

# Model 267/267MR

## Very Low Differential Pressure Transducer



Model 267MR - Multi-Range



Model 267 w/ Display Option

NOTE: Setra quality standards are based on ANSI-Z540-1. The calibration of this product is NIST traceable.

U.S. Patent nos. 6019002; 6014800

### DESCRIPTION

Setra's Model 267 and 267MR pressure transducers sense gauge (static) or differential pressure in air pressure ranges as low as 0.1"WC Full Scale up to 100"WC.

The Model 267 gauge pressure transducer is offered in a high level voltage or 4 to 20 mA output and is available with a static pressure probe for installation directly onto the duct. The 0.25" diameter pressure probe is made of sturdy extruded aluminum and is designed with baffles to prevent velocity pressure errors. This unit is also available with an LCD display.

The 267MR multi-range transducer offers 6 field selectable pressure ranges (bidirectional and unidirectional), and field configurable outputs of 0 to 5 VDC, 0 to 10 VDC, and 4 to 20 mA. With the flip of a switch the user can field calibrate the unit and be assured of optimum performance.

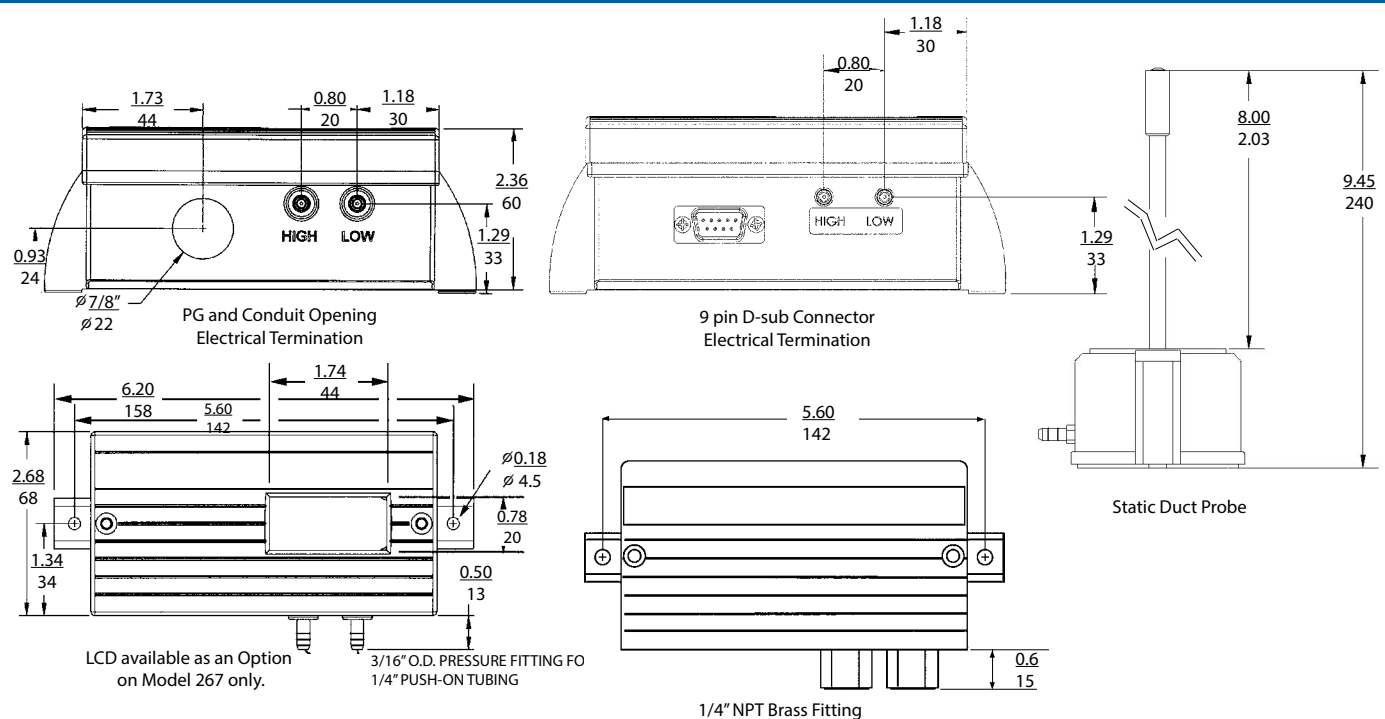
### FEATURES

- Model 267MR Offers Multi-Range Capability, 6 Field Selectable Ranges via Dip Switches, and Field Selectable 0-5 or 0-10 VDC Output
- Model 267 Offers an Optional 3 1/2 Digit LCD Display with a 0.5% FS Standard Accuracy
- NEMA 4/IP65 Rated Housing
- Optional Accuracies as High as 0.25% FS
- 24 VAC or 24 VDC Excitation
- PG-9, PG13.5 or Conduit Electrical Termination
- Integral Static Pressure Probe
- Ranges as low as 0.1 in. W.C. (25 Pa)
- Meets CE Conformance Standards

### APPLICATIONS

- Heating, Ventilating and Air Conditioning (HVAC)
- Energy Management Systems
- Static Duct Pressure
- Clean Room Pressure
- Oven Pressurization and Furnace Draft Controls

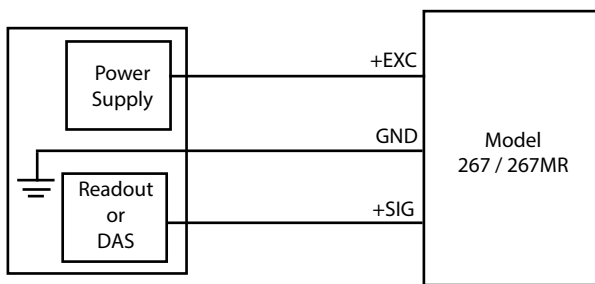
### DIMENSIONS



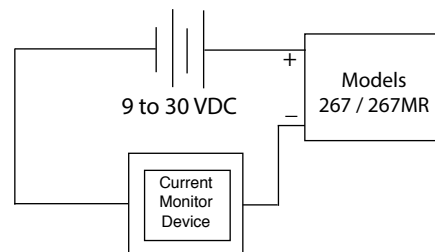
### SPECIFICATIONS

Performance Data			Environmental Data		Electrical Data (Voltage)	
	Standard	Optional	Operating <sup>7</sup> Temperature °F (°C)	0 to +150 (-18 to +65)	Circuit	3-Wire (Exc, Gnd, Sig), Protected from Miswiring
Accuracy RSS <sup>1</sup> (at constant temp)	±1.0% FS	±0.4% FS ±0.25% FS	Storage Temperature °F (°C)	-65 to +180 (-54 to +82)	Excitation (for 0-5 VDC Output)	9 to 30 VAC / 12 to 40 VDC
Non-Linearity, BFSL	±0.98% FS	±0.38% FS ±0.22% FS	<b>Physical Description</b>		Excitation (for 0-10 VDC Output)	11 to 30 VAC / 13 to 40 VDC
Hysteresis	±0.10% FS	±0.10% FS ±0.10% FS	Case	IP65/NEMA 4 Plastic Glass-Filled Polycarbonate UL94V-0 Case	<b>Model 267</b>	
Non-Repeatability	±0.5% FS	±0.5% FS ±0.5% FS	Electrical Connection	Screw Terminal Strip Inside of Case	Output <sup>3</sup>	0 to 5 VDC <sup>4</sup> / 0 to 10 VDC <sup>4</sup>
<b>Position Effect</b>			Electrical Terminations	PG-9/PG13.5 Strain Relief, 1/2" Conduit Opening, or 9 Pin D-Sub Connector*	<b>Model 267MR</b>	
Unit if factory calibrated at 0g effect in the vertical position	Range	Zero Offset (%FS/G)	*9 Pin D-Sub Connector is not suitable for NEMA4/IP-65 Environments		Output (Field Selectable)	0 to 10 VDC <sup>4</sup>
	0.1 in. WC	2.3	Zero and Span Adjustments	Accessible Inside of Case	Bidirectional Output at Zero	Mid-Range of Specified
	0.25 in. WC	1	Display (Optional on 267 only)	Accessible Inside of Case Display (1/74"W x 0.78"H)	Output Impedance	0hms
	0.5 in. WC	0.5	Pressure Fittings	3/16" O.D. Barbed Brass for 1/4" Push-On Tubing (Standard) Static Pressure Probe (Optional) 1/4" NPTF Brass (Optional)	Re-Ranging (267MR Only)	5 Position Dip Switches (Located Inside Case)
	1.0 in. WC	0.3			<b>Electrical Data (Current)</b>	
	2.5 in. WC	0.2			Circuit	2-Wire, Protected from Miswiring
	10 in. WC	0.15	Mounting	2 Mounting Tabs with 0.18" Holes Pressure Probe Assembly is Supplied with a 6061 Aluminum Alloy Probe and a Gasket Against the Duct 7.8" to Seal	Output <sup>5</sup>	4 to 20 mA <sup>6</sup>
<b>Pressure Media</b>			Weight (approx.)	9.0 Ounces (255 grams) 9.5 Ounces (Duct Probe Assembly)	Bidirectional Output at Zero	12 mA
Typically air or similar non-conducting gases.					Max. Loop Supply Voltage (VDC)	30 + 0.004 x (Resistance of Receiver plus line)
<b>Thermal Effects<sup>2,3</sup></b>					Re-Ranging (267MR only)	4 Position Dip Switches (located inside case)
Compensated Range °F (°C)	+40 to +150 (+5 to +65)		<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. <sup>3</sup> Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater. <sup>4</sup> Zero output factory set to within ±50mV (±25 mV for optional accuracies). Span (Full Scale) output factory set to within ±50mV (±25 mV for optional accuracies) <sup>5</sup> Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load. <sup>6</sup> Zero output factory set to within ±0.16 mA (±0.08 mA for optional accuracies). Span (Full Scale) output factory set to within ±0.16 mA (±0.08mA for optional Accuracies.) <sup>7</sup> Operating temperature limits of the electronics only. Pressure media temperatures may be considerably higher.			
Zero/Span Shift %FS/°F (°C)	±0.033 (±0.06)					
Maximum Line Pressure	10 psi					
Overpressure	Up to 10 psi (Range Dependant)					
Long Term Stability	0.1% FS Total					

### WIRING



Voltage Output

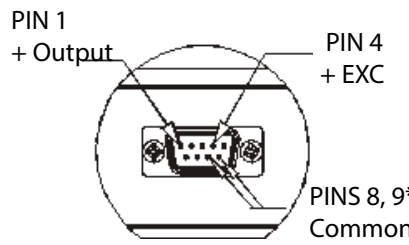


Current Output

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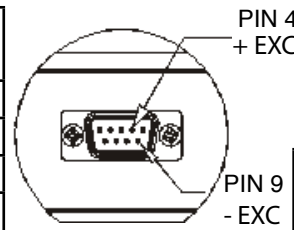
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## D-SUB ELECTRICAL TERMINATION



CONNECTION	9 PIN D-SUB CONNECTOR
+ Excitation	4
+ Output	1
Common	8, 9
Excitation 9 to 30 VAC/ 11.5 to 42 VDC 12 to 30 VAC/ 13 to 42 VDC	Output 0 to 5 VDC 0 to 10 VDC

Voltage Output



CONNECTION	9 PIN D-SUB CONNECTOR
+ Excitation	4
- Excitation	9

Current Output

## ORDERING INFORMATION (Model 267)



Model	Range Code	Output	Pressure Fitting/Elec. Termination			Accuracy (Full Scale)			Display		
2671 = 267	See Table 1 Below	11	4-20 mA	3/16" Barbed Brass Fitting			Std.	C	±1% <sup>3</sup>	D	LCD <sup>4</sup>
		2D	0-5 VDC	Std.	G1	PG-13.5 Strain Relief	Opt. <sup>1</sup>	E	±0.4%	N	None
		2E	0-10 VDC	Std.	G2	PG9 Strain Relief	Opt. <sup>1</sup>	F	±0.25%		
				Std.	D9	9 pin D-Sub Conn.	Opt. <sup>1</sup>	G	±1%		
				Std.	A1	1/2" Conduit Opening	Opt. <sup>1,2</sup>	H	±0.5%		
				1/4"NPTF Brass Fitting			1. Optional accuracies include Calibration Certificate				
				Opt.	1K	PG-9 Strain Relief	2. ±0.5% FS (Code H) accuracy is standard when ordered with the LCD Display (Code D).				
				Opt.	2K	PG-13.5 Strain Relief					
				Opt.	9K	9 Pin D-Sub Conn.	3. Not available with LCD Display (Code D)				
				Opt.	AK	1/2" Conduit Opening					
				Static Duct Probe			4. ±0.5% FS (Code H) Accuracy is standard when ordered with LCD Display (Code D)				
				Opt.	1P	PG-9 Strain Relief					
				Opt.	2P	PG-13.5 Strain Relief					
				Opt.	9P	9 Pin D-Sub Conn..					
				Opt.	Ap	1/2" Conduit Opening					

Table 1. Range Specification

RANGE CODE	UNIDIRECTIONAL	RANGE CODE	BIDIRECTIONAL	RANGE CODE	UNIDIRECTIONAL	RANGE CODE	BIDIRECTIONAL
	"W.C.		"W.C.		PASCALS		PASCALS
0R1WD	0 to 0.1	0R1WB	±0.1	025LD	0 to 25	025LB	±25
R25WD	0 to 0.25	R25WB	±0.25	050LD	0 to 50	050LB	±50
0R5WD	0 to 0.5	0R5WB	±0.5	100LD	0 to 100	100LB	±100
001WD	0 to 1	001WB	±1	250LD	0 to 250	250LB	±250
1RSWD	0 to 1.5	1RSWB	±1.5	500LD	0 to 500	500LB	±500
2R5WD	0 to 2.5	2R5WB	±2.5	10CLD	0 to 1000	10CLB	±1000
005WD	0 to 5	005WB	±5	25CLD	0 to 2500	25CLB	±2500
010WD	0 to 10	010WB	±10	40CLD	0 to 4000	40CLB	
025WD	0 to 25	025WB	±25	70CLD	0 to 7000	70CLB	
050WD	0 to 50	050WB	±50				
100WD	0 to 100	100WB					

Ordering Example: Part No. 2671R25WD11G2CD for a 0 to .25 in. WC Unidirectional Range, 4-20 mA Output, 3/16" Barbed Brass Fitting, PG-9 Electrical Termination, 1% Accuracy with LCD Display

**ORDERING INFORMATION (Model 267MR)**

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Model	Range Code	Output	Pressure Fitting/Elec. Termination	Accuracy (Full Scale)	Display
2671 = 267	See Table 1 Below	11 4-20 mA	3/16" Barbed Brass Fitting	Std. C ±1%	N None
		2D 0-5 VDC	Std. G1 PG-13.5 Strain Relief	Opt. <sup>1</sup> G ±1%	
		2E 0-10 VDC	Std. G2 PG9 Strain Relief		
			Std. D9 9 pin D-Sub Conn.		
			Std. A1 1/2" Conduit Opening		
			1/4"NPTF Brass Fitting		
			Opt. 1K PG-9 Strain Relief		
			Opt. 2K PG-13.5 Strain Relief		
			Opt. 9K 9 Pin D-Sub Conn.		
			Opt. AK 1/2" Conduit Opening		
			Static Duct Probe		
			Opt. 1P PG-9 Strain Relief		
			Opt. 2P PG-13.5 Strain Relief		
			Opt. 9P 9 Pin D-Sub Conn..		
			Opt. Ap 1/2" Conduit Opening		

1. Order Opt G for ±1% Acc. to include Calibration Certificate

Note: Optional higher accuracies are not available on the 267MR.

Ranges are factory set for the highest range

RANGE CODE	DIFFERENTIAL		RANGE CODE	DIFFERENTIAL	
	"W.C.			PASCALS	
MR1WD	0 to 0.1	±0.05	MR5LD	0 to 25	±12.5
MR2WD	0 to 0.25	±0.125	MR6LD	0 to 50	±25
	0 to 0.5	±0.25		0 to 100	±50
	0 to 1	±0.5		0 to 200	±100
MR3WD	0 to 1.25	±0.625	MR7LD	0 to 250	±125
	0 to 2.5	±1.25		0 to 500	±250
	0 to 5.0	±2.5		0 to 1000	±500
MR4WD	0 to 7.5	±3.75	MR8LD	0 to 625	±312
	0 to 15	±7.5		0 to 1250	±625
	0 to 30	±15		0 to 2500	±1250
			MR9LD	0 to 1875	±937
				0 to 3750	±1875
				0 to 7000	±3750

Ordering Example: Part No. 2671MR1WD11G1CN = 267MR Transducer, 0.01, ±0.05 in. WC, Differential, 4-20 mA Output, 3/16" Barbed Brass Fitting, PG-13.5 Strain Relief Electrical Termination, 1% Accuracy with No Display