Ultima® XL/XT Series Gas Monitors



MSA
The Safety Company



Economical and continuous gas monitors with HART Field Communications Protocol. Single-sensor units use catalytic, electrochemical, and infrared gas detection technologies for combustible and toxic gases and for oxygen deficiency.



Ultimate features. Extreme design. Reliable and affordable.

Ultima XL/XT Series Gas Monitors offer an affordable choice in continuous gas detection and monitoring while retaining key features of MSA's Ultima X Series Gas Monitors. HART Field Communications Protocol running over 4-20mA output provides convenient setup, calibration, and diagnostics. The hand-held HART communicator, controller or laptop provides a display, while local calibration employs LEDS and push-buttons.

The Ultima XL Gas Monitor is explosion-proof with a stainless steel enclosure, while the Ultima XT Gas Monitor uses a general purpose plastic housing. The condulet for the Ultima XL Gas Monitor has three entryways for sensor module, intrinsically safe HART port, and signal/power wiring.

These versatile units are well-suited for both indoor and outdoor applications within oil and gas, chemical and petro-chemical facilities, refineries, steel mills, water and wastewater treatment plants, general industry, and many others.

Key Features

- Sensor disconnect-under-power without declassifying a hazardous area
- Interchangeable smart sensors; no reconfiguration required
- One circuit board for increased reliability and easier serviceability
- Calibrate, set up or perform diagnostics with HART from any point along the 4-20mA line
- Easy installation with two-piece field-wiring connectors
- Asset management using HART interface
- Adjustable full-scale range

Calibration Options

- Internal push-button and LEDs provide local intrusive calibration
- Utilize handheld communicator, host DCS or laptop
- Sensor X-change program
- Automatic calibration adjustments and date stamping
- Selectable lockout of output signal during calibration

Ultima® XL/XT Series Gas Monitors

(Ultimate Features...Extreme Design)



Ultima XL Gas Monitor – Explosion-Proof Stainless Steel Gas Detector

The Ultima XL Gas Monitor offers:

- 316 Stainless steel
- Multiple-entry mounting enclosure
- Intrinsically safe HART port



Ultima XT Gas Monitor – Water- and Corrosion-Resistant, All-Purpose, Polycarbonate Gas Detector

The Ultima XT Gas Monitor offers:

- Nema 4X rating
- Light-weight (Only 1.75 lbs)
- HART port



Ultima XL IR Combustible Gas Monitor – Explosion-Proof Stainless Steel, Infrared Gas Detector

The Ultima XL IR Gas Monitor offers:

- 316 Stainless steel
- Multiple-entry mounting enclosure
- Intrinsically safe HART port
- Fast response time
- Operation based on dual-wavelength, heated-optics technology, providing definitive compensation for temperature, humidity, and aging effects
- IR technology offers excellent long-term stability, eliminating the need for frequent calibrations
- A sintered-disk-free design for optimum performance in harsh environments
- No-gas calibration, a zero adjustment is all that is required for full calibration
- IP67 Rated – protected from temporary immersion in water

Gases

* Ammonia- 0-50 PPM
* Ammonia- 0-100 PPM
* Ammonia- 0-1000 PPM
Arsine- 0-2 PPM
* Bromine- 0-5 PPM
Carbon Monoxide- 0-100 PPM
Carbon Monoxide- 0-500 PPM
Carbon Monoxide- 0-1000 PPM
* Chlorine- 0-5 PPM
* Chlorine- 0-10 PPM
* Chlorine- 0-20 PPM
* Chlorine Dioxide- 0-3 PPM
IR Combustible Gas - Methane- 0-100% LEL
IR Combustible Gas - Non Methane- 0-100% LEL
Combustible Gas- 0-100% LEL Natural Gas and H2
Combustible Gas- 0-100% LEL Petroleum Vapors
Combustible Gas- 0-100% Solvents
* Diborane- 0-50 PPM
* ETO- 0-10 PPM
* Fluorine- 0-5 PPM
Germane- 0-3 PPM
* Hydrogen Fluoride- 0-10 PPM
Hydrogen- 0-1000 PPM
* Hydrogen Chloride- 0-50 PPM
Hydrogen Cyanide- 0-50 PPM
Hydrogen Sulfide- 0-10 PPM
Hydrogen Sulfide- 0-50 PPM
Hydrogen Sulfide- 0-100 PPM
Hydrogen Sulfide- 0-500 PPM
Hydrogen Sulfide - solid state- 0-100 PPM
Nitric Oxide- 0-100 PPM
Nitrogen Dioxide- 0-10 PPM
Oxygen- 0-10% - compensated
Oxygen- 0-25% - compensated
Phosphine- 0-2 PPM
Silane- 0-25 PPM
Sulfur Dioxide- 0-25 PPM
Sulfur Dioxide- 0-100 PPM

** These gases not available in the XL model*

Specifications (for Ultima XL, Ultima XT and Ultima XLIR)

Gas Types	XL, XT	Combustibles, oxygen and toxics	
	XLIR	Combustibles; 0-100%LEL	
Temperature Range		-40°C to +60°C (-40°F to +140°F) (Typical-range for some gases may differ)	
Drift			
Zero Drift	XL, XT	<5%/year, typical	
	XLIR	±2%/year, typical	
Span Drift	XL, XT	<10%/year, typical	
Noise		<1% Full Scale	
Accuracy			
Repeatability	XL, XT, XLIR	±1%Full Scale or 2ppm, typical	
Linearity	XL, XT	±2%Full Scale or 2ppm, (O2, CO)	
	XLIR	±2%Full Scale (≤50% LEL)	
	XL, XT	±3%Full Scale (<50% LEL combustibles)	
	XL, XT, XLIR	±5%Full Scale (>50% LEL combustibles)	
	XL, XT	±10%Full Scale or 2ppm, (non-CO toxics)	
Response Times			
T20 O2 & toxics	XL, XT	<12 seconds (typically 6 seconds)	
T50 O2 & toxics	XL, XT	<30 seconds (typically 12 seconds)	
T50 combust.	XL, XT	<10 seconds	
T90 combust.	XL, XT	<30 seconds	
T90 combust.	XLIR	<2 seconds	
Humidity	XL, XT	15%-95% RH, non-condensing	
	XLIR	0%-95% RH, non-condensing	
Sensor Life			
Oxygen & Toxics	XL, XT	2 years typical	
Combust.	XL, XT	3 years typical	
Combust.	XLIR	5 years typical	
Warranty		1 year XL, XT; 10 years XLIR (IR source only)	
Power Input	XL, XT	8-30VDC (oxygen and toxics)	
	XL, XT	8-30VDC @ 450mA maximum (combustibles)	
	XLIR	8-30VDC @ 750mA maximum (combustibles)	
Wiring Requirements			
Combust.	XL, XT, XLIR	3-wire; LEDs and no relays	
Oxygen & Toxics	XL, XT	3-wire; LEDs and no relays	
Signal Output	XL, XT, XLIR	4-20mA 3-wire current source, HART	
Housing Entries	XL, XLIR	Three conduit entries, 3/4" NPT or 25mm	
	XT	Two entries	
Physical	XL	316 Stainless Steel; 7.7lbs (3.5kg) 7.1"W x 4.1"D x 8.8"L (180 x 103 x 224mm)	
	XT	Polycarbonate; 1.75lbs (0.79kg) 6.2"W x 3.0"D x 9.4"L (157 x 76 x 239mm)	
	XLIR	316 Stainless Steel; 8.0lbs (3.6kg) 11.4"W x 4.1"D x 6.3"L (288 x 104 x 159mm)	
Approval Ratings	XL	USA/Canada FM C US APPROVED	Class I, Div. 1 & 2, Groups A, B, C, & D Class I, Zone 1 & 2, Groups IIC, IIB & IIA, T6 Type 4X, IP 66
		Europe Ex	II 2G, 3G, EEx d nA [ib] IIC T6 IP 66
		International	IEC EX scheme Ex d nA [ib] IIC T6 IP 66

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.

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