M22 Transmitter
Dual Channel Universal Gas Monitoring

The Millennium II (M22) dual 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.

- One transmitter for two detection points
- Universal Transmitter — compatible with all sensor types (infrared, catalytic bead, and electrochemical)
- Wide voltage range allows for greater stability and system compatibility
- Lowest power consumption available
- Mix and match all sensor types on a single

M22 (SS & AL) shown with SX3 Series Sensors

transmitter, greater coverage and flexibility
- 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) sensor separation

Dual Channel Transmitter
A single transmitter which accepts two sensor inputs and provides two separate output signals, reducing initial purchasing and installation costs.

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

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!

Superior OLED Display
The only full graphic OLED display available, easy to read in all ambient lighting conditions.

Analog, Relay, Modbus® RS485 RTU
Multiple communication protocols allow the M22 to work seamlessly with your new or existing 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

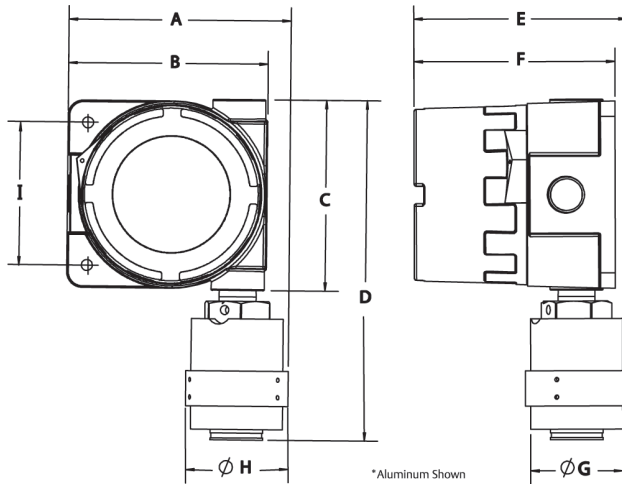### Table 1 - Millennium II M22 Dual Channel Transmitter

Electrical	
Power Consumption	2.4 W @ 24 VDC (average - varies by sensor types/quantities)
Voltage Range	10.5 –32.0 VDC
EMC Compliance	EN 50270: 2006 per EMC directive 2004/108/EC
Display	Organic LED (OLED), Power/Status LED's
Environmental	
Temperature	-67 °F to +185 °F (-55 °C to +85 °C) - Stainless steel -58 °F to +185 °F (-50 °C to+85 °C) - Stainless steel - North American explosion-proof certification -40 °F to +185 °F (-40 °C to +85 °C) - Aluminum
Relative Humidity	0–95 % RH non condensing
Ingress Protection	IP66 (Aluminum), IP67 (Stainless Steel), IP64 (with sensors) Type 4X
Mechanical	
Enclosure Material	Cast Aluminum (A359) or Stainless Steel (SS316)
Conduit Opening	¾" NPT (3X)
Outputs	Standard: Analog 4–20 mA
	Optional: Four 5 A Form C Relays, and RS 485 Modbus® RTU

Certifications	**North American**
	    Class I, Division 1, Groups BCD T5
	    Class I, Zone 1, AEX/Ex d IIB+H2 T5
	    -50 °C ≤ Ta ≤ + 85 °C
	    NEMA Type 4X/IP67
	    FM6320, ANSI/ISA 12.13.01, CSA 22.2 No. 152:2006
	IECEx
	    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 & IEC 60079-1: 2007-04
	Inmetro
	    Ex d IIB+H2 T5 Gb IP67

Sensors	Combustible Gases: SC3 Series Infrared and Catalytic Bead Toxic Gases: ST3 Series Electrochemical
Warranty	3 years
Mounting	Surface Mount/Pipe Mount/Duct Mount
Weight	Aluminum: 5.5 lbs (2.5 kg), Stainless steel: 7.0 lbs (3.2 kg)

Ordering Information	
M22-A	Dual Channel - Analog
M22-AR	Dual Channel - Analog & Relay
M22-AD	Dual Channel - Analog & Modbus
M22-ARD	Dual Channel - Analog & Relay & Modbus
Enclosures Available: Aluminum (-A) Stainless Steel (-S)	
Ordering Matrix Example: **M22-AD-S** (Transmitter - Output - Enclosure Material)	

Special Features
■ Current loop test jacks for each channel on faceplate ■ Non-intrusive one man calibration (magnetic switch) ■ Field selectable toxic gas ranges ■ Redundant menu access via push buttons ■ Sensor enable/disable option from menu (Cl1, Div2) ■ Alarm relays configurable/assignable to any channel ■ Displayed eventlogging (980 events) ■ Retrieve last calibration info from sensor ■ Four languages - English, French, Spanish, Portuguese

Accessories
■ Mounting Bracket Complete With Hardware ■ Sun Shade/Deluge Protection ■ Duct Mount and Hardware Kit

Figure 1 - Millennium II M22 Dual Channel Transmitter Dimensions

	A		B		C		D		E	
Aluminum Housings	6.3	160	5.6	142	5.4	137	9.7	246	6.0	152
Stainless Steel Housings	5.9	150	5.1	130	4.6	117	8.9	226	6.0	152

	F		G		H		I	
Aluminum Housings	5.7	145	2.6	66	2.9	74	4.1	103
Stainless Steel Housings	5.8	147	2.6	66	2.9	74	3.9	100

Accessories

Table 2 - Accessories

Accessories	
UDM-001	Universal duct mount assembly with 1 m inlet sampling pipe - Stainless Steel
UDM-002	Universal duct mount assembly with 1.5 m inlet sampling pipe - Stainless Steel
UDM-003	Universal duct mount assembly - Stainless Steel
UDM-EX1	1 m extension - for use with UDM-001 and UDM-002 - Stainless Steel
UDM-EX2	1.5 m extension - for use with UDM-001 and UDM-002 - Stainless Steel

UN-MK-31	1" Pipe Mounting kit c/w stainless steel mounting bracket and hardware
UN-MK-32	2" Pipe Mounting kit c/w stainless steel mounting bracket and hardware
UN-MK-33	3" Pipe Mounting kit c/w stainless steel mounting bracket and hardware

SSK-51	1" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-31 Mounting Kit
SSK-52	2" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-32 Mounting Kit
SSK-53	3" Pipe Mounted Sun shade kit/rain guard - Stainless steel - includes UN-MK-33 Mounting Kit

EmersonProcess.com/FlameGasDetection

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