Model 209

OEM Pressure Transducer



The Model 209 pressure transducer is designed for Industrial and OEM customers who require high performance, reliability and versatility at an affordable price. It offers exceptional ±0.25% FS accuracy with pressure ranges from 1 PSI up to 10,000 PSI to meet a multitude of demanding applications. The 209 features all stainless steel wetted materials and offers many pressure and electrical connections to satisfy challenging installation requirements. The 209 features a patented overpressure stop to protect the sensor against unexpected spikes or in high pulsation applications.

True Low Range Sensor

The Model 209's capacitive transducer is designed for industrial applications with demanding price and performance requirements. The Model 209 offers exceptional reliability in typical industrial grade environments. The true low range sensor design offers high performance with no additional amplification required to meet range requirements down to 1 PSI.

Flexibility for Many Applications

The 209 transducer offers many pressure and electrical fittings covering many installation configurations. It minimizes additional engineering time to accommodate the sensor, allowing for earlier project completion and quicker time to market.

Robust Design & Construction for Reliable Service

The Model 209 is designed and built to withstand demanding applications. The industrial construction, with optional positive overpressure stop, enables the sensor to withstand overpressure conditions up to 16X the rated range.

- **Rugged For Demanding Applications**
- **Full Span Ranges Down to 1 PSI**
- **Highly Configurable Design**

Model 209 Features:

- High Overpressure Option Available on Select Ranges
- Operates Over a Wide Temperature Band
- Compatible w/ a Variety of Gases & Liquids
- Operates on Low Cost Unregulated DC Power
- Suitable For High Shock & Vibration Applications
- No Seals or O-Rings to Cause Leakage
- No Brazed Joints Susceptible to Corrosion Problems
- CE & RoHS Compliant

Applications:

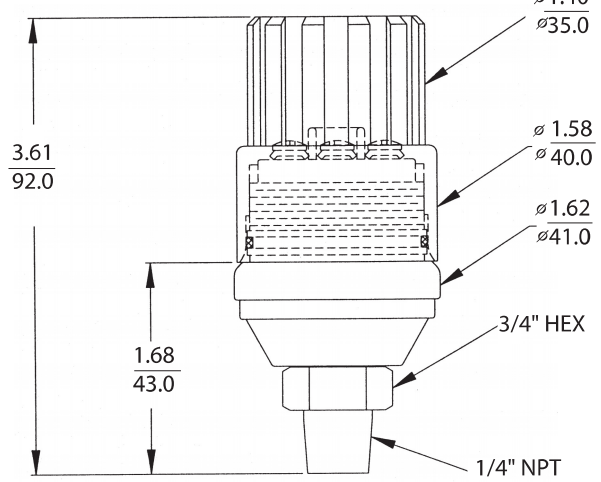
- Industrial OEM Equipment
- Hydraulic Systems
- Compressor Control
- HVAC/R Equipment
- Industrial Engines

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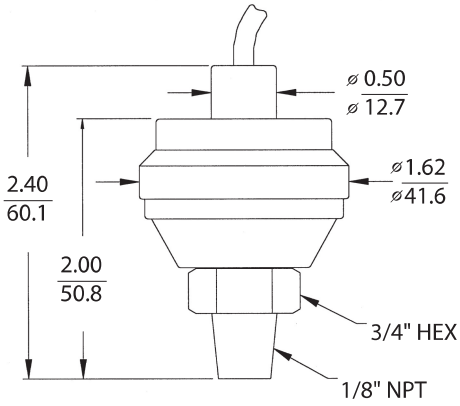
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DIMENSIONS

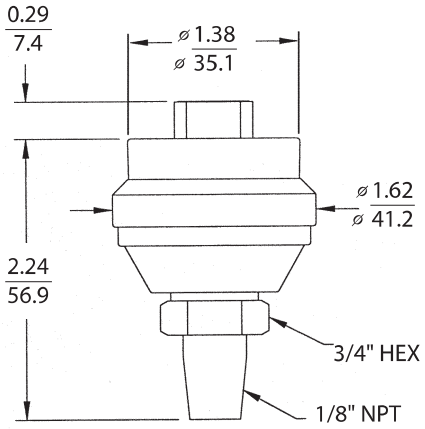
CONDUIT VERSION



CABLE ANCHOR

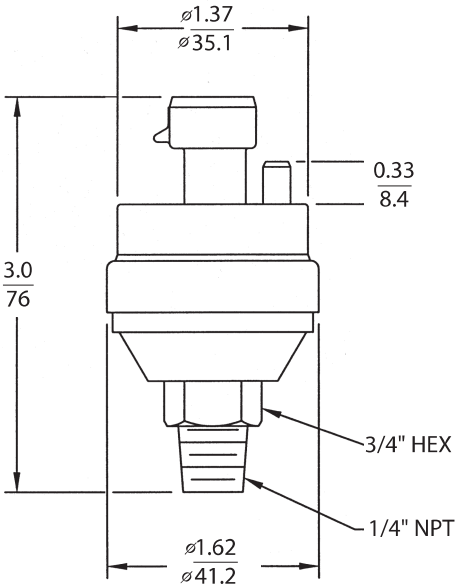


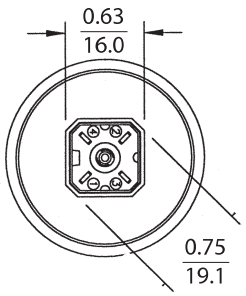
OPTIONAL HIRSCHMANN CONNECTOR
Type: G4A1M #931807-106



in.
mm

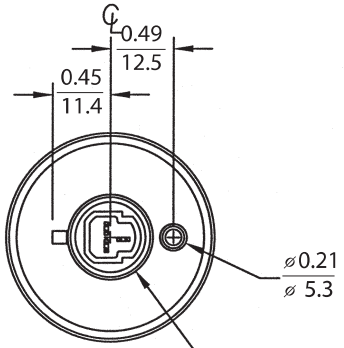
OPTIONAL 3-Pin PACKARD CONNECTOR
Type: P2S Series 150





Top View

Mating Hirschmann Connector G4WIF available. See table below to order.



Top View

Mating Packard Connectors available. See table below to order.

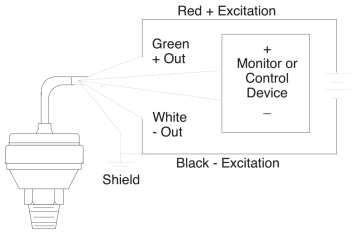
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Model 209
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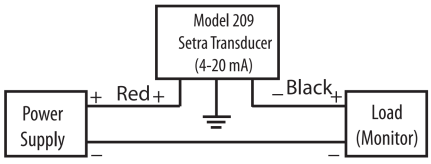
WIRING

CABLE ANCHOR

Voltage Output
The Model 209 voltage output is a 3-wire circuit. If the 209 is supplied with 2 feet of cable, the electrical connection is as follows:

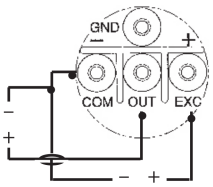


Current Output
The Model 209 True 2-wire device. If the 209 is supplied with 2 feet of cable, the electrical connection is as follows:

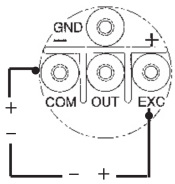


CONDUIT VERSION

Voltage

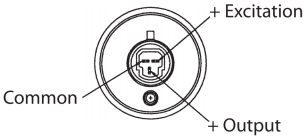


Current



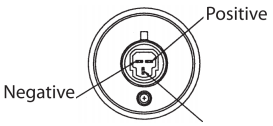
3-PIN PACKARD CONNECTOR

Voltage



Top View: 3-Pin Packard Connector
Type: P2S Series 150

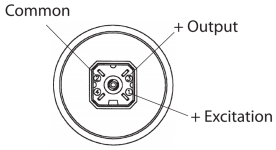
Current



Top View: 3-Pin Packard Connector
Type: P2S Series 150

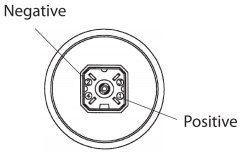
HIRSCHMANN CONNECTOR

Voltage



Top View: Hirschmann Connector
Type: G4A1M#931807-106

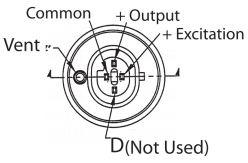
Current



Top View: Hirschmann
Connector
Type: G4A1M#931807-106

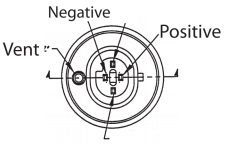
4-PIN PACKARD CONNECTOR

Voltage



Top View: 4-Pin Packard Connector
Type: Metri-Pack 150

Current



Top View: 4-Pin Packard Connector
Type: Metri-Pack 150

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ORDERING INFORMATION

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Model	Range Code				Pressure Type		Pressure Fitting		Output[6]		Elec. Termination		Options	
2091 = Model 209	Range Code	PSI	Range Code	PSI	G	Gauge	2M	1/4" NPT Male	11	4-20 mA	XX	Cable length in feet	H	High Overpressure Capability (Only available on 25 PSI up to 1500 PSI Pressure Ranges)
	001P	0 to 1	500P	0 to 500	C	Compound	J7	7/16" SAE Male	24	0.5 to 5.5 VDC	P1	Packard (3-Pin)[2]		
	002P	0 to 2	10CP	0 to 1,000	S	Sealed[1]	1M	1/8" NPT Male	27	1 to 5 VDC	P3	Packard (4-Pin)[3]		
	005P	0 to 5	15CP	0 to 1,500	V	Vacuum	L4	1/4 Female SAE Internal 7/16-20 w/ Schrader Pin	28	1 to 6 VDC	H2	Hirschmann, ("Mini")[4]		
	010P	0 to 10	20CP	0 to 2,000			G4[5]	1/2" A Male	45	0.5 to 4.5 VDC	A1	Terminal Block w/ Conduit Cover		
	025P	0 to25	30CP	0 to 3,000			P1	1/8" NPT Female Bulkhead (Available on Ranges > 50 PSI)						
	050P	0 to 50	50CP	0 to 5,000										
	100P	0 to 100	10KP	0 to 10,000										
	200P	0 to 200	Z01P	0 to -14.7 PSI										
	250P	0 to 250												

[1] Sealed version available on 200 PSI ranges and above.
[2] Order Setra Part #577 for Mating Connector.
[3] Order Setra Part #857 for Mating Connector.
[4] Order Setra Part #590 for Mating Connector.
[5] Only available for pressure ranges below 25 PSI.
[6] Consult factory for other output options.

Ordering Example: 2091001PG2M1102 = Model 209, 0 to1 PSI Range, Gauge Pressure, 14" NPT Male Fitting, 4 to 20 mA Output, 2 ft. Cable.

ACCESSORIES

577	3-Pin Mating Packard Kit
581	Cable Assembly - Packard, 3-pin (3 ft.)
582	Cable Assembly - Packard, 3-pin (6 ft.)
590	Mating Hirschmann Kit
857	4-Pin Mating Packard Kit

PROOF PRESSURE

	Standard		Option	
Full Scale Range (PSI)	Proof Pressure (PSI)	Burst Pressure (PSI)	High Proof Pressure (PSI)	High Burst Pressure (PSI)
1	2	250	N/A	N/A
2	4	250	N/A	N/A
5	10	250	N/A	N/A
10	20	500	N/A	N/A
25	50	500	N/A	N/A
50	100	750	800	5,000
100	200	1,000	1,000	5,000
200	400	2,000	1,500	5,000
250	500	2,000	2,000	8,000
500	1,000	3,000	2,500	10,000
1,000	2,000	5,000	4,000	10,000
1,500	2,500	6,000	5,000	12,000
2,000	3,000	6,500	N/A	N/A
3,000	4,500	7,500	N/A	N/A
5,000	7,500	10,000	N/A	N/A
10,000	12,500	20,000	N/A	N/A
-14.7 (Vacuum)	10	15	N/A	N/A

GENERAL SPECIFICATIONS

Performance Data		**Environmental Data**	
Accuracy RSS[1] (at constant temp)	±0.25% FS	Operating[3] Temperature °F (°C)	-40 to + 185 (-40 to +85)
Non-Linearity, BFSL	±0.22% FS	Storage Temperature °F (°C)	-40 to + 185 (-40 to +85)
Hysteresis	0.10% FS	Shock[3]	200g operating
Non-Repeatability	0.05% FS	Acceleration	10 g Maximum[5]
Thermal Effects		Shock[3]	200g Operating
Compensated Range °F (°C)	-4 to +176 (-20 to +80)	Vibration[4]	20g
Zero Shift %FS/100°F (%FS/50°C)	±2.0 (±1.8)	Environmental Protection	Weather Resistant
Span Shift %FS/100°F (%FS/50°C)	±1.5 (±1.3)	**Electrical Data (Voltage)**	
Warm-up Shift	0.1% FS Total	Circuit	3-Wire (COM, OUT, EXC)
Response Time	5 milliseconds	Excitation	9 to 30 VDC
Long Term Stability	0.5% FS/1 YR	Output[6]	0.5 to 5.5 VDC[7]
Pressure Media		Output Impedance	10 ohms
Liquids and gases compatible with 17-4 PH Stainless Steel.[2]		**Electrical Data (Current)**	
Physical Description		Circuit	2-Wire
Case	Stainless Steel & Valox	Output[8]	4 to 20mA[9]
Wetted Material	17-4 PH Stainless Steel	External Load	0 to 800 ohms
Electrical Connection	2 ft. multiconductor cable	Minimum supply voltage (VDC)	9+ 0.02 x (Resistance of receiver plus line)
Pressure Fitting[5]	1/4" -18 NPT external, 17-4 PH Stainless Steel	Maximum supply voltage (VDC)	30+ 0.004 x (Resistance of receiver plus line).
Vent	Through cable		
Weight (approx.)	2.3 ounces (65 grams)		

[1] RSS of Non-Linearity, Hysteresis, and Non-Repeatability.
[2] Note: Hydrogen not recommended for use with 17-4 PH Stainless Steel.
[3] Mil-Std. 202, Method 213B, Cond. C
[4] Mil-Std. 202, Method 204, Cond. C
[5] See ordering information for other fittings available (minimum quantities apply).
[6] Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.
[7] Zero output factory set to within ±50mV. Span (Full Scale) output factory set to within ±50mV.
[8] Calibrated at factory with a 24 VDC loop supply voltage and a 250 ohm load.
[9] Zero output factory set to within ±0.16mA. Span (Full Scale) output factory set to within ±0.16mA.
Specifications subject to change without notice.

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