

GDS-78XP Process Gas Monitor for Hazardous Area Applications

- * Designed for installation in Class I, Div 1 Hazardous Locations
- * Dual channel measures toxic and combustible gases in same stream
- * Long life infrared sensors for carbon dioxide and hydrocarbons
- * Stainless steel coalescing filter removes particulate and moisture
- * Built-in flow meter provides visual confirmation of sample flow rate
- * High performance GASMAX CX monitor with large color display
- * Auto-recognition of infrared, VOC and toxic gas Smart Sensors
- * Prompted calibration procedure and cal port for easy maintenance
- * Optional 4x 5A SPDT alarm relays and 2x MODBUS slave interface
- * Optional explosion proof flow switch for critical applications
- * Available with NEMA 4x stainless steel and non-metallic enclosures
- * Ethernet interface with built-in web page and MODBUS/TCP
- * Calibration in hazardous area only requires simple magnetic wand
- * Manufactured in USA

GDS-78XP Process Gas Monitor

The GDS-78XP Process Gas Monitor is designed to monitor gas sample streams compatible with standard electrochemical, infrared or photoionization sensors. For gases that require electrochemical sensors, the stream must contain at least 10% oxygen. If the target gas can be detected by an infrared or photoionization detector, then the gas stream is not required to contain oxygen. The GDS-78XP combines the industry-proven reliability and performance of GDS Corp GASMAX gas monitor with high quality sample conditioning and flow measurement components to deliver cost-effective solutions for process monitoring applications.

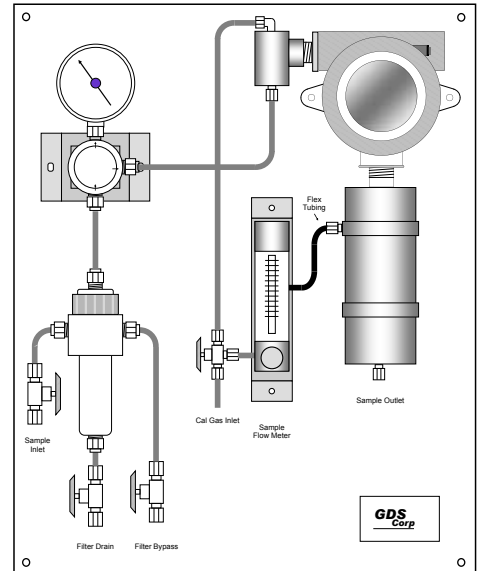
GASMAX CX Gas Monitor

The heart of the GDS-78XP is the new GASMAX CX gas monitor configured for sample flow monitoring. Built around the latest microprocessor technology, the GASMAX CX includes a high visibility color display, built-in Ethernet port with MODBUS/TCP and remotely-accessible web server with HTML readout.

A magnetic switch menu-driven operator interface eliminates all analog potentiometers and allows setup and calibration without hazardous area declassification. Electrochemical sensors include temperature compensation and local heater for increased accuracy in low temperature applications.

Flexible Sample Conditioning

The GDS-78XP can be configured with a range of high quality stainless steel



GDS-78XP for 0-100% CH₄ with regulator, flow switch and membrane + coalescing filter

sample conditioning systems in addition to the standard stainless steel inlet valve and high quality glass flowmeter. For high or variable pressure applications the GDS-78XP can be configured to include an adjustable regulator and stainless steel coalescing filter or combination coalescing and membrane filter with sample bypass loop. Inlet pressure can vary between 1.0 psig and 2500 psig, depending on sample conditioning option selected.

Designed for XP Environments

The GASMAX CX monitor is certified for use in Class I Div 1, Groups A, B, C & D areas when monitoring non-reactive gases. When measuring reactive gases such as chlorine or chlorine dioxide, the GDS-78XP is not suitable for hazardous locations.

The GDS-78XP is mounted on a 17" x 21" plate and is available with optional NEMA 4x non-metallic, painted steel and stainless steel enclosures.

GDS Corp

Gas and Flame Detection

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GDS-78XP SPECIFICATIONS	
Power Input	DC-powered GASMAX CX, 10 to 30VDC, 10 watts Max
Display	High resolution color display with engineering units and trend screens
Sample Conditioning and Inlet Pressure Requirements	Option X=0: Inlet valve only; Requires clean & dry sample, pressure 1 to 50 psig, fixed +/- 10% variation max (no regulation). Option X=1: Inlet valve and Pyrex glass particulate filter to remove moisture and large particulate. Pressure 1 to 50 psig, fixed +/- 10% variation max (no regulation). Option X=2: Inlet valve with stainless steel coalescing filter plus active regulator. Pressure 10 psig to 2500 psig. Option X=3: Inlet valve and combination coalescing & membrane filter plus regulator for maximum protection against moisture and particulates. Pressure 10 psig to 2000 psig.
Sample Inlet Temp	+5°C (+41°F) to +50°C (+122°F)
Flow Switch	Optional explosion proof flow switch. Low flow generates FAULT condition on 4-20mA output.
Signal Output	DC: 3-wire 4-20mA current source. Max R is 750 ohms with 24VDC
Operating Temp	-25°C (-13°F) to +55°C (+130°F)
Construction	GASMAX CX: AL housing with epoxy paint standard; #316 stainless steel optional. All stainless steel tubing and fittings.
Dimensions (Plate)	17" w x 21" h x 6" d 6.8 kg / 15 pounds with simple filter
Dimensions (Enc)	20" w x 24" h x 8" d Non-metallic or 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 with stainless steel flame arrestor.
Warranty	Electronics - 2 years from date of purchase. Important: Electrochemical toxic gas sensors must be powered within three months of shipment or sensor life may be adversely affected.

SENSOR TYPES ^{1,2}					
10	Oxygen	-40 to +55C	61	PID Low (0-50 ppm, 10.6eV) ⁵	-40 to +60C
11	Carbon Monoxide	-40 to +50C	62	PID High (0-300 ppm, 10.6eV) ⁵	-40 to +60C
14	Hydrogen	-40 to +50C	64	PID Low (0-50 ppm, 10.0eV) ⁵	-40 to +60C
15	Hydrogen Sulfide	-40 to +50C	65	PID High (0-300 ppm, 10.0eV) ⁵	-40 to +60C
16	Hydrogen Cyanide	-40 to +50C			
19	Sulfur Dioxide	-40 to +50C	70	Catalytic Bead 0-100% LEL CH4	-55 to +65C
22	Ethylene Oxide	-40 to +50C	71	Catalytic Bead 0-100% LEL (other)	-55 to +65C
23	Arsine	-40 to +40C			
24	Silane	-40 to +40C			
27	Hydrazine	-40 to +40C			
28	Nitric Oxide	-40 to +50C			
29	Nitrogen Dioxide	-40 to +50C			
30	Mercaptan	-40 to +40C			
31	Tetrahydrothiophene	-40 to +40C			

GDS-78XP Order Guide	
GDS-78XP X-A-B-C / D-E-F-G [SS]	
"X"	SAMPLE CONDITIONING ¹ 0 = Stainless steel inlet valve only 1 = Pyrex glass particulate filter 2 = Stainless steel coalescing filter with high pressure regulator 3 = Stainless steel coalescing plus membrane filter with sample bypass plus high pressure regulator
"A"	CHANNEL 1 SENSOR HEAD 1 = Stainless steel sensor head 45 = Flow cell for GDS-IR
"B"	CHANNEL 1 SENSOR TYPE ^{1,2} See GDS Product Configurator
"C"	CHANNEL 1 RANGE ⁴ See GDS Product Configurator
"D"	CHANNEL 2 SENSOR HEAD 1 = Stainless steel sensor head 45 = Flow cell for GDS-IR
"E"	CHANNEL 2 SENSOR TYPE See GDS Product Configurator
"F"	CHANNEL 2 RANGE ⁴ See GDS Product Configurator
"G"	OUTPUT 0 = Analog 4-20mA and Ethernet with built-in web server and MODBUS/TCP 1 = Additional 4x alarm relays (5A SPDT) and dual MODBUS serial ports.
"H"	ENCLOSURE 1 = mounted on 21" x 21" steel plate 2 = mounted in 24" x 24" NEMA 4X non-metallic enclosure 3 = mounted in 24" x 24" NEMA 4X stainless steel enclosure
"J"	ENCLOSURE HEATER ³ 0 = None 1 = 110VAC, 200 W heater 2 = 220VAC, 200 W heater 3 = 277VAC, 200 W heater
"K"	FLOW SWITCH 0 = No low flow warning switch 1 = Explosion-proof low-flow warning switch (generates FAULT)

NOTES
Note 2: Operation above or below published sensor temperature limits may result in damage to the sensor or inaccurate readings.
Note 3: Enclosure heater requires enclosure (Option E = 1, 2 or 3)
Note 4: Available ranges vary and are based on sensor selection; contact GDS Corp for details.
Note 5: Type 6x PID sensors are not compatible with streams containing high concentrations of methane or hydrocarbons.
Note 6: [SS] specifies 316 stainless steel enclosure for GASMAX CX and 304 stainless steel back panel



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