S5000 **Gas Monitor**

Extreme Durability. Anytime. Anywhere.

GM
General Monitors

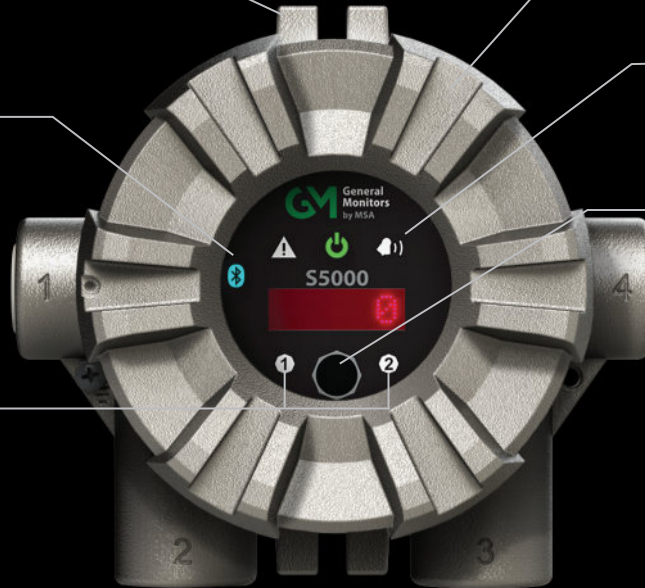Simple retrofits have identical footprint and wiring to S4000 Gas Monitor series.

Bluetooth® wireless technology allows mobile device to act as HMI screen and controller via the X/S Connect App.

Dual sensor capability increases detection coverage without increasing CAPEX expense. Remote mount gas sensors up to 100 m away.

Wide operating temperature for extreme environments (-55°C to +75°C).

Instrument status indicators illuminate power, fault, and alarm conditions.

Intuitive user experience with industry-first touch-button interface or familiar magnetic interface.

X/S Connect App

Reduce setup time by at least 50% with the X/S Connect App.

GET IT ON **Google Play**   Download on the **App Store**

Advanced Sensor Technology

POWERED BY

XCell® SENSORS

WITH

TruCal® TECHNOLOGY

- Patented XCell Sensors with TruCal technology* extend calibration cycles for as long as 18 months, actively monitor sensor integrity, and compensate for environmental factors and electrochemical sensor drift.
- **Diffusion Supervision** sends acoustic signal every 6 hours to check that sensor inlet isn't obstructed so gas can reach the sensor.
- Worry-free operation; automatically self-checks four times per day.
- Three-year warranty and five-year expected life for XCell Sensors.
- **SafeSwap** enables safe and quick XCell Sensor replacement without powering off gas detector.

Applications

- Compressor stations
- CNG maintenance facilities
- Drilling and production platforms
- Fuel loading facilities
- LNG/LPG processing and storage
- Oil well logging
- Petrochemical
- Refineries

SafeSwap®

* Only CO & H_2S XCell Sensors

MSA
The Safety Company

WE KNOW WHAT'S AT STAKE.

S5000 **Gas Monitor**
Specifications

Product Specifications	
COMBUSTIBLE GAS SENSOR TYPE	Catalytic bead (Passive comb., XCell comb.) Infrared (IR400)
TOXIC GAS & OXYGEN SENSOR TYPE	**XCell Toxic** Ammonia (NH_3), Carbon Monoxide (CO), Carbon Monoxide (CO) H_2-resistant, Chlorine (Cl_2), Sulfur Dioxide (SO_2)
	Passive MOS, Echem, XCell Toxic Hydrogen Sulfide (H_2S)
	XCell O_2 Oxygen (O_2)
	Infrared Carbon Dioxide (CO_2)
	Electrochem Ammonia (NH_3), Hydrogen (H_2), Nitrogen Dioxide (NO_2)

SENSOR MEASURING RANGES		
	Combustible	0-100% LEL (CB, IR)
	Cl_2	0-5, 0-10, 0-20 ppm
	CO	0-100, 0-500, 0-1000 ppm
	CO, H_2-resistant	0-100 ppm
	CO_2	0-2000, 0-5000, 0-10000, 0-30000, 0-50000 ppm
	H_2	0-1000 ppm
	NH_3	0-100 ppm, 0-1000 ppm
	H_2S MOS	0-20, 0-50, 0-100 ppm
	H_2S XCell	0-10, 0-20, 0-50, 0-100 ppm
	H_2S Echem	0-500 ppm
	NO_2	0-10 ppm
	O_2	0-25%
	SO_2	0-25 ppm

SENSOR PERFORMANCE*	T90 (typical)	Repeatability	Zero Drift (per year)
PASSIVE COMB.	< 30 sec.	± 3% LEL	< 5% LEL
PASSIVE MOS	< 60 sec.	± 2 ppm	< 0.1 ppm
IR400	< 3 sec.	± 3% LEL	< 2% LEL
IR700	< 8 sec.	± 3% Vol	N/A
XCELL COMB.	< 22 sec.	< ±3%	< 5% LEL
XCELL H_2S	< 23 sec.	< ±1%	< 1% full scale
XCELL CO	< 9 sec.	≤ ±1%	< 1% full scale
XCELL NH_3	< 60 sec.	±1%	≤1% FS per mo.
XCELL O_2	< 11 sec.	± 1% Vol	< 0.2% Vol
XCELL SO_2	< 6 sec.	±1%	≤1% FS per mo.
XCELL Cl_2	< 12 sec	±1%	≤1% FS per mo.
H_2	< 185 sec	±10%	<1% FS per mo.
NO_2	< 60 sec	±10%	<1% FS per mo.

APPROVALS CLASSIFICATION	
	See manual for complete CSA listings.
DIVISIONS (US/CAN)	Class I, Div 1&2, Groups A, B, C & D T5/T4; Class II, Div 1&2, Groups E, F & G, T6; Class III Type 4X, IP66
US ZONES	Class I, Zone 1 AEx db IIC T5 Gb Class I, Zone 2 AEx nA nC IIC T4 Gc Zone 21 AEx tb IIIC T85°C Db
CANADIAN ZONES/ ATEX/ IECEx	Ex db IIC T5 Gb Ex nA nC IIC T4 Gc Ex tb IIIC T85°C Db
CE MARKING DIRECTIVES	Complies with EMC, RED, ATEX

WARRANTY		
	S5000 transmitter	2 years
	XCell Sensors	3 years
	Passive comb., MOS, IR400, IR700	2 years
	Echem Sensors	Varies by gas
APPROVALS	CSA, ATEX, IECEx,INMETRO, ABS, DNV-GL Marine, CE Marking. Complies with C22.2 No. 152, FM 6320, ANSI/ISA/CSA/IEC/EN 60079-29-1, ANSI/ISA 12.13.01. Suitable for SIL 2.	

Dimensions		
HOUSING (W x H x D)	6.37" x 5.38" x 4.25" (162 x 137 x 108 mm)	
W/PASSIVE SENSOR	6.37" x 7.62" x 4.25" (162 x 193 x 108 mm)	
W/DIGITAL SENSOR	6.37" x 10.4" x 4.25" (162 x 265 x 108 mm)	
WEIGHT	8 lb. (3.6 kg), 316 SS	

Environmental Specifications*		
OPERATING TEMPERATURE RANGE	**Transmitter**	-55°C to +75°C
	CB (sintered, Zones)	-40°C to +70°C
	CB (screened, Div)	-40°C to +75°C
	MOS (sintered, Zones)	-40°C to +70°C
	MOS (screened, Div)	-40°C to +75°C
	IR (CSA)	-40°C to +75°C
	IR (ATEX/IECEx)	-60°C to +75°C
	XCell (Comb)	-55°C to +60°C
	XCell (Toxic/O_2)	-40°C to +60°C
STORAGE TEMPERATURE RANGE	**Housing, IR400, IR700, passive sensors**	-50°C to +85°C
	XCell sensors	-40°C to +60°C
RELATIVE HUMIDITY (NON-CONDENSING)	**XCell sensors, IR400, IR700**	10-95%
	Passive combustible	0-95%
	Passive H_2S	15-95%

Mechanical Specifications		
INPUT POWER	24 VDC nominal, 12 to 30 VDC	
SIGNAL OUTPUT	Dual 4-20 mA current source or sink, HART, Modbus, Bluetooth. *Optional: w/o Bluetooth*	
RELAY RATINGS	5A @ 30VDC; 5A @220 VAC (3X) SPDT – fault, warn, alarm	
RELAY MODES	Common, discrete, horn	
NORMAL MAX POWER RELAYS	**Passive comb.**	6.0 W
	Passive MOS	10.8 W
	IR400/IR700	8.9 W
	XCell comb.	6.0 W
	XCell toxic & O_2	3.6 W
	IR400/IR700 + XCell comb.	11.8 W
	IR400/IR700 + XCell toxic or O_2	9.6 W
	Dual XCell toxic or O_2	4.3 W
	Dual XCell comb.	8.4 W
	XCell comb. + XCell toxic or O_2	6.7 W
STATUS INDICATORS	4-digit scrolling LED, icons depicting fault, warn, alarm, Bluetooth, 1 and 2 to indicate sensor reading displayed	
RS-485 OUTPUT	Modbus RTU, suitable for linking up to 128 units or up to 247 units with repeaters	
BAUD RATE	2400, 4800, 9600, 19200, 38400, 115200	
HART	HART 7, HART device description language available	
FAULTS MONITORED	Low supply voltage, RAM checksum error, flash checksum error, EEPROM error, internal circuit error, relay, invalid sensor configuration, sensor faults, calibration faults, analog output mismatch fault	
CABLE REQUIREMENTS	3-wire shielded cable for single sensor and 4-wire shielded cable for dual sensor configurations. Accommodates up to 12 AWG *Refer to manual for mounting distances.*	

*At ambient conditions

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit *MSAsafety.com/offices*.

MSAsafety.com/detection