

# Model MR1

## Multi-Range General Pressure Transducer

The Setra Model MR1 is Setra's newest differential pressure transducer. The Setra MR1 is the ideal product for any contractor, combining the flexibility of a multi-range with the performance of a single range sensor. The MR1 has 8 selectable ranges and 3 selectable outputs, easily adjustable on the job with a flip of a switch or jumper. The MR1 uses an IP67 rated housing and has a conduit fitting for easy wiring, making the MR1 an ideal solution for any general HVAC application.

### Universal Design

The Setra MR1 utilizes a universal design that gives the user total flexibility to make changes on the job site. The user has the option to choose the field configurable range, mounting (DIN Rail, wall mount and duct mount), output (mA or Volt) and engineering unit (W.C. or Pascals). This flexibility means that the contractor can use the MR1 for all of their needs.

### 8 Field Selectable Ranges

The Setra MR1 provides 8 field selectable ranges (0.1, 0.25, 0.5 and 1.0"W.C.). These ranges can be selected on site by flipping to the desired range.

### IP67 Rated Housing

The MR1 housing is a robust IP67 rated design and is sealed with a gasket to make it wash-down capable for difficult applications. The MR1 also has a conduit fitting that make installation and wiring easier.

### Capacitive Sensing Technology

Only Setra can claim ownership to the stainless steel capacitive design used in all of our HVAC/R sensors. Our advanced capacitive element provides excellent stability and linearity, while standing above the competitors in our ability to measure low pressure (<0.0001"W.C.) at high accuracy. Our technology has been used in over 8 million installations and has the highest field acceptance rate in the industry.



- Universal Design
- IP67 Rated Housing
- Field Selectable

### Model MR1 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 DIN Rail
- Unregulated AC/DC Operation

### Target Uses:

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

Hochwertige Messtechnik und Beratung aus einer Hand



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# Model MR1

## Multi-Range General Pressure Transducer



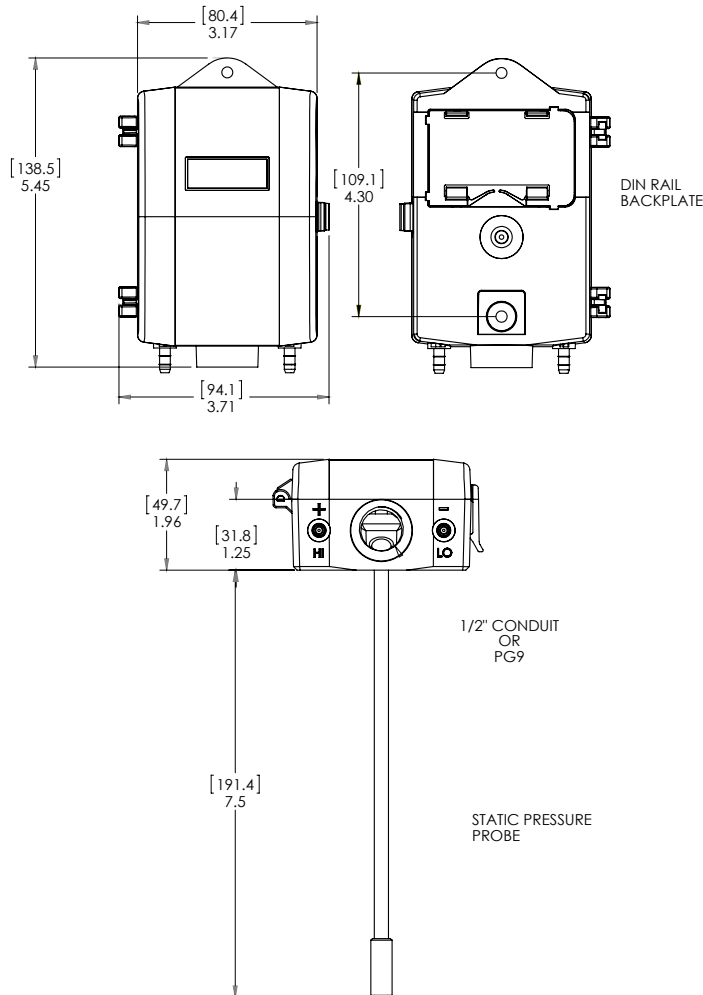
### ORDERING INFORMATION

M R - 1 - - -

Model	Field Selectable Ranges				Configuration		Options	
MR1	Unidirectional Pressure Ranges		Bidirectional Pressure Ranges		S	Standard (Base Mount)	A	1/2" Conduit
	0.1"W.C.	25 Pa	±0.1"W.C.	±25 Pa	U	Universal <sup>1</sup>	P	PG9
	0.25"W.C.	50 Pa	±0.25"W.C.	±50 Pa	D	DIN Rail	C	1/2" Conduit W/ Cal Certification <sup>2</sup>
	0.5"W.C.	100 Pa	±0.5"W.C.	±100 Pa	P	Duct Probe	D	PG9 W/ Cal Certification <sup>2</sup>
	1.0"W.C.	250 Pa	±1.0"W.C.	±250 Pa				

<sup>1</sup>Code U, Universal unit includes Duct Probe and DIN Rail options.  
<sup>2</sup>Calibration is performed at highest range.  
 Ordering Example: MR1UA = Model MR1, Universal Configuration, with 1/2" Conduit.

### 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)	±1.0% FS	<b>Electrical Data</b>	
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	Up to 10 PSI (range dependent)	Field Selectable Output <sup>4</sup>	0 to 5 V, 0 to 10V (3-wire), 4 to 20mA (2-wire)
Long Term Stability (max.)	2.0% FS/YR	Output Resistance (Voltage Output)	10 Ohms (max)
<b>Position Effect</b>		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
<b>Physical Description</b>		<b>Pressure Media</b>	
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 24 VDC 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.			

# Model MR2

## Multi-Range General Pressure Transducer

The Setra Model MR2 is Setra's newest differential pressure transducer. The Setra MR2 is the ideal product for any contractor, combining the flexibility of a multi-range with the performance of a single range transducer. The MR2 has 8 selectable ranges and 3 selectable outputs, easily adjustable on the job with a flip of a switch or jumper. The MR2 uses an IP67 rated housing and has a conduit fitting for easy wiring, making the MR2 an ideal solution for general any HVAC application.

### Universal Design

The Setra MR2 utilizes a universal design that gives the user total flexibility to make changes on the job site. The user has the option to choose the field configurable range, mounting (DIN Rail, wall mount and duct mount), output (mA or Volt) and engineering unit (W.C. or Pascals). This flexibility means that the contractor can use the MR2 for all of their needs.

### 8 Field Selectable Ranges

The Setra MR2 provides 8 field selectable ranges (1.0, 2.5, 5.0 and 10"W.C.). These ranges can be selected on site by flipping to the desired range.

### IP67 Rated Housing

The MR2 housing is a robust IP67 rated design and is sealed with a gasket to make it wash-down capable for difficult applications. The MR2 also has a conduit fitting that make installation and wiring easier.

### Capacitive Sensing Technology

Only Setra can claim ownership to the stainless steel capacitive design used in all of our HVAC/R sensors. Our advanced capacitive element provides excellent stability and linearity, while standing above the competitors in our ability to measure low pressure (<0.0001"W.C.) at high accuracy. Our technology has been used in over 8 million installations and has the highest field acceptance rate in the industry.



- Universal Design
- IP67 Rated Housing
- Field Selectable

#### Model MR2 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 DIN Rail
- Unregulated AC/DC Operation

#### Target Uses:

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

# Model MR2

## Multi-Range General Pressure Transducer



### ORDERING INFORMATION

M R - 2 - - -

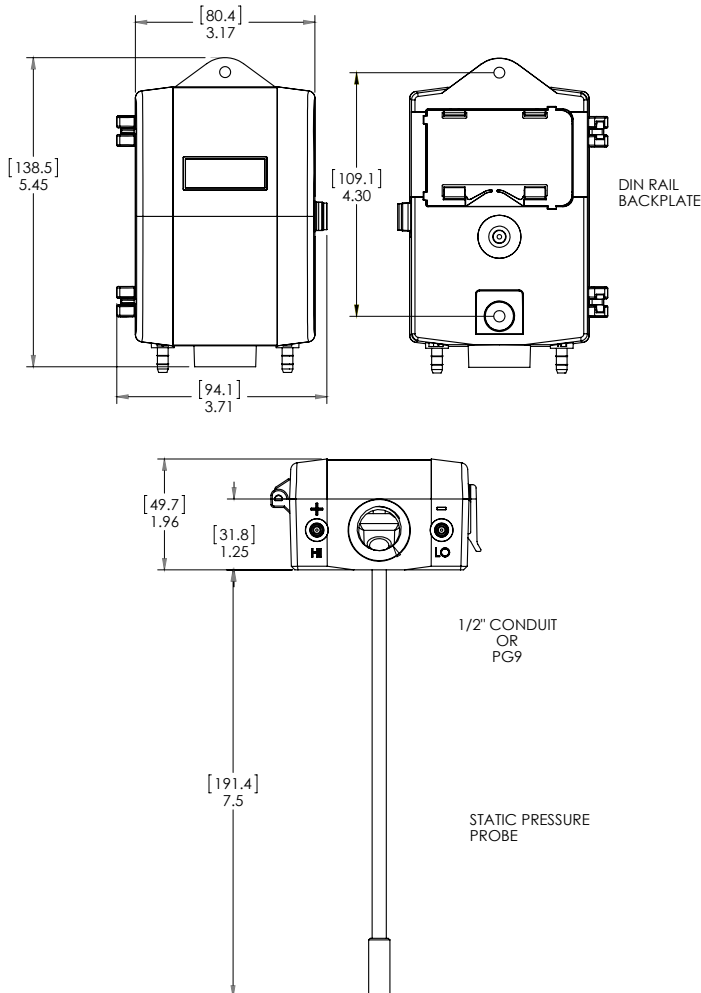
Model	Field Selectable Ranges				Configuration		Options
MR2	Unidirectional Pressure Ranges		Bidirectional Pressure Ranges		S	Standard (Base Mount)	A 1/2" Conduit
	1.0"W.C.	250 Pa	±1.0"W.C.	±250 Pa	U	Universal <sup>1</sup>	P PG9
	2.5"W.C.	500 Pa	±2.5"W.C.	±500 Pa	D	DIN Rail	C 1/2" Conduit W/ Cal Certification <sup>2</sup>
	5.0"W.C.	1,000 Pa	±5.0"W.C.	±1,000 Pa	P	Duct Probe	D PG9 W/ Cal Certification <sup>2</sup>
	10"W.C.	2,500 Pa	±10"W.C.	±2,500 Pa			

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

<sup>2</sup>Calibration is performed at highest range.

Ordering Example: MR2SC = Model MR2, Standard Configuration, with 1/2" Conduit with Cal Certification.

### 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)	±1.0% FS	<b>Electrical Data</b>	
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	Up to 10 PSI (range dependent)	Field Selectable Output <sup>4</sup>	0 to 5 V, 0 to 10V (3-wire), 4 to 20mA (2-wire)
Long Term Stability (max.)	2.0% FS/YR	Output Resistance (Voltage Output)	10 Ohms (max)
<b>Position Effect</b>		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.	
Electrical Connection Block	Removable Screw Terminal	<sup>2</sup> Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.	
Pressure Fitting	3/16" O.D. Barbed Brass	<sup>3</sup> Operating temperature limits of the electronics only. Pressure media temperatures may be considerably higher.	
Zero	Push Button	<sup>4</sup> Calibrated into a 50K ohm load, operable into a 10K ohm load or greater.	
Span	Push Button	<sup>5</sup> Span (Full Scale) output factory set to within 1%.	
Weight (approx.)	8 Ounces	<sup>6</sup> Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.	
		<sup>7</sup> Span (Full Scale) output factory set to within ±0.16mA.	
		Specifications subject to change without notice.	

# Model MRG

## Multi-Range General Pressure Transducer

The Setra Model MRG is Setra's newest differential pressure transducer. The Setra MRG is the ideal product for any contractor, combining the flexibility of a multi-range with the performance of a single range transducer. The MRG has 8 selectable ranges and 3 selectable outputs, easily adjustable on the job with a flip of a switch or jumper. The MRG uses an IP67 rated housing and has a conduit fitting for easy wiring, making the MRG an ideal solution for any general HVAC application.

### Universal Design

The Setra MRG utilizes a universal design that gives the user total flexibility to make changes on the job site. The user has the option to choose the field configurable range, mounting (DIN Rail, wall mount and duct mount), output (mA or Volt) and engineering unit (W.C. or Pascals). This flexibility means that the contractor can use the MRG for all of their needs.

### 8 Field Selectable Ranges

The Setra MRG provides 8 field selectable ranges (0.5, 1.0, 2.5 and 5.0"W.C.). These ranges can be selected on site by flipping to the desired range.

### IP67 Rated Housing

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

### Capacitive Sensing Technology

Only Setra can claim ownership to the stainless steel capacitive design used in all of our HVAC/R sensors. Our advanced capacitive element provides excellent stability and linearity, while standing above the competitors in our ability to measure low pressure (<0.001"W.C.) at high accuracy. Our technology has been used in over 8 million installations and has the highest field acceptance rate in the industry.



- Universal Design
- IP67 Rated Housing
- Field Selectable

#### Model MRG 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 DIN Rail
- Unregulated AC/DC Operation

#### Target Uses:

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

# Model MRG

## Mutli-Range General Pressure Transducer



### ORDERING INFORMATION

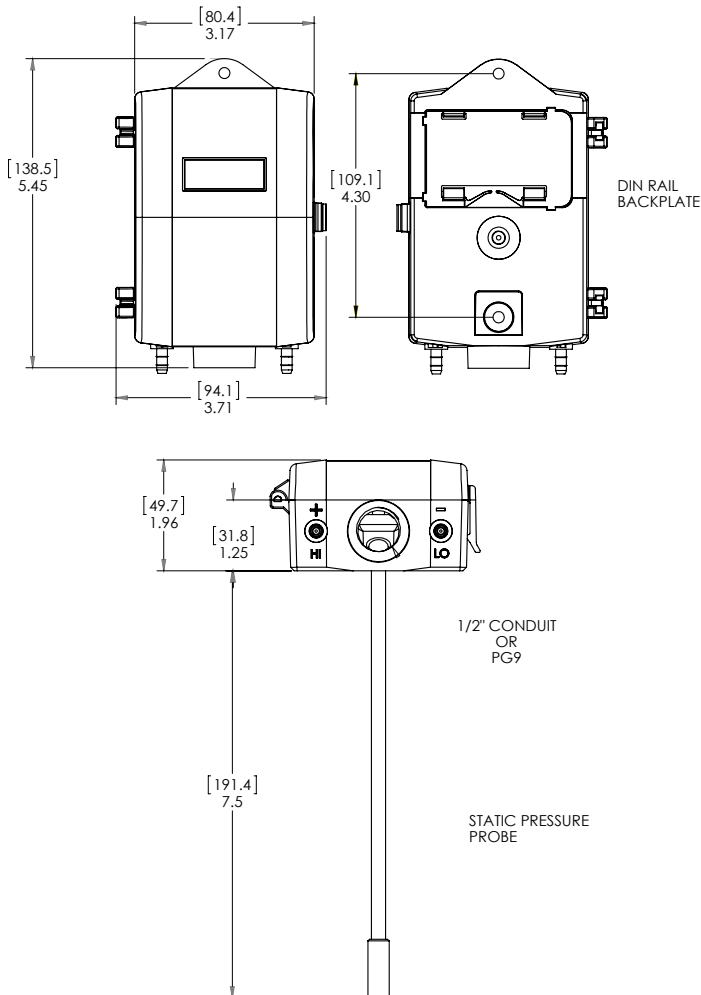
M	R	-	G	-		-	
Model	Field Selectable Ranges				Configuration		Options
MRG	Unidirectional Pressure Ranges		Bidirectional Pressure Ranges		S	Standard (Base Mount)	A 1/2" Conduit
	0.5"W.C.	100 Pa	±0.5"W.C.	±100Pa	U	Universal <sup>1</sup>	P PG9
	1.0"W.C.	250 Pa	±1.0"W.C.	±250 Pa	D	DIN Rail	C 1/2" Conduit W/ Cal Certification <sup>2</sup>
	2.5"W.C.	500 Pa	±2.5"W.C.	±500Pa	P	Duct Probe	D PG9 W/ Cal Certification <sup>2</sup>
	5.0"W.C.	1,000 Pa	±5.0"W.C.	±1,000Pa			

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

<sup>2</sup>Calibration is performed at highest range.

Ordering Example: MRGSA = Model MRG, Standard Configuration, with 1/2" Conduit.

### 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)	±1.0% 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	Up to 10 PSI (range dependent)	Field Selectable Output <sup>4</sup>	0 to 5V, 0 to 10V (3-wire), 4 to 20mA (2-wire)
Long Term Stability (max.)	2.0% 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.			

# Model MRC

## Multi-Range Critical Pressure Transducer

Designed for Critical Environments, The Setra Model MRC is Setra's newest differential pressure transducer. This is the first multi-range transducer designed for stringent requirements of difficult applications. The MRC offers class leading  $\pm 0.5\%$  FS accuracy in selectable ranges down to 0.1" W.C., which is required for critical applications. Setra's MRC comes with 3 different housing configurations; duct probe, DIN Rail mount and a universal model to cover any installation changes on the job site.

### 0.5% FS Accuracy

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 Setra MRC has 5 selectable ranges and 3 selectable outputs, giving the flexibility to make changes on the job site. The MRC is field configurable for range, mounting (DIN Rail, 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.

### IP67 Rated Housing

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, making installation and wiring easier.

### Capacitive Sensing Technology

Only Setra can claim ownership to the stainless steel capacitive design used in all of our HVAC/R sensors. Our advanced capacitive element provides excellent stability and linearity, while standing above the competitors in our ability to measure low pressure (<0.0001" W.C.) at high accuracy. Our technology has been used in over 8 million installations and has the highest field acceptance rate in the industry.



- Ideal For Critical Environments
- 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 DIN Rail
- 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

# Model MRC

## Multi-Range Critical Pressure Transducer



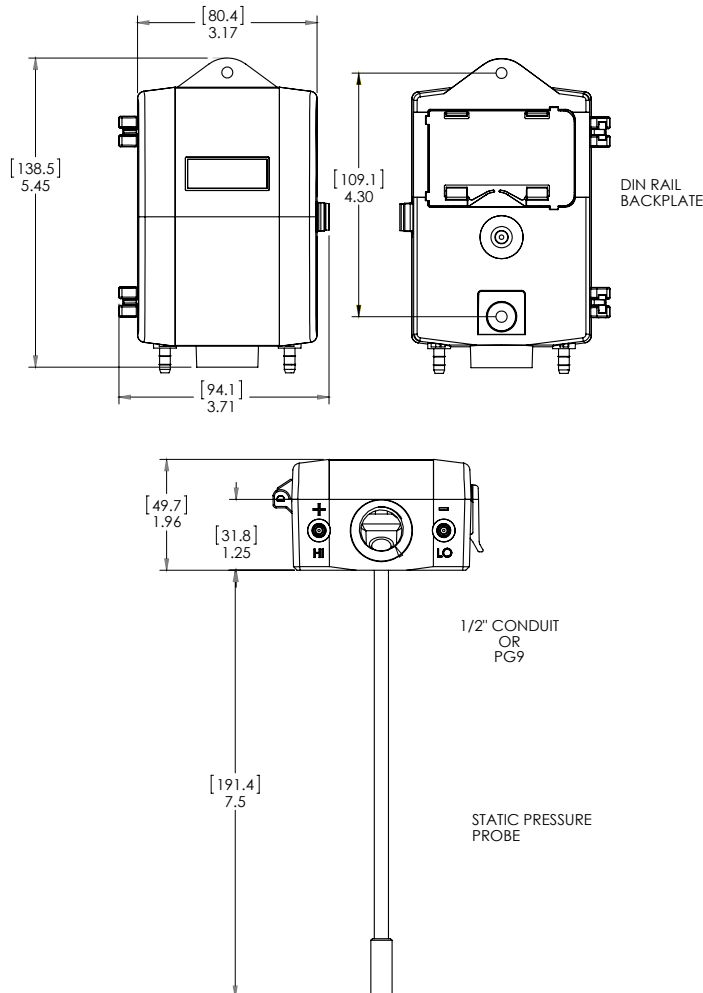
### ORDERING INFORMATION

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 24 VDC 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.			