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"*

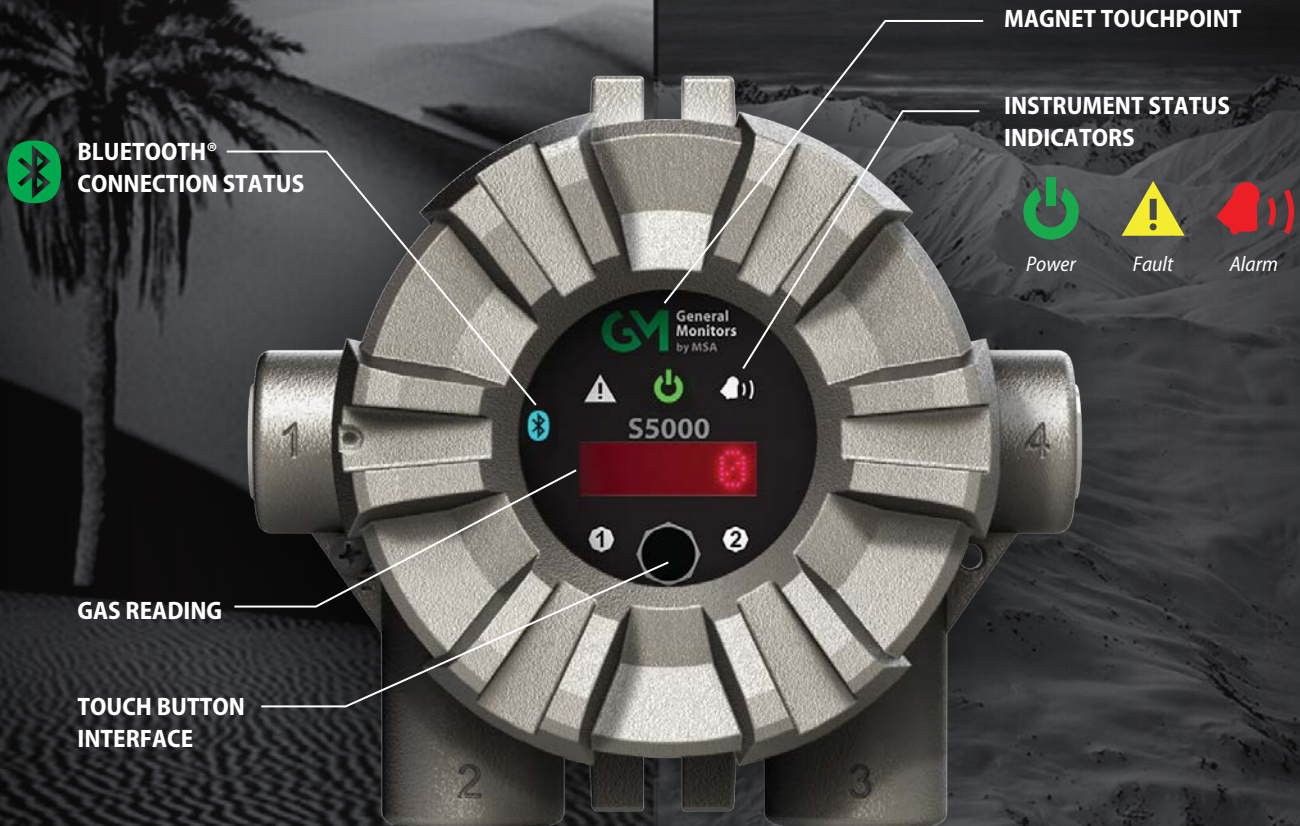*"I DON'T HAVE TIME TO BABYSIT
A GAS DETECTOR"*

IS THE ONLY DETECTOR YOU'LL NEED

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

EXTREME DURABILITY
ANYTIME. ANYWHERE.

MAGNET TOUCHPOINT

INSTRUMENT STATUS INDICATORS

Power · Fault · Alarm

BLUETOOTH® CONNECTION STATUS

General Monitors by MSA

S5000

GAS READING

TOUCH BUTTON INTERFACE

STAY CONNECTED. WORK SMARTER.

- Bluetooth wireless technology
- Check status and get alerts up to 75 ft. (23 m) away
- Modify settings/setpoints/alarms
- Initiate calibration and view progress
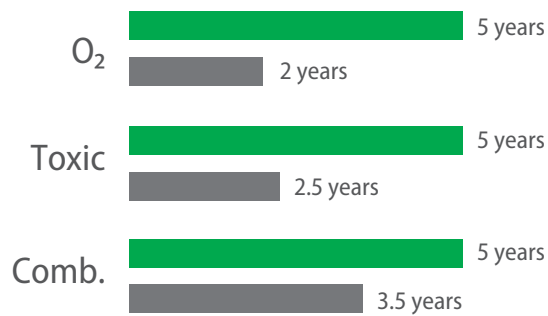- Reduce setup time by at least 50%

GET IT ON Google Play

Download on the App Store

MSA**safety**.com/detection

ADVANCING SENSOR TECHNOLOGY

Up to **2 YEARS** between calibrations!

XCell® SENSORS

	MSA	Industry Average

Longer Sensor Life

O_2
- 5 years (MSA)
- 2 years (Industry Average)

Toxic
- 5 years (MSA)
- 2.5 years (Industry Average)

Comb.
- 5 years (MSA)
- 3.5 years (Industry Average)

Longer Warranties
- 3 years (MSA)
- 1 year (Industry Average)

Higher Temperature
- + 60℃ (MSA)
- + 50℃ (Industry Average)

10x Better Resolution for H_2S & SO_2
- 0.1 ppm (MSA)
- 1 ppm (Industry Average)

Data may vary for different gases and configurations
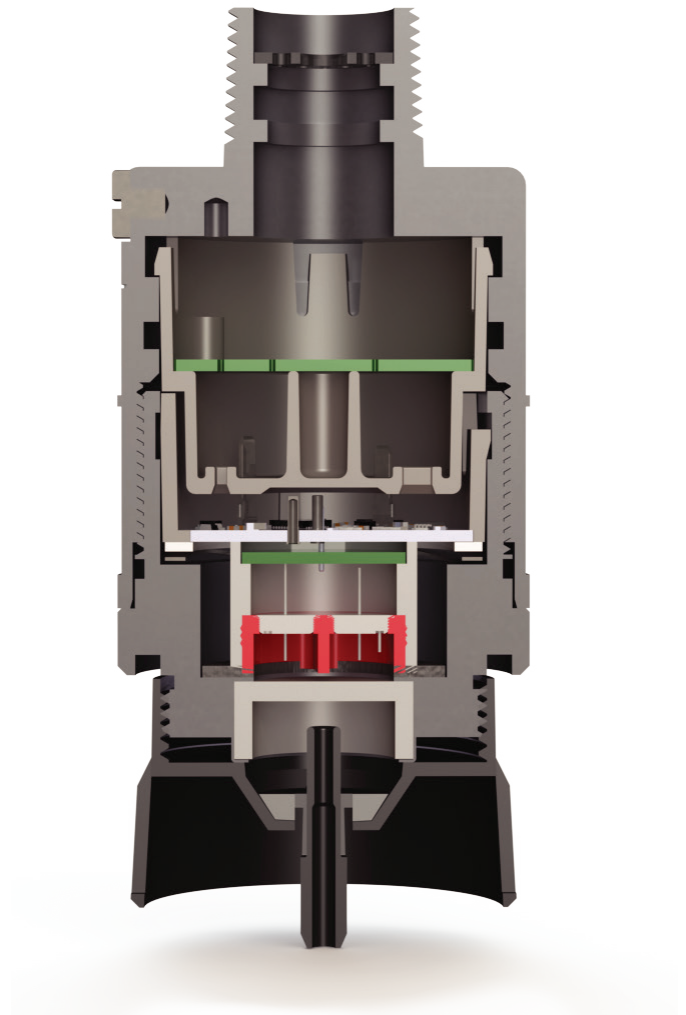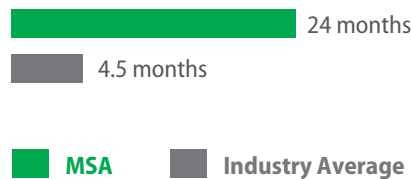
RE-CALIBRATE YOUR EXPECTATIONS

TruCal®
TECHNOLOGY

Adaptive Environmental Compensation (AEC)

Longer Sensor Life

Automatically self-checks 4x/day

Longer Calibration Cycles

24 months

4.5 months

MSA   **Industry Average**

Better Stability (Lower Drift)

MSA

Sensor Stability (% Original Output)

50%   Industry Average

Months   24

Diffusion Supervision (DS)

SPEAKER & SPEAKER PORT

XCELL SENSOR

UNOBSTRUCTED SENSOR OPENING

MEASUREMENT MICROPHONE

XCELL SENSOR

BLOCKED SENSOR OPENING
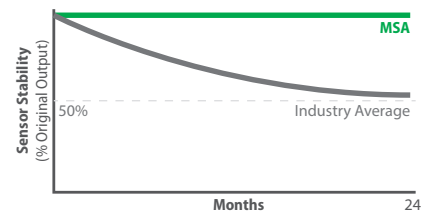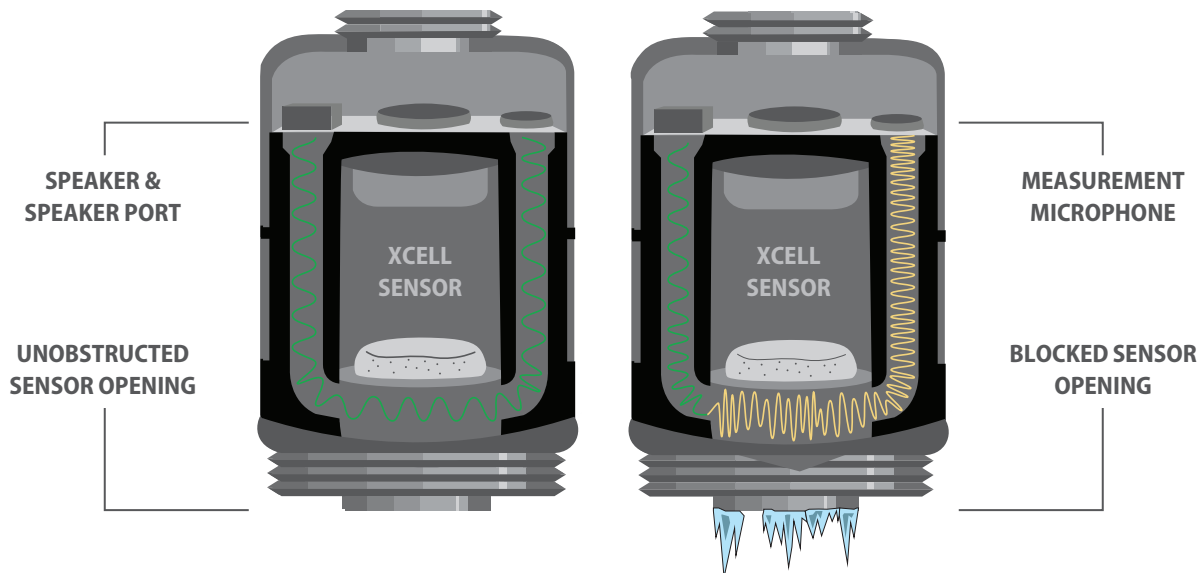
Diffusion Supervision warns if the sensor inlet becomes blocked and unable to detect gas. It employs a proprietary acoustic mechanical design and algorithms to measure sound across the sensor's inlet. If the inlet is blocked with a material, like ice, the difference in the sound is detected and the unit is put into fault. When the obstruction is removed, Diffusion Supervision detects the clearance and returns to normal operation. H_2S and CO Sensors configured with Diffusion Supervision technology allow extended calibration cycles of 24 months reducing maintenance costs and allowing resources to be utilized elsewhere!

STANDS OUT BUT STILL FITS IN

It just works. All day. Every day.

SIMPLE RETROFITS

Identical footprint and wiring to S4000 Series

316 stainless steel

Passive and digital sensor options

Custom ID tag attachment

POWERED BY

XCell® SENSORS

WITH

TruCal® TECHNOLOGY

SafeSwap®

Safely and quickly replace sensors without turning off the instrument

Dual XCell Sensor capability

S5000 w/passive sensor
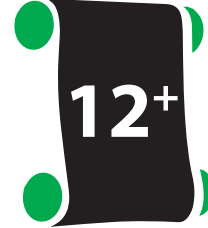
S5000 w/IR400 and digital sensor

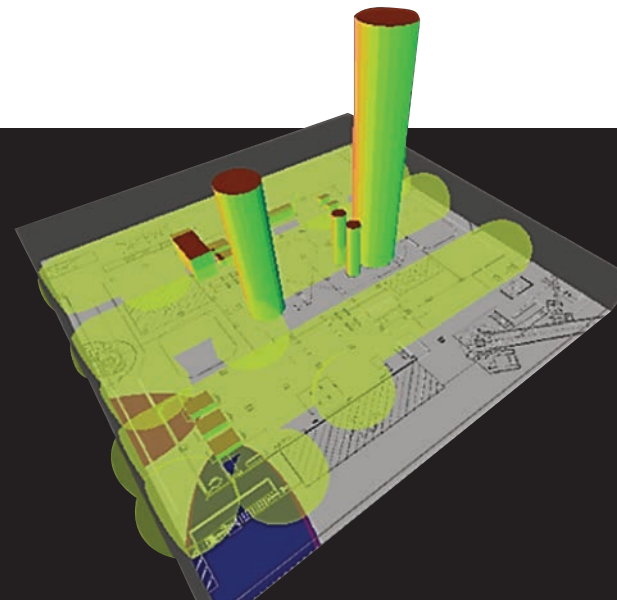# IT MAKES SENSE... NO EXCEPTIONS

5 years
EXPECTED LIFE

3 years
WARRANTY

12+
PATENTS

We're going to help you save*

Installation	**30%**	**~$7,000**
Annual maintenance	**50%**	**~$1,500**
Over the life of the product	**75%**	**~$15k**

Questions about sensor placement?

MSA's gas and flame mapping service combines 160 years of gas detection experience with 3D technology to help you maximize the effectiveness of every sensor.

Check out the link or scan for more information:
MSAsafety.com/gas-mapping

* Based on 10 sensors and 2 sensors/transmitter

MSA**safety**.com/detection

S5000 **Gas Monitor**

Specifications

SHERBINY الشربيني

GM **General Monitors** by MSA

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-resist., Chlorine (Cl_2), Sulfur Dioxide (SO_2)
	XCell Toxic, Echem, Passive MOS	Hydrogen Sulfide (H_2S)
	XCell O_2	Oxygen (O_2)
	Infrared	Carbon Dioxide (CO_2)
	Echem	Ammonia (NH_3), Hydrogen (H_2), Hydrogen Chloride (HCl), Hydrogen Cyanide (HCN), Nitrogen Oxide (NO), Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_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
	HCl	0-50 ppm
	HCN	0-50 ppm
	H_2S	0-10, 0-20, 0-50, 0-100, 0-500 ppm
	NH_3	0-100 ppm, 0-1000 ppm
	NO	0-100 ppm
	NO_2	0-10 ppm
	O_2	0-25%
	SO_2	0-25, 0-100 ppm
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, FM*, 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 mm x 108 mm)
W/PASSIVE SENSOR	6.37" x 7.62" x 4.25 (162 x 193 mm x 108 mm)
W/DIGITAL SENSOR	6.37" x 10.4" x 4.25" (162 x 265 mm x 108 mm)
WEIGHT	8.0 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
OPERATING HUMIDITY RANGE	**XCell sensors, IR400, IR700**	10-95%
	Passive comb.	10-90%
	Passive H_2S	0-95%

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	5 A @ 30 VDC; 5 A @ 220 VAC (3X) SPDT - fault, warn, alarm	
RELAY MODES	Common, discrete, horn	

NORMAL MAX POWER	Without Relays	With Relays
Passive comb.	5.0 W	6.0 W
Passive MOS	9.8 W	10.8 W
IR400/IR700	7.9 W	8.9 W
XCell comb.	5.0 W	6.0 W
XCell toxic & O_2	2.6 W	3.6 W
IR400/IR700 + XCell comb.	10.8 W	11.8 W
IR400/IR700 + XCell toxic or O_2	8.6 W	9.6 W
Dual XCell toxic or O_2	3.3 W	4.3 W
Dual XCell comb.	7.4 W	8.4 W
XCell comb. + XCell toxic or O_2	5.7 W	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 or 4 mm2 *Refer to manual for mounting distances.*

* See manual for FM approved sensors.
** See data sheet for complete list.

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice.

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