



PRODUCT DATASHEET

www.high-accuracy.com

M2B Transmitter

Single Channel Universal Gas Monitoring

The Millennium II Basic (M2B) universal transmitter is a robust and reliable safety solution delivering highly accurate monitoring of toxic and combustible gases. Utilizing our state-of-the-art sensor technology, it provides a flexible detection platform that includes all the advanced features users in the field demand with complete ease-of-use and operation.

- Compatible with ST3 and SC3 series sensors (Infrared, Catalytic Bead, Electrochemical)
- -67 °F to +185 °F (-55 °C to +85 °C)
-58 °F to +185 °F (-50 °C to +85 °C) North American explosion-proof certification
- Lowest power consumption available
- Wide voltage range allows for greater stability and system compatibility
- Nonintrusive menu system, simple set-up and calibrations via external magnet
- Field selectable gas curves and ranges
- Long range (+600 m/2,000 ft.) sensor separation through digital communication between transmitter and sensor

Streamlined Controller Design

Designed for applications that require a local, full-featured transmitter interface but do not require a character display. The Millennium II Basic includes a bright multi-colored LED indicator for Power/Alarm/Fault conditions with an optional HART® interface.

Universal Transmitter

A truly universal transmitter, the M2B can be fitted with a full range of both toxic or combustible gas sensors. The Millennium II sensors are pre-calibrated and easily connect to the transmitter which automatically recognizes a newly fitted sensor and uploads its specific configuration profile.



Millennium II Basic Gas Detection Transmitters

Digital Communications

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

Analog, Relay, Modbus® RS485 RTU & HART®

Multiple communication protocols allow the M2B to work seamlessly with your new or existing system.

Field-proven Sensor Innovations

Our sensors are engineered to be fast and reliable with field-proven performance in the harshest industrial conditions. Sensors include electrochemical, catalytic bead with SensorGuard, which greatly prolongs sensor life, and point infrared. The infrared sensor offers a dual beam design with no mirrors, which increases the sensor's resilience to dust or other debris.

Specifications

Table 1 - Millennium II Basic Transmitter

Electrical	
Power Consumption	1.5 W @ 24 VDC (average - varies by sensor type/quantity)
Voltage Range	10.5–32.0 VDC (HART: 18–32 VDC)
EMC Compliance	EN 50270:2006 per EMC directive 2004/108/EC
Display	Multi-color LED Indication (Normal/Fault/Alarm)
Environmental	
Temperature	-67 °F to +185 °F (-55 °C to +85 °C) -58 °F to +185 °F (-50 °C to +85 °C) - North American explosion-proof certification
Relative Humidity	0–95 % RH non condensing
Enclosure	
Enclosure Material	Aluminum (6061) or 316 Stainless Steel
Conduit Opening	¾" NPT (3X)
Outputs	Optional: Analog 4–20 mA, Four 5 A Form C Relays, RS-485 Modbus® RTU, and HART®
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/IP 67 FM6320, ANSI/ISA 12.13.01, CSA C22.2 No. 152:2006 IECEX Ex d IIB+H2 T5 Gb -55°C ≤ Ta ≤ +85°C IP67 IEC 60079-0:2011/IEC60079-1:2007 IECEX FMG 14.0010X 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: 0.8 kg (2.0 lbs), Stainless Steel (316SS): 1.6 kg (3.5 lbs)

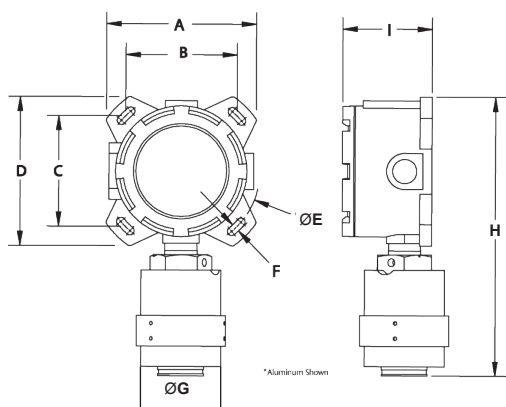
Ordering Information	
M2B-A	Single Channel - Analog
M2B-R	Single Channel - Relay
M2B-D	Single Channel - RS485 Modbus®
M2B-AH	Single Channel - Analog & HART®
Enclosure Available: Aluminum (-A) Stainless Steel (-S)	
Ordering Matrix Example: M2B-A-S (Transmitter - Output - Enclosure - Material)	

Special Features
■ Nonintrusive one man calibration (magnetic switch) ■ Field selectable toxic gas ranges ■ Field selectable combustible gas curves
Accessories
■ HART® Port Adaptor ■ Mounting Bracket c/w Hardware ■ Sun Shade/Deluge Protection ■ Duct Mount and Hardware Kit

Specifications

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
HPT-001	HART® Communicator port, mounts directly to JB-MPH-A/S or Millennium II transmitter
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



	A		B		C		D		E	
	in	mm	in	mm	in	mm	in	mm	in	mm
Aluminum Housings	4.8	122	3.6	92	3.6	92	4.8	122	5.1	130
Stainless Steel Housings	4.7	119	3.6	92	3.6	92	4.7	119	5.1	130
	F		G		H		I			
	in	mm	in	mm	in	mm	in	mm		
Aluminum Housings	0.3	8	2.6	66	9.0	229	3.3	84		
Stainless Steel Housings	0.3	8	2.6	66	8.9	226	3.2	81		

HA HIGH ACCURACY

m e a s u r e m e n t i n s t r u m e n t s

Our offering:

	Pressure Measurement		Level Measurement
	Temperature Measurement		Flow Measurement
	Marine Measurement & Analytical		Gas Analysis
	Liquid Analysis		Flame and Gas Detection
	Tank Gauging		Wireless Infrastructure
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