

S5000 Gas Monitor

Extreme Durability. Anytime. Anywhere.



General Monitors

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

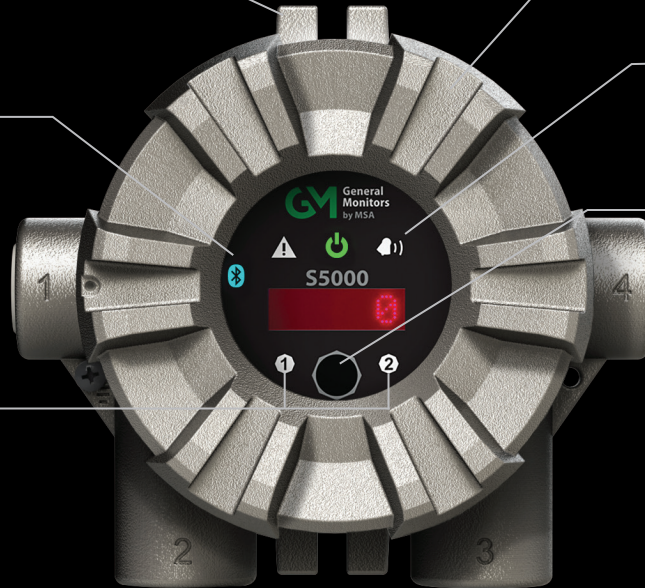
Wide operating temperature for extreme environments (-55°C to +75°C).

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

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

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

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.



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



SafeSwap®

* Only CO & H₂S XCell Sensors



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 ₂ S)	
	XCell O₂	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)	
	Cl₂	0-5, 0-10, 0-20 ppm	
	CO	0-100, 0-500, 0-1000 ppm	
	CO, H₂-resistant	0-100 ppm	
	CO₂	0-2000, 0-5000, 0-10000, 0-30000, 0-50000 ppm	
	H₂	0-1000 ppm	
	NH₃	0-100 ppm, 0-1000 ppm	
	H₂S MOS	0-20, 0-50, 0-100 ppm	
	H₂S XCell	0-10, 0-20, 0-50, 0-100 ppm	
	H₂S Echem	0-500 ppm	
	NO₂	0-10 ppm	
	O₂	0-25%	
	SO₂	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 ₂ S	< 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/O₂) -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 H₂S 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. <i>Optional: w/o Bluetooth</i>
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 & O₂ 3.6 W
	IR400/IR700 + XCell comb. 11.8 W
	IR400/IR700 + XCell toxic or O₂ 9.6 W
	Dual XCell toxic or O₂ 4.3 W
	Dual XCell comb. 8.4 W
	XCell comb. + XCell toxic or O₂ 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 <i>Refer to manual for mounting distances.</i>

*At ambient conditions

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit [MSAsafety.com/offices](https://www.MSA.com/offices).

[MSAsafety.com/detection](https://www.MSA.com/detection)