

GASMAX II + PID Gas Monitor

Photoionization Detector (PID) for Volatile Organic Compounds

- * CSA Certified for Class I, Div 1 explosion-proof installations
- * Monitor both toxic gases and VOCs with one detector
- * Graphic display shows values, units, trend graph, alarm levels
- * Supports both local and remote sensors for easy installation
- * Non-intrusive, prompted calibration with programmable cal gas
- * Power-up and post-calibration delays eliminate false alarms
- * Backlit display for better visibility in low light conditions
- * Options for 3x 5A alarm contacts, isolated 4-20mA and MODBUS®
- * Security settings to lock critical parameters
- * Auto-recognition of Smart Sensors uploads calibration data & more
- * Fault supervision circuitry detects failed sensor & transmits warning
- * Setup in hazardous area requires only simple magnetic wand
- * Optional 9.6 eV sensor suitable for detection of Benzene
- * Manufactured in USA



Shown with local stainless steel sensor head (left) and dual-local sensor mount (right)

The GASMAX II gas monitor for VOCs uses a photoionization detector (PID) to detect concentrations of volatile organic compounds (VOC) such as benzene, toluene, xylene and chlorinated hydrocarbons.

PID Sensor Technology

The PID Smart Sensor is available in High Range (0-300 ppm) and Low Range (0-50 ppm) for maximum flexibility. The PID sensor is fi eV or 9.6 eV source lamps designed to ionize the most commonly found VOCs while remaining insensitive to changes in humidity, oxygen or CO₂ levels. Any compound with an ionization potential lower than the lamp value can be detected with the GASMAX II / PID monitor. Built-in dual channel electronics allow the GASMAX II to support any GDS Corp oxygen or toxic gas sensor in combination with the photoionization detector.

Advanced User Interface

The highly visible backlit display and high intensity alarm LEDs constantly show alarm status, gas reading and programmable tag name; a second screen shows alarm levels and the most recent 30 minute trend. An internal real-time clock and event log time-stamp calibration and alarm events for later review. A menu-driven operator interface using magnetic keys eliminates all analog potentiometers and allows complete setup and calibration without hazardous area declassifi

Flexible Output Options

In addition to standard dual 4-20mA current loop outputs, an optional dual isolated 4-20mA output board or an RS-485 2-wire MODBUS® interface with three 5A SPDT relays are available to communicate with controllers or drive local alarm indicators. When used with the C1 Protector Controller's MODBUS master port, multiple GASMAX II monitors can be daisy-chained up to 500m.

Reliable

Available in both single and dual channel models, the GASMAX II is CSA certified for use in Class I, Div 1 explosion proof installations. For low temperature applications, an Extended Temp option adds thermostatically controlled heaters to enable operation as low as -55°C ambient for electrochemical sensors.

GDS
Corp

Gas and Flame Detection

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GASMAX II + PID SPECIFICATIONS	
Power Input	10-30VDC at < 4 watts with relay board. Additional power (4W peak) required for Extended Temp option.
Display	Backlit 64 x 128 pixel LCD with trend, bargraph and eunits.
Electrochemical Sensor Input	Channel 1 accepts microamp-level signals from GDS Corp toxic & oxygen defi
Bridge Type Sensor Input	Channel 2 provides adjustable excitation voltage for SmartIR, PID and catalytic bead or 4-20mA current source
Standard Output	Standard dual 3-wire 4-20mA current source. Max loop R is 750 ohms with nominal 24VDC power supply
Optional Output #1	Dual 1500CMV isolated 4-20mA current source. Max loop R is 650 ohms with nominal 24VDC.
Optional Output #2	Three Form C Relays 5A @ 30VDC / 240VAC plus RS-485 2-wire MOD-BUS® slave interface
Temp	-40°C to +60°C; To -55°C with Extended Temp Heaters.
Housing	Aluminum housing with epoxy paint standard; Optional #316 stainless steel housing (add [SS] to part number)
Dimensions	Width 5.4" (137 mm), Height 8" (203 mm), Depth 5" (127 mm) Shipping weight 6.5 pounds (3 kg)
Approvals	CSA Certifications ATEX Certifi
Warranty	2 years on electronics and one year on sensors.

SENSOR TYPES					
10	Oxygen	-40 to +55C	27	Hydrazine ⁶	-40 to +40C
11	Carbon Monoxide	-40 to +50C	28	Nitric Oxide	-40 to +50C
12	Chlorine ⁶	-40 to +50C	29	Nitrogen Dioxide	-40 to +50C
13	Chlorine Dioxide ⁶	-40 to +40C	30	Mercaptan TBM	-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	-40 to +50C
17	Hydrogen Chloride ⁶	-40 to +50C			
18	Hydrogen Fluoride ⁶	-40 to +50C			
19	Sulfur Dioxide	-40 to +50C	61	PID Low (0-50 ppm) 10.6 eV	-40 to +60C
20	Ammonia ⁶	-40 to +40C	62	PID High (0-300 ppm) 10.6 eV	-40 to +60C
21	Ozone ⁶	-40 to +40C	63	PID Low (0-50 ppm) 9.6eV	-40 to +60C
22	Ethylene Oxide	-40 to +50C	64	PID Low (0-50 ppm) 10.0 eV	-40 to +60C
23	Arsine	-40 to +40C	90	4-20mA input	-40 to +65C
24	Silane	-40 to +40C			
25	Fluorine ⁶	-40 to +40C			-
26	Phosgene ⁶	-40 to +40C			



GASMAX II Order Guide	
GM II A - B - C / D - E - F / G - H [SS]	
"A" & "D"	SENSOR HEAD ^{1,2,3,4,6,8} 0 = None 1 = Local sensor head 2 = Local sensor head + splash guard 3 = Local sensor head for reactive gases 4 = Local sensor head + SG for reactive gases 5 = Remote sensor head 6 = Remote sensor head + splash guard 7 = Remote sensor for reactive gases 8 = Remote sensor head + SG for reactive gases 9 = Local mount for GDS-IR ⁷ 10 = Remote mount for GDS-IR ⁷ 12 = Local ATEX sensor head 13 = Local ATEX sensor head + splash guard 14 = Remote ATEX sensor head 15 = Remote ATEX sensor head + splash guard 20 = Local 4-20mA sensor transmitter 21 = Local sensor transmitter + splash guard 22 = Local sensor transmitter for reactive gases ³ 23 = Local sensor transmitter + SG for reactive gases 24 = Remote 4-20mA sensor transmitter 25 = Remote sensor transmitter + splash guard 26 = Remote sensor transmitter for reactive gases 27 = Remote sen. trans.+ SG for reactive gases
"B" & "E"	SENSOR TYPE (see chart) ⁵ Using toxic sensors on "E" requires local or remote 4-20mA transmitter
"C" & "F"	DETECTION RANGE ⁵ 1 = 0 - 1 5 = 0 - 50 2 = 0 - 5 6 = 0 - 100 3 = 0 - 10 7 = 0 - 500 4 = 0 - 25 8 = 0 - 1000 Custom RXXXX (0-9999)
"G"	OUTPUT OPTIONS 0 = Dual 4-20mA output (standard) 1 = MODBUS + 3X Alarm Relays 2 = Dual isolated 4-20mA output 3 = MODBUS only 4 = HART interface (single ch)

NOTES
Note 1: Certain sensor installations do not utilize Smart Sensor interface
Note 2: Maximum distance for remote toxic sensor connection is 25ft (3m). Use sensor transmitter for longer
Note 3: GASMAX II with sensor head for reactive gases not suitable for XP installations
Note 4: ATEX cert not available for reactive gases
Note 5: Standard ranges shown; contact factory for additional ranges
Note 6: Certain highly reactive gases require sensor heads for reactive gases
Note 7: Selections 9 & 10 for Option "D" only
Note 8: Dual local sensors require Y-adaptor
Note 10: Operation below -10°C for sensor types 10 to 31 may require Extended Temp option (local mount sensors only)