GASMAX IIx *Wireless* Monitor

Wireless DC-Powered Gas Monitor for Toxic, Combustible or Volatile Organics (VOC) Hazards

✳ Integrated radio modem enables wireless data transmission

✳ Monitor toxic or combustible gases in remote locations without wires

✳ 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

✳ 900Mhz (US) or 2.4Ghz (worldwide) versions available

✳ 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

✳ Typical > 1 mile range with local 'whip' antenna (900Mhz)

✳ For battery applications, see the GASMAX/ECx gas monitor

✳ Manufactured in USA

The GASMAX IIx gas monitor delivers the latest in wireless toxic or combustible gas detection technology, reliability and ease of use.

Widest Variety of Available Sensors
Advanced electronics allows the GAS-MAX IIx to support any single GDS Corp electrochemical toxic or bridge-type catalytic bead, infrared or PID sensor. GDS Corp Smart Sensors enhance this capability by maintaining their own record of serial number, born-on date, initial calibration values, engineering units and more. Using this information, the GASMAX IIx constantly tracks sensor performance and calculates an estimate of sensor life remaining.

Advanced User Interface
The highly visible backlit display and high intensity alarm LEDs constantly show alarm status, calibrated engineering values and programmable tag name; a trend screen shows alarm levels and the most recent 30 minute data values. 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 declassification.

Fully Integrated Wireless Solution
An internal 900Mhz or 2.4Ghz license-free spread-spectrum wireless modem allows the GASMAX IIx to transmit gas detection data to a remote host controller. Every 6 seconds, the GASMAX IIx

Shown with local stainless steel sensor head and 900Mhz whip antenna

samples the atmosphere and transmits a warning signal if the pre-programmed alarm level is exceeded. Under normal "no-gas" conditions the GASMAX IIx transmits a 'keep-alive' signal every fi minutes to verify communications.

Host Controllers
The GASMAX IIx is designed to communicate with the C1 *Protector* 8/16 channel controller / receiver or the C2 *Quad Protector* 4 channel controller / receiver. Both controllers are available with integrated 900Mhz or 2.4Ghz wireless modems.

GDS Corp
Gas and Flame Detection

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

GASMAX IIx SPECIFICATIONS

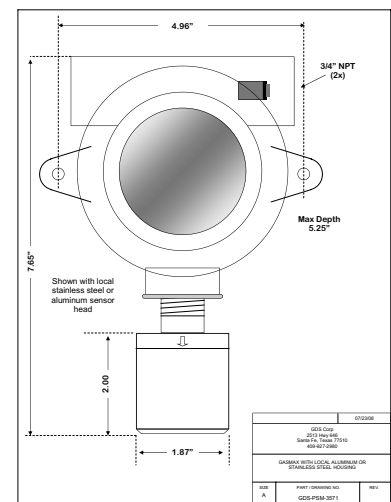|	
Power Input	10-30VDC at < 3 watts with wireless radio modem.
Display	Backlit 64 x 128 pixel LCD with 30-minute trend, bargraph and engineering units display.
Electrochemical Sensor Input	Channel 1 accepts microamp-level signals from GDS Corp toxic & oxygen deficiency sensors
Bridge Type Sensor Input	Channel 2 provides adjustable excitation voltage for SmartIR, PID and catalytic bead. Can be converted to 4-20mA input.
Standard Output	License-free 900Mhz or 2.4Ghz frequency-hopping spread spectrum wireless modem with data encryption 900MHz power adjustable from 10mW to 1.0 watt 900MHz; 2.4GHz output fi Receiver sensitivity typically -110dBm
Temp	-25°C to +65°C (see sensor limitations)
Housing	Aluminum with epoxy paint standard; #316 stainless optional
Dimensions	Width 5.4" (137 mm), Height 8" (203 mm), Depth 5" (127 mm) Shipping weight 6.5 pounds (3 kg)
Approvals	Suitable for XP installations
Warranty	2 years on electronics and one year on sensors.

SENSOR TYPES

10	Oxygen (0-25%)	-30 to +55C	27	Hydrazine (0-1)	-10 to +40C
11	Carbon Monoxide (0-300)	-30 to +50C	28	Nitric Oxide (0-50)	-20 to +50C
12	Chlorine (0-5) [6]	-20 to +50C	29	Nitrogen Dioxide (0-100)	-20 to +50C
13	Chlorine Dioxide (0-1) [6]	-20 to +40C	30	Mercaptan TBM (0-15)	-10 to +40C
14	Hydrogen (0-2000)	-20 to +50C	31	Tetrahydrothiophene (0-100)	-10 to +40C
15	Hydrogen Sulfi	-30 to +50C			
16	Hydrogen Cyanide (0-50)	-20 to +50C	50	SmartIR 0-100% LEL (Methane)	-20 to +50C
17	Hydrogen Chloride (0-30) [6]	-20 to +50C	51	SmartIR 0-100% LEL (Propane)	-20 to +50C
18	Hydrogen Fluoride (0-10) [6]	-20 to +50C	53	SmartIR 0-100% v/v (Methane)	-20 to +50C
19	Sulfur Dioxide (0-25)	-30 to +50C	53	SmartIR Carbon Dioxide	-20 to +50C
20	Ammonia (0-100) [6]	-20 to +40C	61	PID Low (0-50 ppm) 10.6eV	-40 to +60C
21	Ozone (0-1) [6]	-20 to +40C	62	PID High (0-300 ppm) 10.6eV	-40 to +60C
22	Ethylene Oxide (0-20)	-20 to +50C	63	PID Low (0-50 ppm) 9.6eV	-40 to +60C
23	Arsine (0-1)	-20 to +40C	64	PID High (0-300 ppm) 9.6eV	-40 to +60C
24	Silane (0-50)	-20 to +40C	70	Catalytic Bead 0-100% LEL	-40 to +65C
25	Fluorine (0-1) [6]	-10 to +40C	90	4-20mA input	-40 to +65C
26	Phosgene (0-1) [6]	-20 to +40C	99	GDS-IR (specify gas)	-40 to +65C
				See GDS-IR data sheet for more target gas selections	

Determining Wireless Communications Range

The distance at which any wireless connection will operate reliably is dependent on many factors, including terrain, frequency, path length, interference from existing radio sources, combined antenna height, transmitter power and receiver sensitivity. For reliable communication, the system power margin (TX power + RX gain + Antenna gain - Path Loss) must exceed 20 dB. Range can be improved by increasing antenna height, using directional antennas or increasing transmitter power.

GDS Corp
Gas and Flame Detection

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

GASMAX IIx Order Guide

GM IIx A - B - C / D - E - F / G - H

"A" & "D"	SENSOR HEAD [1,2,3,4,6] 1 = Stainless Steel Sensor Head 2 = SS Head + Splash Guard 4 = SS Head + SG (no XP) 5 = Remote SS Sensor Head 6 = Remote SS Head + SG 8 = Remote SS Head + SG (no XP) 9 = Local mount for GDS-IR [7] 10= Remote mount for GDS-IR [7] 12= Local SS ATEX Sensor Head
"B" & "E"	SENSOR TYPE (see chart) [5] B use only types 10 - 31 E use only types 50 - 99
"C" & "F"	DETECTION RANGE 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 = Standard 4-20mA output
"H"	TEMPERATURE RANGE [10] 0 = Std range –40°C to +55°C

NOTES

Note 1: Remote sensor installations do not utilize Smart Sensor interface
Note 2: Maximum distance for remote e-chem sensor connection is 25ft (3m).
Note 3: Single channel only
Note 4: ATEX certifi aluminum sensor head
Note 6: Certain highly reactive gases require type 4 or type 8 sensor head
Note 7: Selections 9 & 10 for Option "D" only