



General Monitors

# S5000 Gas Monitor



*A DETECTOR AS TOUGH  
AS YOU ARE...*



*"LOWER TEMPERATURE SPEC? ...  
ARCTIC WINTERS"*

*"IT HAS TO BE THE MOST RELIABLE PIECE  
OF EQUIPMENT OUT HERE"*

*"IF THE DETECTOR DOESN'T WORK,  
WE DON'T SO IT NEEDS TO WORK"*

*"I DON'T HAVE TIME TO BABYSIT  
A GAS DETECTOR"*

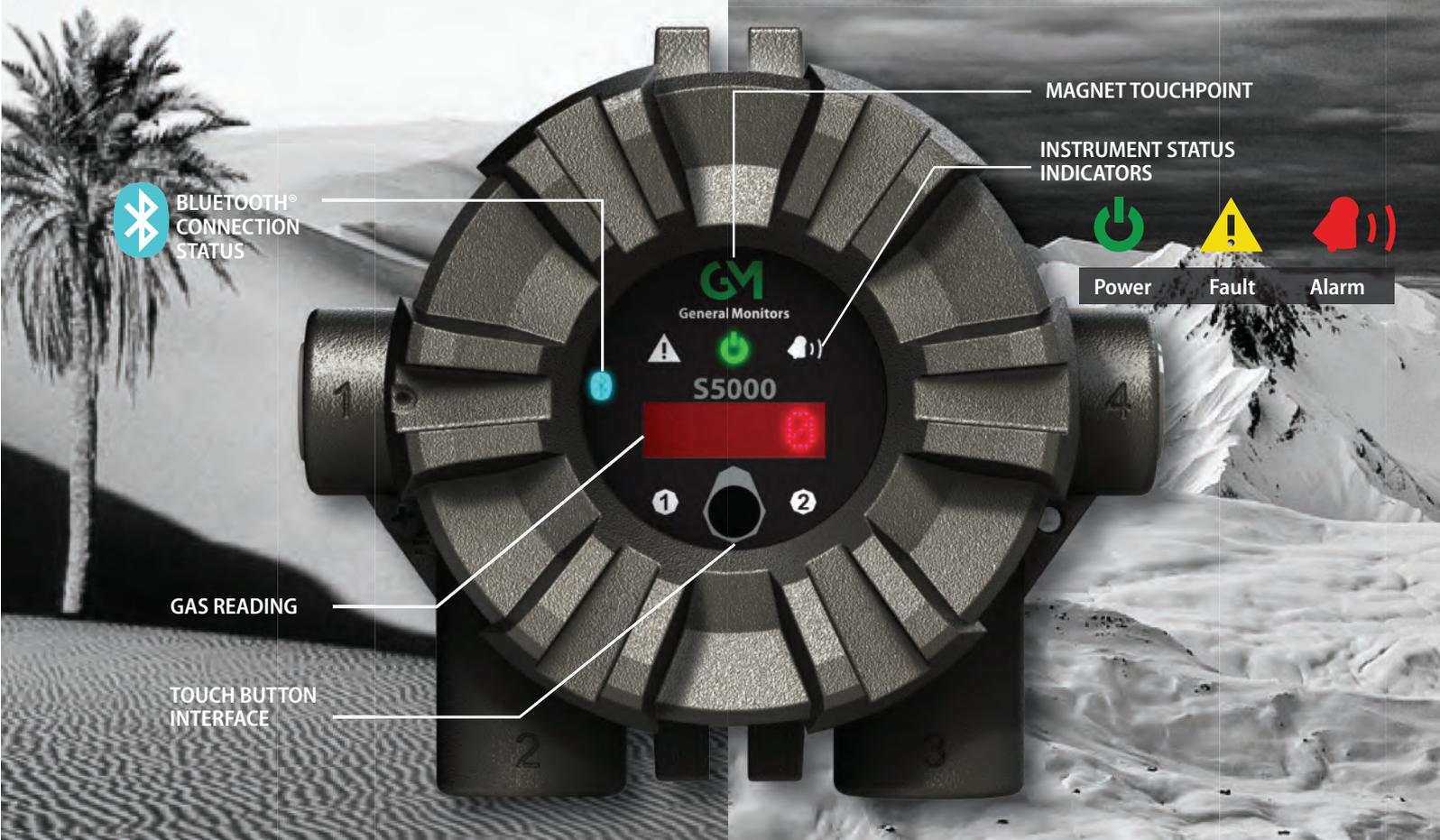


*IS THE ONLY DETECTOR  
YOU'LL NEED*

*"I WANT TO  
INSTALL IT AND  
FORGET ABOUT IT"*



# EXTREME DURABILITY ANYTIME. ANYWHERE.



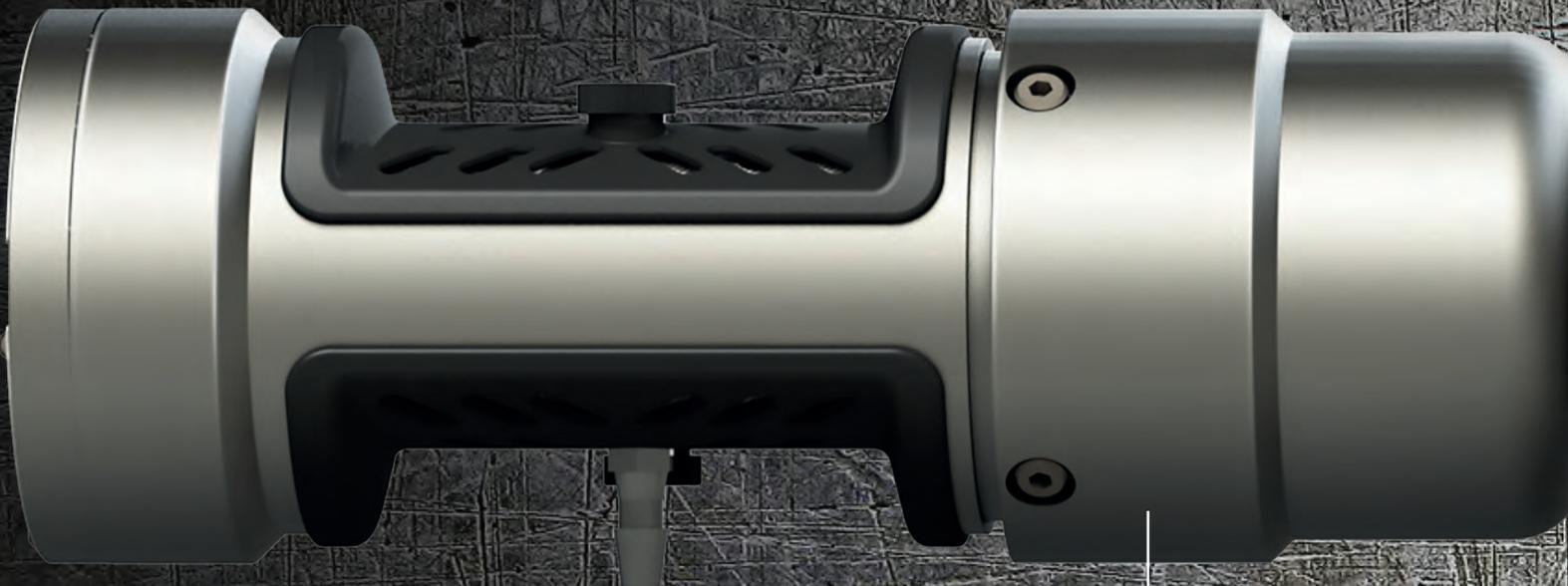
## STAY CONNECTED. WORK SMARTER.

- Bluetooth® wireless technology
- Check status and get alerts up to 23 m away
- Modify settings/setpoints/alarms
- Initiate calibration and view progress
- Reduce setup time by at least 50%



# WHEN EVERYTHING ELSE FAILS

It just works. All day. Every day.



DUAL SENSOR  
CAPABILITY

PASSIVE AND DIGITAL  
SENSOR OPTIONS

POWERED BY

**XCell**<sup>®</sup>  
SENSORS

WITH

**TruCal**<sup>®</sup>  
PLATFORM

**MATERIAL:**  
Stainless Steel  
Ultra Corrosion Resistant  
3.6 kg

LS

**SIMPLE RETROFITS**  
Identical footprint and  
wiring to the S4000 Series



**CUSTOM ID  
TAG ATTACHMENT**

3/4" NPT

## SafeSwap®

Safely and quickly replace  
XCell sensors without  
turning off the instrument

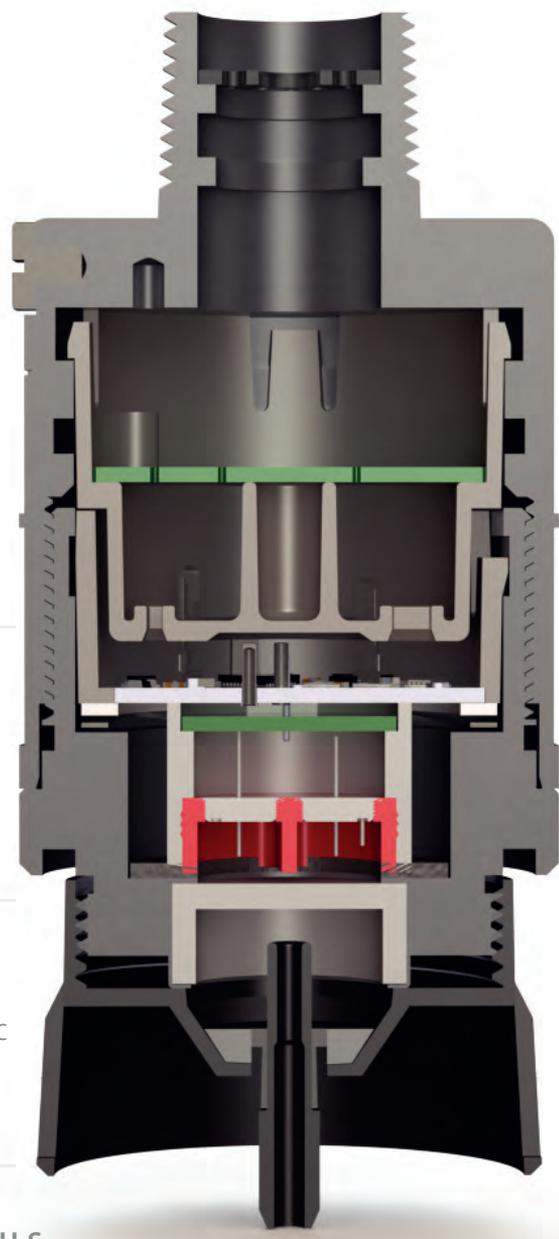
(ACTUAL SIZE)

# NEW ADVANCED SENSOR TECHNOLOGY

## Up to 1.5 YEARS between calibrations!



only CO & H<sub>2</sub>S XCell Sensors

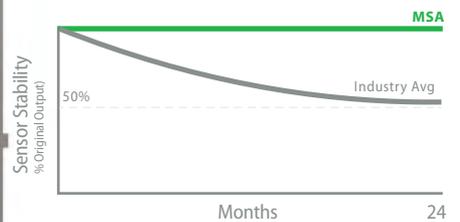


MSA Industry Avg

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### Longer Sensor Life

### Better Stability (Lower Drift)



### Longer Warranties

### Longer Calibration Cycles



### Higher Temperature



### Worry-Free Operation



### 10 × Better Resolution for H<sub>2</sub>S



Automatically self-checks 4x/day

Data may vary for different gases and configurations

# IT MAKES SENSE ... NO EXCEPTIONS



EXPECTED LIFE



WARRANTY



PATENTS

## We're going to help you save

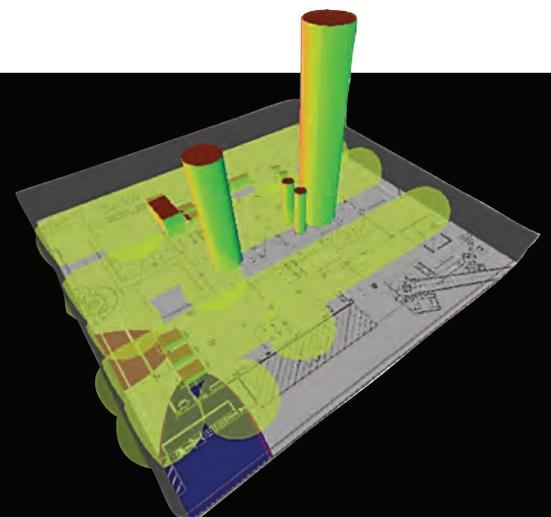
Installation	<b>30 %</b>	<b>~ 6,000 €</b>
Annual Maintenance	<b>50 %</b>	<b>~ 1,300 €</b>
Over the life of the product	<b>75 %</b>	<b>~ 13K €</b>

Based on 10 sensors and 2 sensors/transmitter

## Questions about sensor placement?

MSA's new gas and flame mapping service combines 150 years of gas detection experience with 3D technology to help you maximize the effectiveness of every sensor.

Check out the link for more information:  
<https://gb.MSAsafety.com/gas-mapping>



# S5000 Gas Monitor

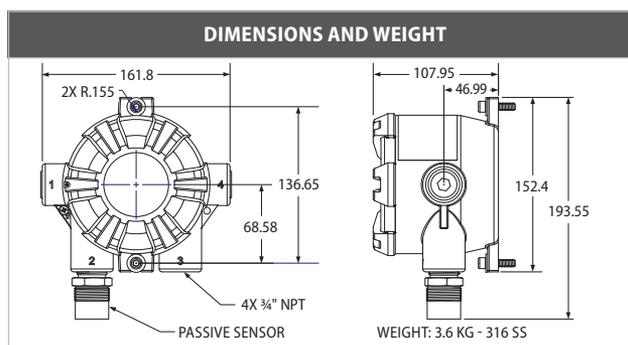
## Specifications



PRODUCT SPECIFICATIONS			
<b>COMBUSTIBLE GAS SENSOR TYPE</b>	Catalytic Bead (Passive Comb, XCell Comb) Infrared (IR400)		
<b>TOXIC GAS SENSOR TYPE</b>	Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO H <sub>2</sub> -Resistant (XCell Toxic) Hydrogen Sulfide H <sub>2</sub> S (Passive MOS, XCell Toxic) Oxygen O <sub>2</sub> (XCell O <sub>2</sub> )		
<b>SENSOR MEASURING RANGES</b>	All Combustible: 0–100% LEL H <sub>2</sub> S MOS: 0–20, 0–50, 0–100 ppm H <sub>2</sub> S XCell: 0–10, 0–50, 0–100 ppm CO: 0–100, 0–500, 0–1000 ppm CO H <sub>2</sub> -Resist: 0–100 ppm O <sub>2</sub> : 0–25%		
<b>TYPICAL SENSOR LIFE</b>	5 years – catalytic bead, MOS, XCell Sensor 10 years – infrared		
SENSOR PERFORMANCE*	T <sub>90</sub> (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
XCELL COMB	<30 sec.	+/- 1% LEL	<5% LEL
XCELL H <sub>2</sub> S	<23 sec.	+/- 3%	<1% full scale
XCELL CO	<11 sec.	+/- 3%	<1% full scale
XCELL O <sub>2</sub>	<11 sec.	≤ +/- 0.1% Vol	0.2% Vol
<b>APPROVALS CLASSIFICATION</b>	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 <b>US Zones</b> Class I, Zone 1 AEx db IIC T5 Gb Class I, Zone 2 AEx nA nC IIC T4 Gc Class II, Zone 21 AEx tb IIIC T85°C Db <b>Canadian Zones/ATEX/IECEx</b> Ex db IIC T5 Gb Ex nA nC IIC T4 Gc Ex tb IIIC T85°C Db RED, FCC <i>(see manual for complete CSA listings)</i>		
<b>WARRANTY</b>	S5000 Transmitter: 2 years, XCell Sensors: 3 years Passive Comb, Passive MOS, IR400: 2 years		
<b>APPROVALS</b>	CSA, ATEX, IECEx, CE Marking Complies with C22.2 No. 152, FM 6320, IEC/EN 60079-29-1, ANSI/ISA 12.13.01. Suitable for SIL 2		
ENVIRONMENTAL SPECIFICATIONS			
<b>OPERATING TEMPERATURE RANGE</b>	Passive Comb (sintered): –40°C to +70°C Passive Comb (screened): –40°C to +75°C Passive MOS (sintered): –40°C to +70°C Passive MOS (screened): –40°C to +75°C IR400 (CSA): –40°C to +75°C IR400 (ATEX/IECEx): –60°C to +75°C XCell Comb: –55°C to +60°C XCell Toxic & O <sub>2</sub> : –40°C to +60°C		
<b>STORAGE TEMPERATURE RANGE</b>	S5000: –45°C to +85°C (includes housing and all sensors)		
<b>OPERATING HUMIDITY RANGE</b>	10–95% (XCell Toxics & O <sub>2</sub> ) 0–95% (Passive & XCell Comb, IR400, Passive MOS)		

\*At ambient conditions

MECHANICAL SPECIFICATIONS																					
<b>INPUT POWER</b>	24 VDC nominal, 12 to 30 VDC																				
<b>SIGNAL OUTPUT</b>	Dual 4–20 mA current source, HART, Modbus, Bluetooth, Optional: w/o Bluetooth																				
<b>RELAY RATINGS</b>	5A @ 30VDC; 5A @220 VAC (3X) SPDT – fault, warn, alarm																				
<b>RELAY MODES</b>	Common, discrete, horn																				
<b>NOMINAL MAX POWER (W/ RELAYS)</b>	<table border="0"> <tr><td>Passive Comb</td><td>6.0 W</td></tr> <tr><td>Passive MOS</td><td>10.8 W</td></tr> <tr><td>IR400</td><td>8.9 W</td></tr> <tr><td>XCell Comb</td><td>6.0 W</td></tr> <tr><td>XCell Toxic &amp; O<sub>2</sub></td><td>3.6 W</td></tr> <tr><td>IR400 + XCell Comb</td><td>11.8 W</td></tr> <tr><td>IR400 + XCell Toxic or O<sub>2</sub></td><td>9.6 W</td></tr> <tr><td>Dual XCell Toxic or O<sub>2</sub></td><td>4.3 W</td></tr> <tr><td>Dual XCell Comb</td><td>8.4 W</td></tr> <tr><td>XCell Comb + XCell Toxic or O<sub>2</sub></td><td>9.1 W</td></tr> </table>	Passive Comb	6.0 W	Passive MOS	10.8 W	IR400	8.9 W	XCell Comb	6.0 W	XCell Toxic & O <sub>2</sub>	3.6 W	IR400 + XCell Comb	11.8 W	IR400 + XCell Toxic or O <sub>2</sub>	9.6 W	Dual XCell Toxic or O <sub>2</sub>	4.3 W	Dual XCell Comb	8.4 W	XCell Comb + XCell Toxic or O <sub>2</sub>	9.1 W
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<b>EMC DIRECTIVE</b>	Complies with EN 50270 type 2, EN 61000-6-4																				
<b>STATUS INDICATORS</b>	4-digit scrolling LED, icons depicting fault, warn, alarm, Bluetooth, 1 and 2 to indicate sensor reading displayed																				
<b>RS-485 OUTPUT</b>	Modbus RTU, suitable for linking up to 128 units or up to 247 units with repeaters																				
<b>BAUD RATE</b>	2400, 4800, 9600, 19200, 38400, 115200																				
<b>HART</b>	HART 7, HART device description language available																				
<b>FAULTS MONITORED</b>	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																				
<b>CABLE REQUIREMENTS</b>	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>																				



Subject to change without notice  
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