# ULTIMA® X5000 Gas Monitor

The future looks bright.



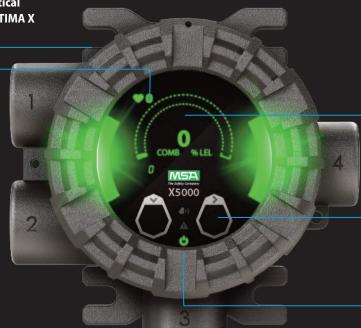
Simple retrofits have identical footprint and wiring to ULTIMA X Gas Monitor series.

Bluetooth® wireless technology allows mobile device to act as HMI screen and controller.



Download the X/S Connect App from the Google Play store.

Reduce setup time by at least 50% with the X/S Connect App



Intuitive display features new design equipped with organic LED (OLED) display, with full word text in 9 languages. Bright green, yellow and red status LEDs for extreme visibility.

Industry-first, touch-button interface provides intuitive, tool-free user experience.

Instrument status indicators illuminate power, fault and alarm conditions.

#### **Advanced Sensor Technology**

POWERED BY

**XCell**®

WITH



- 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.\*
- 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.
- Dual sensor capability doubles sensing power with half the footprint of a single gas sensor transmitter.



### **Applications**

- Chemical
- · Oil and gas
- Petrochemical

- Utilities
- Wastewater
- General industry



## **ULTIMA®** X5000 **Gas Monitor**



COMBUSTIBLE GAS SENSOR TYPE Infrared (XIR PLUS)  Hydrogen Sulfide H <sub>2</sub> S (XCell Toxic) Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO (XCell Toxic) Oxygen O <sub>2</sub> (XCell O <sub>2</sub> )  SENSOR MEASURING RANGES RANGES  SENSOR MEASURING Combustible: 0-100% LEL H <sub>2</sub> S: 0-10, 0-50, 0-100 ppm CO: 0-100, 0-500, 0-100 ppm CO-H <sub>2</sub> Resist: 0-100 ppm O <sub>2</sub> : 0-25%  TYPICAL SENSOR LIFE  SENSOR PERFORMANCE* T90 (TYPICAL)  XIR PLUS  22 sec. SH-1% LEL SCELL COMB  22 sec. SH-1% LEL SCELL COMB  XCELL COMB SCENSOR SENSOR PERFORMANCE*  T90 (TYPICAL)  XIR PLUS SENSOR SENSOR PERFORMANCE* T90 (TYPICAL)  XIR PLUS SENSOR SENSOR PERFORMANCE* SENSOR SENSOR PERFORMANCE* SENSOR						
SENSOR TYPE Infrared (XIR PLUS)  TOXIC GAS & OXYGEN SENSOR TYPE Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO H <sub>2</sub> -Resistant (XCell Toxic) Oxygen O <sub>2</sub> (XCell O <sub>2</sub> )  SENSOR MEASURING RANGES Combustible: 0-100% LEL H <sub>2</sub> S: 0-10, 0-50, 0-100 ppm CO: 0-100, 0-500, 0-100 ppm CO-H <sub>2</sub> Resist: 0-100 ppm O <sub>2</sub> : 0-25%  TYPICAL SENSOR 5 years – XCell Sensors 10 years – infrared  SENSOR PERFORMANCE* T90 REPEATABILITY (PER YEAR)  XIR PLUS <2 sec. ≤ +/- 1% LEL <5% LEL  XCELL COMB <22 sec. ≤ +/- 1% LEL <5% LEL  XCELL H <sub>2</sub> S <23 sec. +/- 5% <1% full scale  XCELL O <sub>2</sub> <15 sec. ≤ +/- 0.3% Vol 0.2% Vol  XCELL CO <9 sec. +/- 5% <1% full scale  APPROVALS CLASSIFICATION Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class III US Zones  Class I Zone 1 AEx db IIC T5 Gb	PRODUCT SPECIFICATIONS					
SENSOR TYPE  Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO $H_2$ -Resistant (XCell Toxic) Oxygen $H_2$ (XCell $H_2$ )  SENSOR MEASURING RANGES  RANGES  RANGES  Combustible: 0-100% LEL $H_2$ S: 0-10, 0-50, 0-100 ppm CO: 0-100, 0-500, 0-1000 ppm CO- $H_2$ Resist: 0-100 ppm O2: 0-25%  TYPICAL SENSOR LIFE  SENSOR PERFORMANCE*  T90 (TYPICAL)  REPEATABILITY (PER YEAR)  XIR PLUS $H_2$ S eec. $H_2$ + 1% LEL $H_2$ S below  XIR PLUS $H_2$ S eec. $H_2$ + 1% LEL $H_2$ S below  XCELL COMB  XCELL COMB  XCELL O2 $H_2$ S eec. $H_2$ + 1% LEL $H_2$ S below  XCELL O2 $H_2$ S eec. $H_2$ S below $H_2$ S eec. $H_3$ S below $H_2$ S eec. $H_3$ S below $H_3$ S eec. $H_4$ S eec. $H_3$ S below $H_3$ S eec. $H_4$ S eec. $H_3$ S eec. $H_4$		, (,				
RANGES  H <sub>2</sub> S: 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%  TYPICAL SENSOR LIFE  SENSOR PERFORMANCE*  T90 (TYPICAL)  REPEATABILITY (PER YEAR)  XIR PLUS  <2 sec. ≤ +/- 1% LEL <5% LEL  XCELL COMB <22 sec. ≤ +/- 1% LEL  XCELL H <sub>2</sub> S  <23 sec. +/- 5%  <1% full scale  XCELL O <sub>2</sub> <15 sec. ≤ +/- 0.3% Vol  XCELL CO  SPEC. +/- 5%  CLASSIFICATION  CLASSIFICATION  CLASSIFICATION  Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class III Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb		Hydrogen Sulfide H <sub>2</sub> S (XCell Toxic) Carbon Monoxide CO (XCell Toxic) Carbon Monoxide CO H <sub>2</sub> -Resistant (XCell Toxic)				
SENSOR   T90   REPEATABILITY   ZERO DRIFT   (PER YEAR)		H <sub>2</sub> S: 0-10, 0-50, 0-100 ppm CO: 0-100, 0-500, 0-1000 ppm CO-H <sub>2</sub> Resist: 0-100 ppm				
PERFORMANCE* (TYPICAL)         XIR PLUS       <2 sec.       ≤ +/- 1% LEL       <5% LEL         XCELL COMB       <22 sec.       ≤ +/- 1% LEL       <5% LEL         XCELL H <sub>2</sub> S       <23 sec.       +/- 5%       <1% full scale         XCELL O <sub>2</sub> <15 sec.       ≤ +/- 0.3% Vol       0.2% Vol         XCELL CO       <9 sec.       +/- 5%       <1% full scale         APPROVALS       Class I Div 1 Groups A-D, T5, Type 4X, IP66       Class II Div 1 Groups E-G, T6; Class III         US Zones       Class I Zone 1 AEx db IIC T5 Gb						
XCELL COMB <22 sec. ≤ +/- 1% LEL <5% LEL  XCELL H <sub>2</sub> S <23 sec. +/- 5% <1% full scale  XCELL O <sub>2</sub> <15 sec. ≤ +/- 0.3% Vol 0.2% Vol  XCELL CO <9 sec. +/- 5% <1% full scale  APPROVALS  CLASSIFICATION  Class I Div 1 Groups A-D, T5, Type 4X, IP66  Class II Div 1 Groups E-G, T6; Class III  US Zones  Class I Zone 1 AEx db IIC T5 Gb			REPEATABILITY			
XCELL $H_2S$ $<23$ sec. $+/-5\%$ $<1\%$ full scaleXCELL $O_2$ $<15$ sec. $<+/-0.3\%$ Vol $0.2\%$ VolXCELL CO $<9$ sec. $+/-5\%$ $<1\%$ full scaleAPPROVALS CLASSIFICATIONClass I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb	XIR PLUS	<2 sec.	≤ +/- 1% LEL	<5% LEL		
XCELL O <sub>2</sub> <15 sec. ≤ +/- 0.3% Vol 0.2% Vol  XCELL CO <9 sec. +/- 5% <1% full scale  APPROVALS CLASSIFICATION Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb	XCELL COMB	<22 sec.	≤ +/- 1% LEL	<5% LEL		
XCELL CO <9 sec. +/- 5% <1% full scale  APPROVALS CLASSIFICATION Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb	XCELL H <sub>2</sub> S	<23 sec.	+/- 5%	<1% full scale		
APPROVALS CLASSIFICATION Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb	XCELL O <sub>2</sub>	<15 sec.	≤ +/- 0.3% Vol	0.2% Vol		
CLASSIFICATION Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb	XCELL CO	<9 sec.	+/- 5%	<1% full scale		
Global Zones Ex db IICT5 Gb Ex tb IIICT85°C Db	CLASSIFICATION	Class I Div 1 Groups A-D, T5, Type 4X, IP66 Class II Div 1 Groups E-G, T6; Class III US Zones Class I Zone 1 AEx db IIC T5 Gb Class II Zone 21 AEx tb IIIC T85°C Db Global Zones Ex db IIC T5 Gb Ex tb IIIC T85°C Db				
WARRANTY X5000 Transmitter: 2 years XIR PLUS: 10 years source, 5 years electronics XCell Sensors: 3 years	WARRANTY	, , , , , , , , , , , , , , , , , , ,				
APPROVALS  CSA, ATEX, IECEx, CE Marking.  Complies with C22.2 No. 152, FM 6320, IEC/EN: EN 60079-29-1, ANSI/ISA 12.13.01.  Suitable for SIL 2	APPROVALS	Complies with C22.2 No. 152, FM 6320, IEC/EN: EN 60079-29-1, ANSI/ISA 12.13.01.				
ENVIRONMENTAL SPECIFICATIONS						
OPERATING XCell: -40°C to +60°C TEMPERATURE XIR PLUS: -40°C to +60°C RANGE (may differ by gas, see manual)	TEMPERATURE	XIR PLUS: -40	0°C to +60°C			
STORAGE -40°C to +60°C TEMPERATURE RANGE	TEMPERATURE RANGE	-40°C to +60°C				
(NON-CONDENSING) (NON-CONDENSING) 0-95% (XCell Toxics & O <sub>2</sub> ) 0-95% (XCell Comb) 0-95% (XIR PLUS)		0-95% (XCell Comb)				

\*At ambient conditions

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. MSA – The Safety Company 1000 Cranberry Woods Drive Cranberry Township, PA 16066 USA Phone 724-776-8600 www.MSAsafety.com

U.S. Customer Service Center Phone 1-800-MSA-2222

Fax 1-800-967-0398

MSA Canada
Phone 1-800-672-2222

Fax 1-800-967-0398 **MSA Mexico** 

Phone 01 800 672 7222

INPUT POWER	10 to 30 VDC, 3 wire, <5W nominal			
SIGNAL OUTPUT	Dual 4-20 mA current source, HART, 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)	lua na i	6.7W 5.5W 2.8W 9.6W 7.0W 11.6W 3.6W 10.6W 5.5W		
EMC DIRECTIVE	Complies with EN 50270, EN 61000-6-4 EN 61000-6-3	,		
DISPLAY	Organic LED (multi-lingual) with Contrast Ratio of 2000:1 and View Angle of 160°			
BAUD RATE	2400, 4800, 9600, 19200, 38400, 11520	0		
HART	HART 7, HART device description langu available	age		
FAULTS MONITORED	Low supply voltage, RAM checksum error, flash checksum error, EEPROM error, internal circuit error, relay, invalid sensor configuration, sensor faults, calibration faults, general system			
WIRING REQUIREMENTS	3-wire (single sensor) or 4-wire (dual sensor) shielded cable. Refer to manual for mounting distances and wire gauge.			

**MECHANICAL SPECIFICATIONS** 

#### DIMENSIONS

