

# Thermo Scientific AutoMITTER PRO

## Smart multi-variable transmitter

Introducing the new improved Thermo Scientific™ AutoMITTER PRO™ Smart Multi-variable Transmitter featuring increased accuracy, greater stability, and fully integrated characterization—eliminating the need for eeprom.

### Features

- Single board with rotary switch for addressing and daisy-chainable connections
- Differential pressure and static pressure accuracy of up to  $\pm 0.04\%$
- High differential pressure operating range with 400:1 turndown
- Stability (%URL/Year) of up to 0.008%.

### Wide Range of Operability

The Thermo Scientific AutoMITTER PRO is a 3-in-1 device designed for highly accurate volumetric rate calculations. This smart multi-variable transmitter integrates seamlessly with Thermo Scientific™ gas flow computers to measure differential pressure, static pressure and temperature. It features a high operating range for differential pressure yet has a 400:1 turndown, enabling this one transmitter to be used on virtually any application. For ultrasonic and other temperature-sensitive applications, the AutoMITTER PRO offers highly accurate temperature measurement to within  $0.1^{\circ}\text{C}$ . From high accuracy to low cost, two different



models are available, ensuring a tailored, cost-effective solution for every application.

### Simplified Design

With a rotary switch for addressing and easily accessible, daisy-chainable connections, the single board design simplifies installation, maintenance and troubleshooting. In addition, it saves analog inputs by maintaining a full digital signal through to the flow computer, eliminating the need for an additional input board. The device mounts remotely and is easy to configure for fast, simple start-up.

### Built for Extreme Environments

The AutoMITTER PRO endures extreme environmental conditions. All signal terminations are tested to withstand in excess of 120 consecutive, indirect lightning strikes, measuring up to 6,000 volts/3,000 amps each. The standard operating temperature range is  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ ) to optimize reliability and durability.

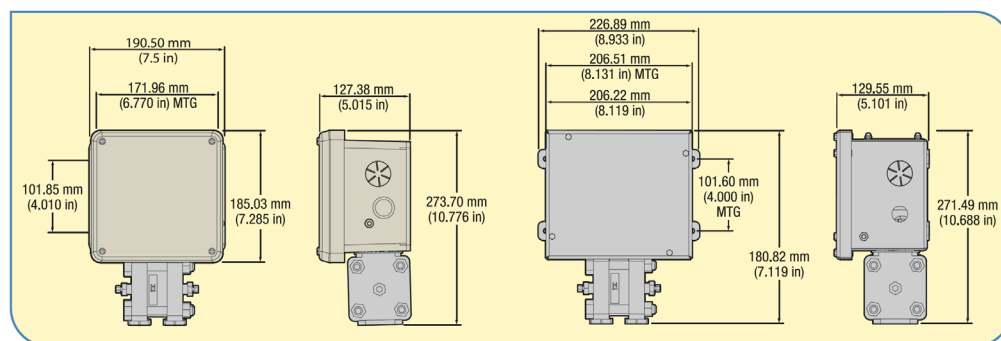


## Thermo Scientific AutoMITTER PRO

Hardware		
RTD Input	Accuracy: $\pm 0.10^{\circ}\text{C}$ ( $\pm 0.18^{\circ}\text{F}$ ) for 100-ohm platinum RTD – 0.00385 coefficient; Ambient temp. effect: $\pm 0.0013^{\circ}\text{C}/1^{\circ}\text{C}$ change; Repeatability: $\pm 0.01^{\circ}\text{C}$ ( $\pm 0.018^{\circ}\text{F}$ )	
Communications	RS485, maximum serial data rate: 9600 bps; Protocol: 8-bit RTU Modbus at 9600 bps	
Electrical		
Input Power	+5.5 VDC to +16 VDC	
Current Consumption	Normal operation (unit in sleep mode except during intermittent polling): 6 mA average; 12 mA average with continuous polling (unit in awake mode)	
Input/Output Protection	All I/O lightning/surge protected; Meets or exceeds IEEE 472	
Environmental		
Operating Temperature Range	Standard: $-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ ( $-40^{\circ}\text{F}$ to $+185^{\circ}\text{F}$ ); ATEX: $-40^{\circ}\text{C}$ to $+80^{\circ}\text{C}$ ( $-40^{\circ}\text{F}$ to $+176^{\circ}\text{F}$ )	
Operating Humidity Range	0 to 95%, non-condensing	
Enclosure Rating	NEMA 4X / IP65 industrial control enclosure; Fiberglass reinforced polyester or stainless steel (optional)	
Certifications	FM: C/US Class I, Div. 1, Groups C & D; CSA: C/US Class I, Div. 2, Groups C & D; ATEX: II 1 G Ex ia IIB T4 ( $-40^{\circ}\text{C}$ to $+80^{\circ}\text{C}$ )	
Differential Pressure		
	400"/1500psia (MXA745)	400"/4500psig (MXG870)
Upper Range Limit (URL)	400" H <sub>2</sub> O	400" H <sub>2</sub> O
Lower Range Limit (LRL)	-400" H <sub>2</sub> O	-400" H <sub>2</sub> O
Turndown Ratio	+/- 400 to 1	+/- 400 to 1
Minimum Span	1" H <sub>2</sub> O	1" H <sub>2</sub> O
Maximum Span	400" H <sub>2</sub> O	400" H <sub>2</sub> O
Accuracy <sup>(1)</sup> (% Span)	0.0525%	0.04%
Stability (%URL/Year)	0.0625	0.0625
Response Time	100 ms	90 ms
Static Pressure		
Upper Range Limit (URL)	1500 psia	4500 psig
Lower Range Limit (LRL)	100 psia	-14.7 psig
Turndown Ratio	15:1	75:1
Minimum Span	100 psia	60 psig
Maximum Span	1500 psia	4500 psig
Accuracy <sup>(1)</sup> (% Span)	0.0550%	0.0375%
Stability (%URL/Year)	0.008	0.016
Response Time	100 ms	90 ms

<sup>(1)</sup> Terminal based accuracy-Includes the combined effects of linearity, hysteresis, and repeatability.

### AutoMITTER PRO Dimensional Drawing



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