

# M21 Transmitter

## Single Channel Universal Gas Monitoring

The Millennium II (M21) single channel universal transmitters have been engineered from the ground-up to include the innovative features that managers and operators in the field demand, while providing rock solid day-to-day operation, even in the most extreme conditions. The Millennium II redefines what you expect from a fixed gas detection solution.

- Universal transmitter — compatible with all sensor types (Infrared, catalytic Bead, and electrochemical)
- Wide voltage range allows for greater stability and system compatibility
- -55 °C to +85 °C temperature range

### Universal Transmitter

The transmitter can be fitted with a wide range of toxic or combustible gas sensors. Sensors are pre-calibrated and easily connected to the transmitter which recognizes a newly fitted sensor, automatically uploading the sensor's specific configuration profile.

### Digital Communications

Sensor and transmitter continuously communicate digitally, giving you the confidence of stable, accurate protection with fast response times even over long separation distances.

### Global Certifications

The Millennium II is approved to international hazardous area safety standards for operation and performance.

### Easy To Use Menus

English, French, Portuguese, or Spanish display languages included. The full text menu makes installation, operation, and calibration simple. No manual necessary!



M21 (SS & AL) shown with SX3 Series Sensors

- Lowest power consumption available
- Full diagnostics with event and data logging
- Intuitive menu system provides operators with non-intrusive set-up and calibration interface
- Field selectable gas curves and ranges
- Long range (+2,000 ft/600 m) sensor separation

### Superior OLED Display

The only full graphic OLED display available, easy to read in all ambient lighting conditions and operates down to -55 °C!

### Analog, Relay, Modbus RS485 RTU & HART®

Multiple communication protocols are available combined with relays to allow the M21 Transmitter to work seamlessly with your system.

### Field-proven Sensor Innovations

All of our sensors are engineered to be fast and reliable with field-proven performance in the harshest industrial conditions possible. These include a full range of fast response Electrochemical toxic gas sensors. For combustible gas detection, poison resistant Catalytic Bead technology with *SensorGuard*, which greatly prolongs sensor life and Infrared sensor technology utilizing a dual beam design with no mirrors that can become contaminated (“fogged up”) or misaligned.

# Specifications

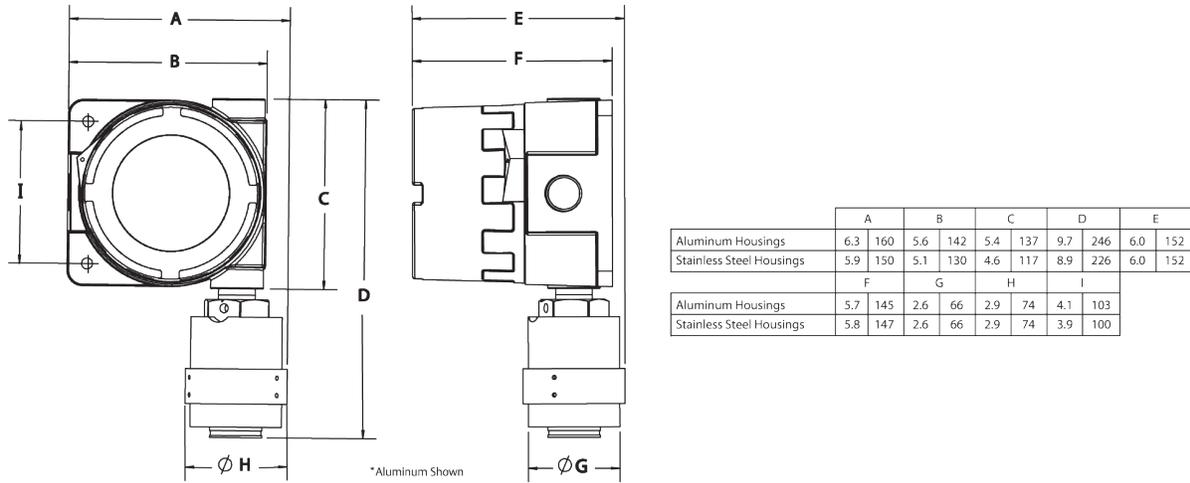
**Table 1 - Millennium II M21 Single Channel Transmitter**

Electrical	
<b>Power Consumption</b>	2.4 W @ 24 VDC (average - varies by sensor types/quantities)
<b>Voltage Range</b>	10.5–32.0 VDC (HART®: 18–32 VDC)
<b>EMC Compliance</b>	EN 50270:2006 per EMC directive 2004/108/EC
<b>Display</b>	Organic LED (OLED), Power/Status LED's
Environmental	
<b>Temperature</b>	-55 °C to +85 °C (-67 °F to +185 °F) -40 °C to +85 °C (-40 °F to +185 °F) - Aluminum ATEX/IECEX
<b>Relative Humidity</b>	0–95 % RH non condensing
<b>Ingress Protection</b>	IP66 (Aluminum), IP67 (Stainless steel), IP64 (with sensors) Type 4X
Mechanical	
<b>Enclosure Material</b>	Cast Aluminum (A359) or stainless steel (SS316)
<b>Conduit Opening</b>	¾" NPT (3X)
<b>Outputs</b>	Standard: Analog 4–20 mA Optional: Four 5 A Form C Relays, and RS 485 Modbus® RTU, and HART®
<b>Certifications</b>	<p><b>North American</b> Class I, Division 1, Groups BCD; Class I, Zone 1, Group IIB+H2 Type 4X FM 6310/6320, ANSI/ISA 12.13.01CSA-C22.2 No152</p> <p><b>ATEX</b> CE 0575 Ex II 2 G Exd IIB+H2 T5 DNV-2005-OSL-ATEX-0324 (Aluminum) IP66, controller only FM07ATEX0013X (Stainless Steel) IP67, controller only EN 61779-1 &amp; EN 61779-4</p> <p><b>IECEX</b> Ex d IIB+H2 T5 Gb IECEX DNV 12.0014 (Aluminum) IP66, controller only IECEX FMG 12.0006X (Stainless Steel) IP 67, controller only IEC 60079-0: 2007-10 &amp; IEC 60079-1: 2007-04</p> <p><b>Inmetro</b> Ex d IIB+H2 T5 Gb IP67</p>
<b>Sensors</b>	Combustible Gases: SC3 Series Infrared and Catalytic Bead Toxic Gases: ST3 Series Electrochemical
<b>Warranty</b>	3 years
<b>Mounting</b>	Surface Mount/Pipe Mount/Duct Mount
<b>Weight</b>	Aluminum: 5.5 lbs (2.5 kg), Stainless steel: 7.0 lbs (3.2 kg)

Ordering Information	
<b>M21-A</b>	Single Channel - Analog
<b>M21-AR</b>	Single Channel - Analog & Relay
<b>M21-AD</b>	Single Channel - Analog & Modbus
<b>M21-ARD</b>	Single Channel - Analog & Relay & Modbus
<b>M21-AH</b>	Single Channel - Analog & HART®
<b>M21-AHR</b>	Single Channel - Analog & HART® & Relay
Enclosures Available: Aluminum (-A) Stainless Steel (-S)	
<b>Ordering Matrix Example:</b> M21-AH-S (Transmitter - Output - Enclosure Material)	

Special Features
<ul style="list-style-type: none"> <li>■ Current loop text jacks for each channel on faceplate</li> <li>■ Non-intrusive one man calibration (magnetic switch)</li> <li>■ Field selectable toxic gas ranges</li> <li>■ Redundant menu access via push buttons</li> <li>■ Sensor enable/disable option from menu (Cl1, Div2)</li> <li>■ Alarm relays configurable/assignable to any channel</li> <li>■ Displayed event logging (980 events)</li> <li>■ Easily retrieve last calibration data from sensor</li> <li>■ Four languages - English, French, Spanish, Portuguese</li> </ul>
Accessories
<ul style="list-style-type: none"> <li>■ Mounting Bracket Complete With Hardware</li> <li>■ Sun Shade/Deluge Protection</li> <li>■ Duct Mount and Hardware Kit</li> </ul>

Figure 1 - Millennium II M21 Single Channel Transmitter Dimensions



## Accessories

Table 2 - Accessories

Accessories	
<b>UDM-001</b>	Universal duct mount assembly with 1 m inlet sampling pipe - Stainless Steel
<b>UDM-002</b>	Universal duct mount assembly with 1.5 m inlet sampling pipe - Stainless Steel
<b>UDM-003</b>	Universal duct mount assembly - Stainless Steel
<b>UDM-EX1</b>	1 m extension - for use with UDM-001 and UDM-002 - Stainless Steel
<b>UDM-EX2</b>	1.5 m extension - for use with UDM-001 and UDM-002 - Stainless Steel
<b>UN-MK-31</b>	1" Pipe Mounting kit c/w stainless steel mounting bracket and hardware
<b>UN-MK-32</b>	2" Pipe Mounting kit c/w stainless steel mounting bracket and hardware
<b>UN-MK-33</b>	3" Pipe Mounting kit c/w stainless steel mounting bracket and hardware
<b>HPT-001</b>	HART® Communicator port, mounts directly to Millennium II transmitter
<b>SSK-51</b>	1" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-31 Mounting Kit
<b>SSK-52</b>	2" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-32 Mounting Kit
<b>SSK-53</b>	3" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-33 Mounting Kit

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