Order Guide	
GDS-68XP X-A-B-C / D-E-F	
"X"	SAMPLE CONDITIONING 1 = Ambient Sample Draw 2 = Coalescing Filter 3 = Filter + Regulator 4 = Dual Filter / Bypass + Regulator
"A"	INPUT TYPE 1 = Standard Sensor Head
"B"	SENSOR TYPE 30 = Mercaptan (0-14 ppm, 0-3.00 lbs/mmcf, 0-50 mg/m3) 31 = Tetrahydrothiophene (0-3.00 lbs/mmcf, 0-50 mg/m3) 40 = Spotleak® 1001 (0-3.00 lbs/mmcf, 0-50 mg/m3) 41 = Spotleak 1005 (0-3.00 lbs/mmcf, 0-50 mg/m3) 42 = Spotleak 1007 (0-3.00 lbs/mmcf, 0-50 mg/m3) 43 = Spotleak 1009 (0-3.00 lbs/mmcf, 0-50 mg/m3) 44 = Scentinel® A (0-3.00 lbs/mmcf, 0-50 mg/m3) 46 = Scentinel E (0-3.00 lbs/mmcf, 0-50 mg/m3)
"C"	RANGE 1 = 0-1.00 2 = 0-5.00 3 = 0-10.0 4 = 0-25.0 5 = 0-50.0 6 = 0-100 7 = 0-500 8 = 0-1000 9 = Custom (Rxxxx)
"D"	OUTPUT 1 = Analog 4-20mA output + Ethernet 2 = Adds 4X relays & dual MODBUS
"E"	ENCLOSURE 1 = 21" x 21" painted steel plate only 2 = 24" x 24" non-metallic enclosure 3 = 24" x 24" stainless steel enclosure
"F"	ENCLOSURE HEATER / FAN 0 = None 1 = 110VAC, 200W rated heater 2 = 220VAC, 200W rated heater 3 = 270VAC, 200W rated heater 4 = 24VDC Exhaust Fan (2.2W)



Gas and Flame Detection

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