GDS-78XP Process Gas Monitor for Hazardous Area Applications

* Designed for installation in Class I, Div 1 Hazardous Locations

* Reliable electrochemical sensor technology for toxic gases

* Long life infrared sensors for carbon dioxide and hydrocarbons

* Stainless steel coalescing fi 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 fl 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.
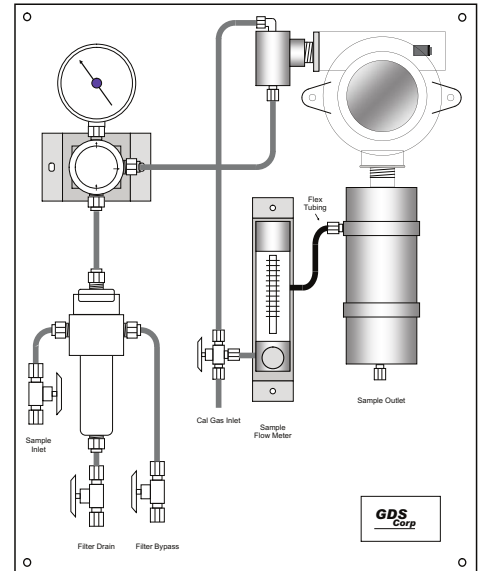
GASMAX CX Gas Monitor

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

A magnetic switch menu-driven operator interface eliminates all analog potentiometers and allows setup and calibration without hazardous area declassifi
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% CH_4 with regulator, flow switch and membrane + coalescing fil

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 certifi 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.

Toxic & Combustible Gas Detection ● Controllers ● Process Monitors ● Calibration Supplies

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 tp remove moisture and large particulate. Pressure 1 to 50 psig, fi variation max (no regulation). Option X=2: Inlet valve with stainless steel coalescing fi 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 flo 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. Painted steel backplate.
Dimensions (Plate)	17"w x 21" h x 6" d 6.8 kg / 15 pounds with simple fi
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	27	Hydrazine	-40 to +40C
11	Carbon Monoxide	-40 to +50C	28	Nitric Oxide	-40 to +50C
12	Chlorine [1]	-40 to +50C	29	Nitrogen Dioxide	-40 to +50C
13	Chlorine Dioxide [1]	-40 to +40C	30	Mercaptan	-40 to +40C
14	Hydrogen	-40 to +50C	31	Tetrahydrothiophene	-40 to +40C
15	Hydrogen Sulfide	-40 to +50C	32	Diborane	-40 to +40C
16	Hydrogen Cyanide	-40 to +50C	33	Hydrogen Sulfi	
17	Hydrogen Chloride [1]	-40 to +50C	61	PID Low (0-50 ppm, 10.6eV)	-40 to +60C
18	Hydrogen Fluoride [1]	-40 to +50C	62	PID High (0-300 ppm, 10.6eV)	-40 to +60C
19	Sulfur Dioxide	-40 to +50C	64	PID Low (0-50 ppm, 10.0eV)	-40 to +60C
20	Ammonia [1]	-40 to +40C	65	PID High (0-300 ppm, 10.0eV)	-40 to +60C
21	Ozone [1]	-40 to +40C	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	109-133	Types 109 - 133 GDS-IR Infrared Sensor with built-in temperature compensation and fault detection	-55 to +65C
25	Fluorine [1]	-40 to +40C			
26	Phosgene [1]	-40 to +40C			

GDS Corp — Gas and Flame Detection

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 fi pressure regulator
"A"	1 = Stainless steel sensor head 3 = SS sensor head for reactive gases 28 = Flow cell for GDS-IR
"B"	SENSOR TYPE [1, 2] 10 - 33 Toxic 61 - 64 Photoionization for VOC 70 - 71 Catalytic bead for LEL 110 - 133 GDS-IR Infrared for LEL or by-volume hydrocarbons or carbon dioxide (CO_2).
"C"	RANGE [4] (Contact factory for available ranges)
"D"	OUTPUT 0 = Analog 4-20mA and Ethernet with built-in web server and MODBUS/TCP 1 = Addtional 4x alarm relays (5A SPDT) and dual programmable MODBUS serial ports.
"E"	ENCLOSURE 0 = mounted on 17" (w) x 21" (h) carbon steel plate 1 = mounted in 20" (w) x 24" (h) NEMA 4X non-metallic enclosure 2 = mounted in 20" (w) x 24" (h) NEMA 4X painted steel enclosure 3 = mounted in 20" (w) x 24" (h) NEMA 4X stainless steel enclosure
"F"	ENCLOSURE HEATER 0 = None 1 = 110VAC, 200 W heater 2 = 220VAC, 200 W heater
"G"	FLOW SWITCH 0 = No low fl 1 = Explosion-proof low-fl switch (generates FAULT)

NOTES

Note 1: Reactive gases require type 3 sensor head. Units for reactive gases with type 3 sensor heads are not suitable for use in hazardous areas.

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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