



# ULTIMA<sup>®</sup> X5000 Gas Monitor



SAFEGUARDING  
**PEOPLE, PLACES & THE PLANET**

*WE KNOW YOU'RE TIRED OF...*



*"NEEDING TO DISCONNECT POWER  
BEFORE CHANGING A SENSOR"*

*"REMEMBERING HOW TO  
CALIBRATE THIS THING"*

*"HAVING TO PULL SO MUCH WIRE AT EVERY  
GAS DETECTOR INSTALLATION..."*

*"WONDERING IF THE GAS DETECTOR  
IS WORKING"*



*YOU HAVEN'T BEEN ABLE  
TO DO ANYTHING ABOUT IT...  
UNTIL NOW.*

*"LOSING MY MAGNET...  
I HAVE BIGGER THINGS  
TO WORRY ABOUT"*





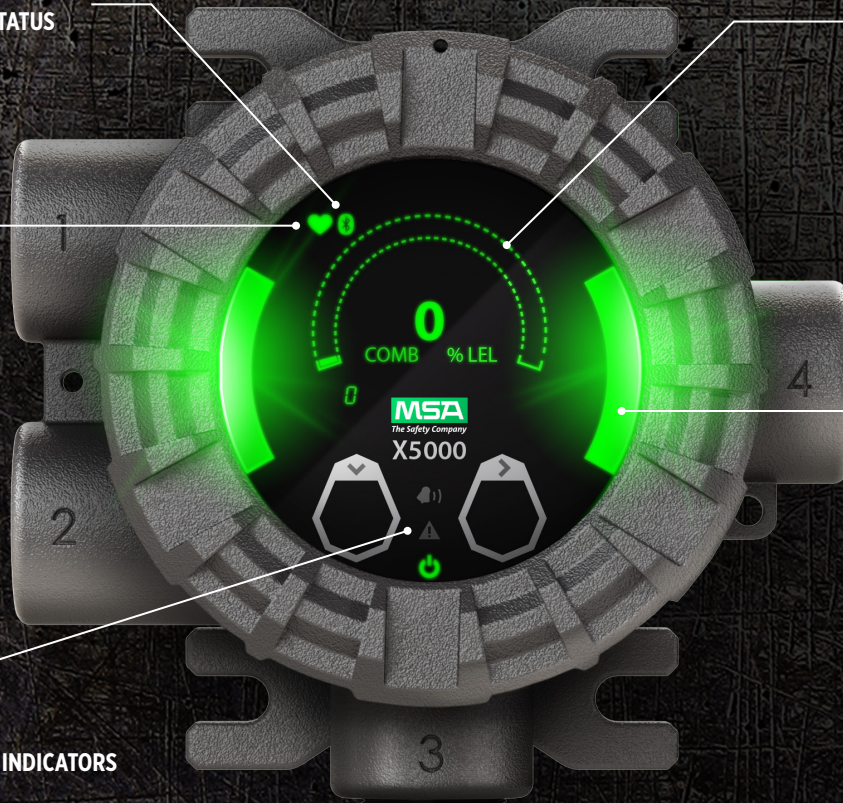
# ALL NEW DESIGN

**BLUETOOTH® CONNECTION STATUS**

**ACTIVE OPERATION INDICATOR**

**GAS READING GAUGE AND PROGRESS BAR**

**BRIGHT STATUS LED**



**INSTRUMENT STATUS INDICATORS**



Power



Fault



Alarm

## STAY CONNECTED. WORK SMARTER.

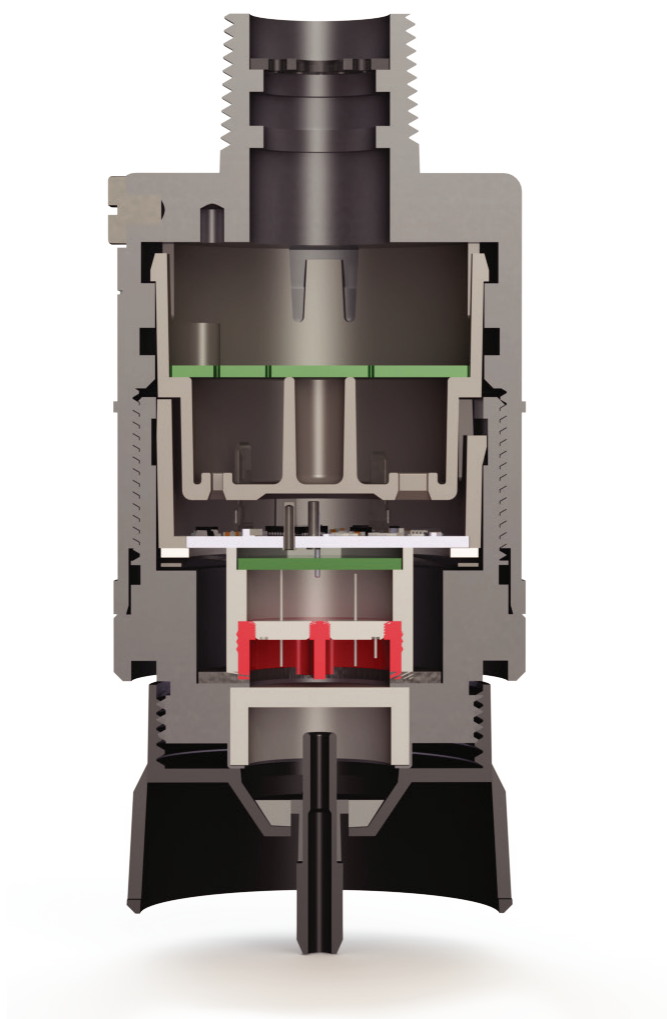
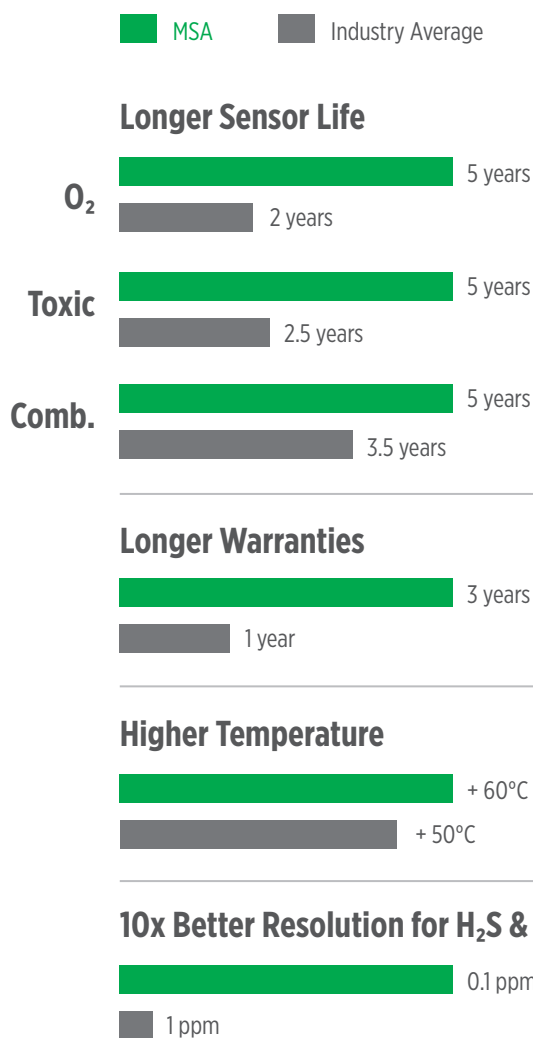
- Bluetooth wireless technology
- Check status and get alerts up to 70 ft. (21 m) away
- Modify settings/setpoints/alarms
- Initiate calibration and view progress
- Reduce setup time by at least 50%





# ADVANCING SENSOR TECHNOLOGY

Up to **2 YEARS** between calibrations



*\* Data may vary for different gases and configurations*



# RE-CALIBRATE YOUR EXPECTATIONS



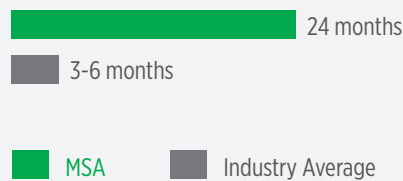
## Adaptive Environmental Compensation (AEC)

### Longer Sensor Life

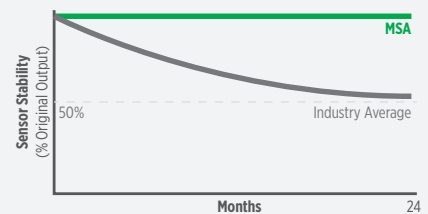


Automatically self-checks 4x/day

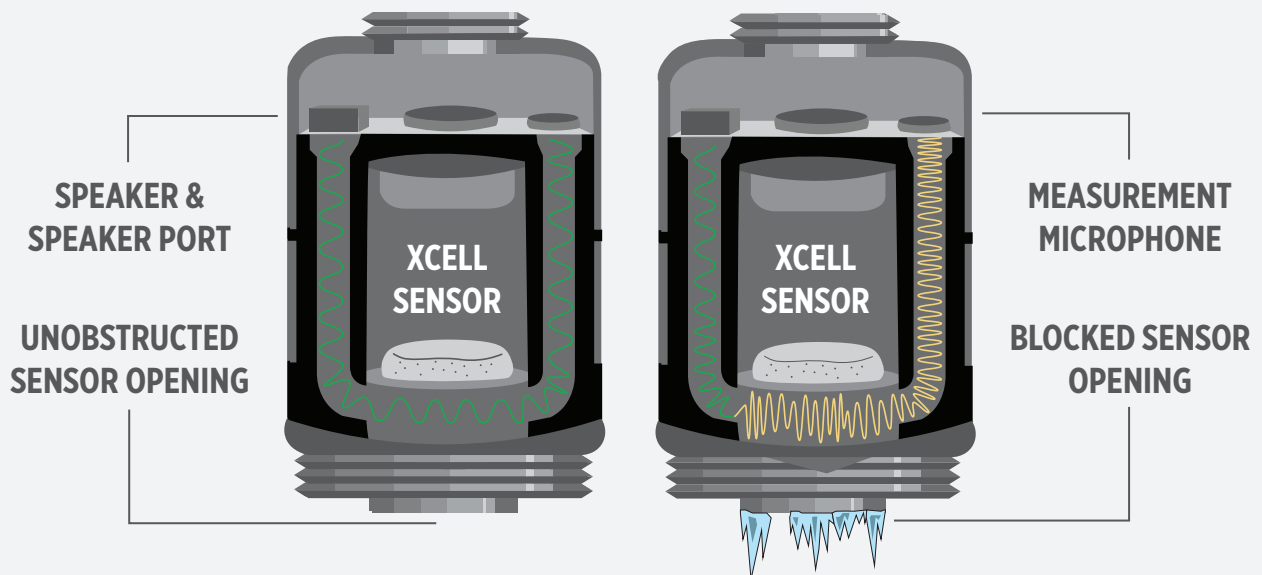
### Longer Calibration Cycles



### Better Stability (Lower Drift)



## Diffusion Supervision (DS)



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<sub>2</sub>S 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.

# DO MORE WITH LESS





# IT MAKES SENSE... NO EXCEPTIONS



**EXPECTED LIFE**



**WARRANTY**



**PATENTS**

## We're going to help you save\*

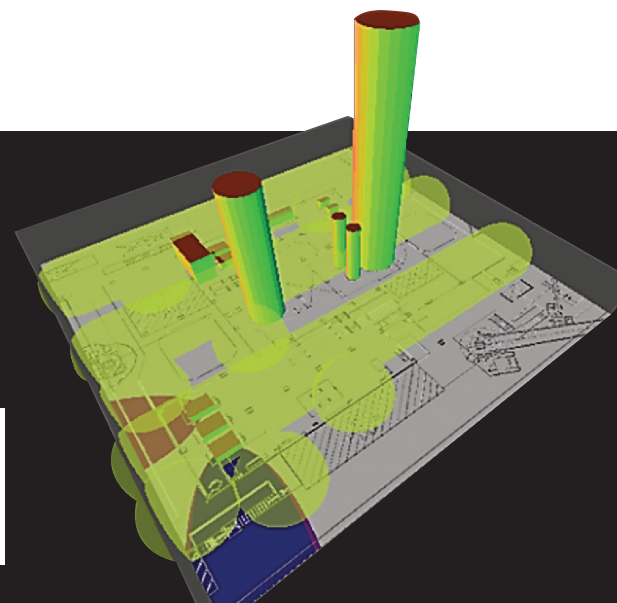
Installation	<b>30%</b>	<b>~\$7,000</b>
Annual maintenance	<b>50%</b>	<b>~\$1,500</b>
Over the life of the product	<b>75%</b>	<b>~\$15k</b>

Request a Cost of Ownership comparison.

## 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](https://MSAsafety.com/gas-mapping)



\* Based on 10 sensors and 2 sensors/transmitter

Product Specifications	
<b>COMBUSTIBLE GAS SENSOR TYPE</b>	Catalytic Bead (XCell combustible) Infrared (XIR Plus)
<b>TOXIC GAS &amp; OXYGEN SENSOR TYPE</b>	<p><b>XIR PLUS</b> Carbon Dioxide (CO<sub>2</sub>)</p> <p><b>XCell Toxic</b> Ammonia (NH<sub>3</sub>), Carbon Monoxide (CO), Carbon Monoxide (CO) H<sub>2</sub>-resistant, Hydrogen Sulfide (H<sub>2</sub>S), Chlorine (Cl<sub>2</sub>), Chlorine Dioxide (ClO<sub>2</sub>), Sulfur Dioxide (SO<sub>2</sub>)</p> <p><b>XCell O<sub>2</sub></b> Oxygen (O<sub>2</sub>)</p> <p><b>Electrochem.</b> Ammonia (NH<sub>3</sub>), Ethylene Oxide (ETO) Hydrogen (H<sub>2</sub>), Hydrogen Chloride (HCl), Hydrogen Cyanide (HCN), Hydrogen Fluoride (HF) Nitric Oxide (NO), Nitrogen Dioxide (NO<sub>2</sub>), Sulfur Dioxide (SO<sub>2</sub>)</p>
<b>SENSOR MEASURING RANGES</b>	<p><b>Combustible</b> 0-100% LEL</p> <p><b>CO<sub>2</sub></b> 0-2%, 0-5% Vol</p> <p><b>CO</b> 0-100, 0-500, 0-1000 ppm</p> <p><b>CO, H<sub>2</sub>-resistant</b> 0-100 ppm</p> <p><b>Cl<sub>2</sub></b> 0-5, 0-10, 0-20 ppm</p> <p><b>ClO<sub>2</sub></b> 0-3 ppm</p> <p><b>ETO</b> 0-10 ppm</p> <p><b>H<sub>2</sub></b> 0-1000 ppm</p> <p><b>HCl</b> 0-50 ppm</p> <p><b>HCN</b> 0-50 ppm</p> <p><b>HF</b> 0-10 ppm</p> <p><b>H<sub>2</sub>S</b> 0-10, 0-50, 0-100, 0-500 ppm</p> <p><b>NH<sub>3</sub></b> 0-100, 0-1000 ppm</p> <p><b>NO</b> 0-100 ppm</p> <p><b>NO<sub>2</sub></b> 0-10 ppm</p> <p><b>O<sub>2</sub></b> 0-25%</p> <p><b>SO<sub>2</sub></b> 0-25, 0-100 ppm</p>
<b>TYPICAL SENSOR LIFE</b>	<p><b>XCell Sensors</b> 5 years</p> <p><b>Infrared</b> 10 years</p>
<b>APPROVALS CLASSIFICATION</b>	<i>Markings vary by component.</i> <i>See manual for specific component markings.</i>
<b>DIVISIONS (US/CAN)</b>	Class I, II, III; Div 1 & 2, T4/T5/T6
<b>ZONES (GLOBAL)</b>	Ex db nA IIC T5 Gb (Class I, Zone 1/Zone 2) Ex tb IIIC T85°C Db (Class II, Zone 21)
<b>ENCLOSURE RATING</b>	Type 4X, IP66
<b>WARRANTY</b>	<p><b>X5000 transmitter</b> 2 years</p> <p><b>XIR PLUS</b> 10 years source, 5 years electronics</p> <p><b>XCell Sensors</b> 3 years</p> <p><b>Electrochemical Sensors</b> Varies by gas</p>
<b>APPROVALS</b>	CSA, FM*, ATEX, IECEx, INMETRO, DNV-GL Marine, CE Marking. SIL 2 suitable. Complies with C22.2 No. 152, FM 6320

Environmental Specifications**																															
<b>OPERATING TEMPERATURE RANGE</b>	** May differ by gas type, see data sheet <p><b>XCell</b> -40°C to +60°C</p> <p><b>XIR PLUS</b> -40°C to +60°C</p>																														
<b>RELATIVE HUMIDITY (NON-CONDENSING)</b>	<p><b>XCell toxics &amp; O<sub>2</sub></b> 10-95%</p> <p><b>XCell combustible</b> 0-95%</p> <p><b>XIR PLUS</b> 15-95%</p>																														
Mechanical Specifications																															
<b>INPUT POWER</b>	11 to 30 VDC, 3 wire, <5 W nominal																														
<b>SIGNAL OUTPUT</b>	Dual 4-20 mA current source, HART																														
<b>BLUETOOTH (OPTIONAL)</b>	Bluetooth Low Energy (BLE) v4.3 or higher																														
<b>RELAY RATINGS</b>	5 A @ 30 VDC; 5 A @ 220 VAC (3X) SPDT - fault, warn, alarm																														
<b>RELAY MODES</b>	Common, discrete, horn																														
<b>NORMAL MAX POWER</b>	<table border="1"> <thead> <tr> <th></th> <th>Without Relays</th> <th>With Relays</th> </tr> </thead> <tbody> <tr> <td><b>XIR PLUS</b></td> <td>5.7 W</td> <td>6.7 W</td> </tr> <tr> <td><b>XCell combustible</b></td> <td>3.9 W</td> <td>4.9 W</td> </tr> <tr> <td><b>XCell Toxic &amp; O<sub>2</sub></b></td> <td>1.8 W</td> <td>2.8 W</td> </tr> <tr> <td><b>XIR PLUS &amp; XCell combustible</b></td> <td>9.9 W</td> <td>10.9 W</td> </tr> <tr> <td><b>XIR PLUS &amp; XCell toxic or O<sub>2</sub></b></td> <td>6.0 W</td> <td>7.0 W</td> </tr> <tr> <td><b>Dual XIR PLUS</b></td> <td>10.6 W</td> <td>11.6 W</td> </tr> <tr> <td><b>Dual XCell toxic &amp; O<sub>2</sub></b></td> <td>2.6 W</td> <td>3.6 W</td> </tr> <tr> <td><b>Dual XCell combustible</b></td> <td>9.6 W</td> <td>10.6 W</td> </tr> <tr> <td><b>Dual XCell comb. &amp; XCell toxic or O<sub>2</sub></b></td> <td>4.3 W</td> <td>5.3 W</td> </tr> </tbody> </table>		Without Relays	With Relays	<b>XIR PLUS</b>	5.7 W	6.7 W	<b>XCell combustible</b>	3.9 W	4.9 W	<b>XCell Toxic &amp; O<sub>2</sub></b>	1.8 W	2.8 W	<b>XIR PLUS &amp; XCell combustible</b>	9.9 W	10.9 W	<b>XIR PLUS &amp; XCell toxic or O<sub>2</sub></b>	6.0 W	7.0 W	<b>Dual XIR PLUS</b>	10.6 W	11.6 W	<b>Dual XCell toxic &amp; O<sub>2</sub></b>	2.6 W	3.6 W	<b>Dual XCell combustible</b>	9.6 W	10.6 W	<b>Dual XCell comb. &amp; XCell toxic or O<sub>2</sub></b>	4.3 W	5.3 W
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<b>EMC DIRECTIVE</b>	Complies with EN 50270, EN 61000-6-4, EN 61000-6-3																														
<b>DISPLAY</b>	Organic LED (multi-lingual) with contrast ratio of 2000:1 and view angle of 160°																														
<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, general system																														
<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 or 4 mm <sup>2</sup> <i>Refer to manual for mounting distances.</i>																														
Dimensions																															
<p>Technical drawings showing dimensions for the X5000 gas monitor. Dimensions are provided in inches and millimeters.</p> <ul style="list-style-type: none"> <li>Top view: 5.88 [149.4] (width), 2.70 [68.58] (width), 4.50 [114.3] (height), 6.71 [170.93] (height)</li> <li>Side view: 13.42 [340.97] (length)</li> <li>Detail view 1: 3.88 [98.04] (width)</li> <li>Detail view 2: 4.86 [123.44] (width)</li> <li>Bottom view: 10.15 [257.78] (width)</li> </ul>																															
* See manual for FM approved sensors.																															

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 is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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