

# Model MRC

## Multi-Range Critical Pressure Transducer

Setra's Model MRC multi-range low differential pressure transducer uses a dead-ended capacitive sensing element that requires minimal amplification and delivers excellent accuracy and longterm stability. The MRC is the industries first multi-range sensor designed for critical environments. It is the only multi-range sensor available with  $\pm 0.5\%$  FS accuracy and field selectable ranges down to 0.1" W.C., a requirement for critical applications. The MRC has 4 selectable ranges and 3 selectable outputs, easily adjustable on the job with a flip of a switch or jumper. The MRC is offered with 3 different housing configurations: Duct Probe, DINrail or Wall Mount and a universal design that incorporates all 3 configurations in one to address any installation changes on the job site.

### Industry First 0.5% FS Accuracy Multi-Range

The Setra MRC is the first multi-range transducer designed for use in Critical Environments. No other multi-range transducer product offers better than 1% FS accuracy; a requirement in most critical applications. The Setra MRC is available down to 0.1" W.C. with 0.5% FS accuracy.

### Field Selectable Universal Design

The MRC has 4 selectable ranges and 3 selectable outputs, giving the flexibility to make changes on the job site. The MRC is field configurable for range, mounting (DINrail, wall mount and duct mount), output (mA or voltage) and engineering units (W.C. or Pascals). This flexibility means that the contractor can use the MRC for all of their critical needs.

### Robust Enclosure for Harsh Environments

The MRC housing is a robust IP67 rated design and is sealed with a gasket to make it wash down capable for difficult applications. The MRC also has a conduit fitting that make installation and wiring easier.

### The Setra Sensor

The core technology of the MRC is the all stainless steel capacitive sensing element. Setra designs and manufactures all of their sensing elements resulting in full control over the process and quality of every single sensor. The welded dead-ended capacitive sensors requires minimal amplification and delivers excellent accuracy and longterm stability. Setra's technology has been used in over 8 million installations and has the highest field acceptance rate in the industry.



- Ideal For Critical Environments
- $\pm 0.5\%$  FS Accuracy
- Universal Design

#### Model MRC Features:

- Field Configurable Duct Probe
- 4 Digit LCD
- Field Selectable Range
- Field Selectable Output
- Simple 5-Step Setup
- Field Accessible Push-Button Zero & Span
- External Mounting Tabs & Optional DINrail
- Unregulated AC/DC Operation
- IP67 Rated Housing

#### Target Uses:

- Service/Retrofit Friendly
- Sub-Contractors- Quick Installation
- Flexible for Building Specification Changes
- Service Technicians- Quick & Accurate Reconfiguration
- Hospitals
- Isolation Rooms
- Vivariums

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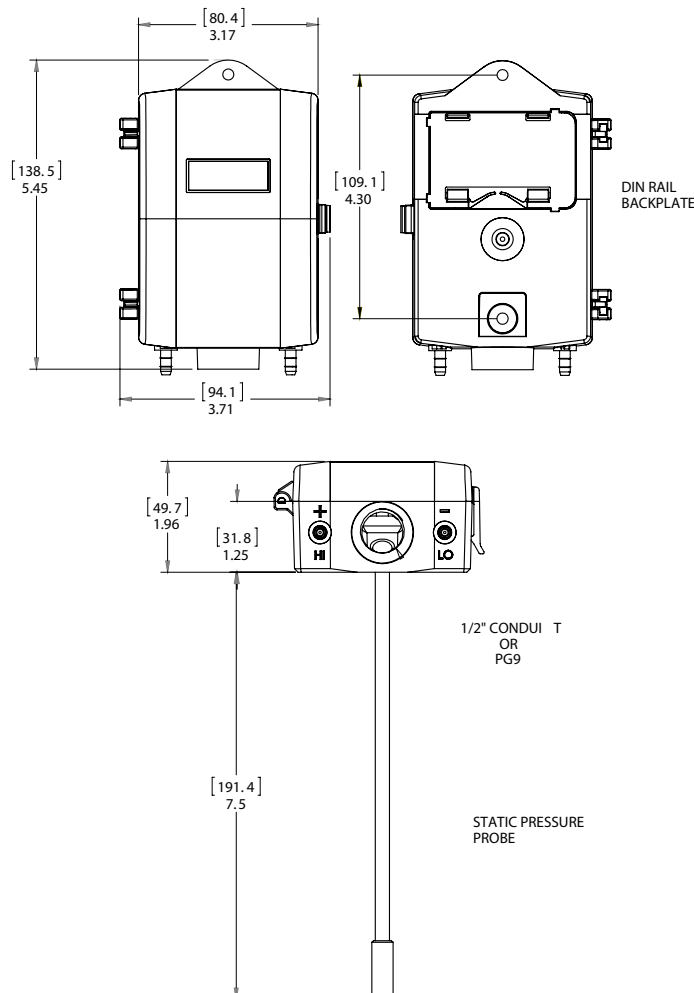
### ORDERING INFORMATION

M	R	-	C	-		-	
Model	Field Selectable Ranges				Configuration	Options	
MRC	Unidirectional Pressure Ranges		Bidirectional Pressure Ranges		S Standard (Base Mount)	C	1/2" Conduit w/ Cal Certification <sup>2</sup>
	0.1"W.C.	25 Pa	±0.1"W.C.	±25 Pa	U Universal <sup>1</sup>	D	PG9 w/ Cal Certification <sup>2</sup>
	0.25"W.C.	50 Pa	±0.25"W.C.	±50 Pa	D DIN Rail		
					P Duct Probe		

<sup>1</sup>Universal unit includes Duct Probe and DIN Rail options.

<sup>2</sup>Calibration certificate is standard and is provided for highest range ±0.25"W.C. on ±50 Pa.

### DIMENSIONS



### GENERAL SPECIFICATIONS

Performance Data		Environmental Data	
	Standard	Operating Temperature <sup>3</sup>	32 to 122°F (0 to 50°C)
Accuracy RSS <sup>1</sup> (at constant temp)	±0.5% FS	Electrical Data	
Compensated Range °F (°C)	32 to 122°F (0 to 50°C)	Excitation Range	13 to 30 VDC/18 to 24 VAC (Voltage Output) 13 to 30 VDC (4 to 20mA output at terminals)
Thermal Effects <sup>2</sup> %FS/°F(°C)	0.03 (0.054)	Current Consumption	30mA (max)
Maximum Line Pressure	10 PSI	Mis-Wiring	Reverse Excitation Protection
Overpressure	1 PSI	Field Selectable Output <sup>4</sup>	0 to 5 V, 0 to 10V (3-wire), 4 to 20mA (2-wire)
Long Term Stability (max.)	1.0% FS/YR	Output Resistance (Voltage Output)	10 Ohms (max)
Position Effect		Load Resistance (Voltage Output)	10 K-Ohms (min)
Zero Offset %FS/G	0.5%	Loop Resistance (4-20mA)	0 to 800 Ohms
(Unit is factory calibrated at 0g effect in the vertical position)		Approval	CE & RoHS Compliant
Physical Description		Pressure Media	
Case	Fire-Retardant Polycarbonate (UL 94 V-0 Approved), Hinged Lid	Typically air or similar non-conducting gases.	
Mounting	Two Screw Holes Vertical Position	<sup>1</sup> RSS of Non-Linearity, Hysteresis, and Non-Repeatability. <sup>2</sup> Units calibrated at nominal 70° F. Maximum thermal error computed from this datum.	
Electrical Connection Block	Removable Screw Terminal	<sup>3</sup> Operating temperature limits of the electronics only. Pressure media temperatures may be considerably higher.	
Pressure Fitting	3/16" O.D. Barbed Brass	<sup>4</sup> Calibrated into a 50K ohm load, operable into a 10K ohm load or greater.	
Zero	Push Button	<sup>5</sup> Span (Full Scale) output factory set to within 1%.	
Span	Push Button	<sup>6</sup> Calibrated at factory with a 24VDC loop supply voltage and a 250 ohm load.	
Weight (approx.)	8 Ounces	<sup>7</sup> Span (Full Scale) output factory set to within ±0.16mA.	
		Specifications subject to change without notice.	