



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 75 ft (23 m) away
- Modify settings/setpoints/alarms
- Initiate calibration and view progress
- Reduce setup time by at least 50%



WHEN EVERYTHING ELSE

It just works. All day. Every day.



DUAL SENSOR
CAPABILITY

PASSIVE AND DIGITAL
SENSOR OPTIONS

MATERIAL OPTIONS



STAINLESS STEEL
Ultra Corrosion
Resistant
8 lbs (3.6 kg)

POWER

X
S E I

WITH

T
P

E FAILS

SIMPLE RETROFITS
Identical footprint and
wiring to the S4000 Series

CUSTOM ID
TAG ATTACHMENT

3/4" NPT

POWERED BY
XCell
SENSORS

truCal
PLATFORM



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!

XCell[®]
SENSORS

MSA Industry Avg

Longer Sensor Life

O₂ 5 yrs
1 yr

Toxic (CO/H₂S) 5 yrs
2-3 yrs

Longer Warranties

3 yrs
1 yr

Higher Temperature

+60C
+50C

10x Better Resolution for H₂S

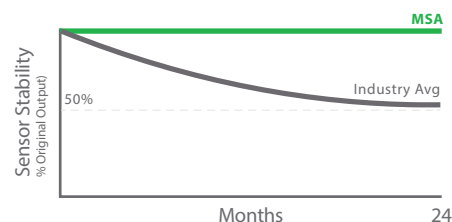
0.1ppm
1ppm

TruCal[®]
TECHNOLOGY

*only CO & H₂S XCell Sensors

MSA Industry Avg

Better Stability (Lower Drift)



Longer Calibration Cycles

18 months
4.5 months

Worry-Free Operation



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*

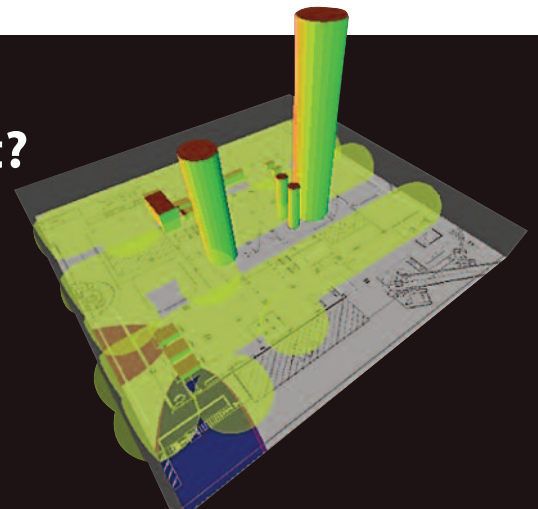
Installation	30%	~\$7,000
Annual Maintenance	50%	~\$1,500
Over the life of the product	75%	~\$15k

* 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://us.msasafety.com/gas-mapping>



Trust us...We've been saving lives for over 100 years



S5000 Gas Monitor Specifications and Features

PRODUCT SPECIFICATIONS			
COMBUSTIBLE GAS SENSOR TYPE	Catalytic Bead (Passive Comb, XCell Comb) Infrared (IR400)		
TOXIC GAS SENSOR TYPE	Hydrogen Sulfide H ₂ S (Passive MOS, XCell Toxic) Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO H ₂ -Resistant (XCell Toxic) Oxygen O ₂ (XCell O ₂)		
SENSOR MEASURING RANGES	Combustible: 0-100% LEL (CB, IR) H ₂ S MOS: 0-20, 0-50, 0-100 ppm H ₂ S XCell: 0-10, 0-50, 0-100 ppm CO: 0-100, 0-500, 0-1000 ppm CO H ₂ -Resist: 0-100 ppm O ₂ : 0-25%		
TYPICAL SENSOR LIFE	5 years – catalytic bead, MOS, XCell Sensor 10 years - infrared		
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
XCELL COMB	<22 sec.	≤ +/- 1% LEL	<5% LEL
XCELL H ₂ S	<23 sec.	+/- 5%	<1% full scale
XCELL CO	<9 sec.	+/- 5%	<1% full scale
XCELL O ₂	<15 sec.	≤ +/- 0.3% Vol	0.2% Vol
APPROVALS CLASSIFICATION	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 Class II, 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 (see manual for complete CSA listings)		
WARRANTY	S5000 transmitter: 2 years XCell Sensors: 3 years Passive Comb, Passive MOS, IR400: 2 years		
APPROVALS	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			
OPERATING TEMPERATURE RANGE	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	S5000: -45°C to +85°C (Min/Max) (includes housing and all sensors)		
OPERATING HUMIDITY RANGE	10% to 95% (XCell Toxics, O ₂) 0 to 95% (Passive & XCell Comb, IR400, Passive MOS)		

*At ambient conditions

MECHANICAL SPECIFICATIONS																			
INPUT POWER	24 VDC nominal, 12 to 30 VDC																		
SIGNAL OUTPUT	Dual 4-20 mA current source, HART, Modbus, Bluetooth. Optional: w/o Bluetooth																		
RELAY RATINGS	5A @ 30VDC; 5A @220 VAC (3X) SPDT – fault, warn, alarm																		
RELAY MODES	Common, discrete, horn																		
NOMINAL MAX POWER (W/ RELAYS)	<table> <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 8.9 WXCell Comb</td><td>6.0 W</td></tr> <tr><td>XCell Toxic & O₂</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 O₂</td><td>9.6 W</td></tr> <tr><td>Dual XCell Toxic or O₂</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 O₂</td><td>9.1 W</td></tr> </table>	Passive Comb	6.0 W	Passive MOS	10.8 W	IR400 8.9 WXCell Comb	6.0 W	XCell Toxic & O ₂	3.6 W	IR400 + XCell Comb	11.8 W	IR400 + 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	9.1 W
Passive Comb	6.0 W																		
Passive MOS	10.8 W																		
IR400 8.9 WXCell Comb	6.0 W																		
XCell Toxic & O ₂	3.6 W																		
IR400 + XCell Comb	11.8 W																		
IR400 + 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	9.1 W																		
EMC DIRECTIVE	Complies with EN 50270, EN 61000-6-4, EN 61000-6-3																		
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>																		
DIMENSIONS																			

Note: This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products. Specifications subject to change without notice.



Corporate Headquarters:
MSA – The Safety Company
1000 Cranberry Woods Drive
Cranberry Township, PA 16066
United States
+1-724-776-8600
info.us@MSAsafety.com

Design Center:
General Monitors
26776 Simpatica Circle
Lake Forest, CA 92630
United States
+1-949-581-4464
info.gm@MSAsafety.com

ID 1465-20-MC / Apr 2017

© MSA 2017 Printed in U.S.A.

Additional locations can be found on our web site:
www.MSAsafety.com

MSAsafety.com/detection