



**MSA**  
X Series AL Junction Box  
p/n: 10115334  
Serial-No.: 12/10-000010  
**Ex**  
BVS 10 ATEX E 066X  
II 2G Ex e II T4 -50°C<Tas<70°C  
T6 -50°C<Tas<40°C  
II 2D Ex ID A21 IP6x  
T135°C -50°C<Tas<70°C  
T 85°C -50°C<Tas<40°C  
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## PrimaX IR Gas Transmitter

*Designed for Reliable Performance in Extreme Conditions*

# PrimaX IR Gas Transmitter

Every feature of the SIL 2 designed PrimaX IR Gas Transmitter is designed with reliability in mind to withstand the most challenging environmental conditions throughout the product's life. MSA's **PrimaX IR Gas Transmitter** offers LEL (Lower Explosive Limit) combustible gas detection through a patent-pending PrimaX Gas Transmitter **IR dual source** design. A redundant IR source provides reliability and uninterrupted monitoring should a source failure occur. Furthermore, the possibility of obscurations due to rain, fog, dirt, dust, and other environmental conditions is minimized due to dual source design. In addition, optics are optimized for maximum signal, resulting in a product of extraordinary stability.



## *Features & Benefits*

- Patent-pending dual source design provides redundancy and reliable, uninterrupted performance
- Patent-pending environmental guard sensor housing for fast, efficient response time
- Heated optics prevent condensation buildup
- 4–20 mA analog output
- User-friendly setup, calibration diagnostics, and maintenance via HART digital communication
- One-person calibration is easily performed using calibration cap
- Easy connection using aluminium or stainless steel junction box
- 316 stainless steel, IP 67-rated, rugged housing protects unit from environmental extremes
- Factory-calibrated for fast commissioning
- Wide temperature range of  $-40$  to  $+80^{\circ}\text{C}$



## *Applications*

- OGP including platforms, refineries, drilling rigs, and compressor stations
- Chemical plants
- Fuel-loading and storage facilities
- Wastewater
- Various other industrial applications



## *Installation*

The PrimaX IR Gas Transmitter is designed for quick and easy installation. Stainless steel and aluminum junction boxes can be ordered pre-installed for further ease of installation and wiring. A unique environmental guard with patent-pending clamshell design provides convenient installation in tight locations.



## *Calibration*

Users may choose the most suitable calibration method for their applications. A calibration cap is placed on the unit to provide one-person calibration. Calibration cap icon-driven user interface guides users through the calibration process. Alternatively, HART (Highway Addressable Remote Transducer) output provides remote calibration capability. A HART junction box is offered for local calibration in classified areas; HART software is provided to initiate calibration from remote locations.

## *Maintenance*

The PrimaX IR Gas Transmitter is designed to minimize maintenance costs without replacement of internal components. The PrimaX IR Gas Transmitter dual source design reduces potential system faults due to obscurations caused by rain, fog, dirt, etc. This monitor provides maintenance alerts as well as other fault conditions over 4–20 mA and HART outputs.

## Specifications

Description	Specification
Gas Types and Ranges	Hydrocarbon gases & vapors; 0–100% LEL
Temperature Range	–40 °C to +80 °C (–40 °F to +176 °F)
Repeatability	±1% full-scale
Linearity	3% of gas level
Response Times without environmental guard with environmental guard	$T_{90} < 4$ sec. Tested as per procedure in IEC 60079-29-1. For 50% LEL, 50% response < 10 sec., 90% response < 25 sec.
Humidity	0%–95% RH, non-condensing
Sensor Warranty	10 years for IR source
Power Input	18–32 VDC, 5 watts (–40 °C to +80 °C)
Current Draw	350 mA RMS average @ 24 VDC
Wiring Requirements	3-wire, 2.0 mm max (14 AWG)
Signal Output	4–20 mA 3-wire current source with HART protocol
Physical Weight Dimensions	316 stainless steel 2.0 kg (4.5 lbs.) 89 x 203 mm (3.5" dia. x 8" long)
Approval Ratings	<b>Europe/International</b> CE EMC Directive: 2004/108/EC CE ATEX Directive: 94/9/EC II 2G Ex d IIc T4 <b>US and Canada</b> cFMus (pending) Class I, Div. 1, Groups A, B, C, & D Class II, Div. 1, Groups E, F, & G Class III ANSI/ISA 12.13.01 CSA C22.2 No. 152 Combustible Gas Performance <b>IEC</b> China Ex/CMC/CCCF (pending) Russia Ex/GOST R (pending) ( $T_{amb}$ –40 °C to +80 °C)
Ingress Protection	IP 67
Source Redundancy	100% redundancy with failure of 1st source
HART	Compatibility with HART 7.0
Safety Integrity Level	SIL 2 (pending)



## Options & Accessories



*Calibration cap*



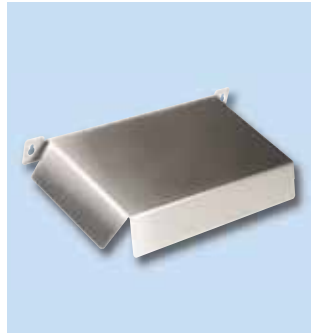
*Junction boxes*



*Flow cap*



*Duct-mount kit*



*Sun shield*



*Insect guard*



*Calibration cover*



*HART junction box*



*Environmental guard tether*



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



**UK Office**

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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.