

Model 524 Slimline Immersible Pressure Transducers



Setra System's Model 524 new slim-line, fully immersible pressure transducers are ideal for industrial and residential water level applications that require exceptional long-term stability, immersibility, and high accuracy.

Immersible to 200mwtg, the Model 524 is rated for NEMA 6/IP68 operation. Its custom hermetic header is triple sealed and guaranteed to eliminate the potential of water intrusion in the transducer even if the cable sheath is damaged

All wetted parts are constructed of corrosion-resistant 316 Stainless Steel, Polyurethane, and Acetal, which makes the sensor resistant to the effects of condensation caused by a high humidity environment, assuring long-term stability and service.

The Model 524 offers 0.25% FS accuracy, compensated temperature range of -15°F to +120°F (-10°C to 50°C), operating temperatures as low as -40°F to 180°F (-40°C to 80°C), and gauge pressure ranges from 0 to 13 ft. up to 686 ft. wg.

The Model 522's modular design is offered in a wide choice of millivolt, voltage or current, outputs over almost any pressure range, and a variety of pressure and electrical connections, enabling this unit to be custom configured for your OEM application

Principle of Operation

Micro-Electro-Mechanical Systems (MEMS) brings together silicon-based microelectronics with micromachining technology. The electronics are fabricated using integrated circuit process sequences (e.g., CMOS, Bipolar, or BICMOS process,) and mechanical elements, such as strain gauge sensors are fabricated using compatible micromachining processes that etch way part of the silicon wafer or add new layers to form the mechanical and electromechanical devices, providing a complete system-on-a chip.

Applications

- Ground Water Table Levels
- Liquid Level
- Industrial and Municipal Wells

Benefits

- Superior Stability Avoids Down Time
- Small 3/4 inch Diameter FootPrint
- $\pm 0.25\%$ FS Accuracy
- Millivolt, Voltage, or Current Outputs
- Less than 10ms Switch On/Setting Period
- Triple Sealed to ensure Long-Term Immersibility
- NEMA 4/IP68 Rated
- Meets \llcorner Conformance Standards

*When it comes to a product to rely on - choose the Model 524 .
When it comes to a company to trust - choose Setra.*



Visit Setra On-line:
<http://www.setra.com>

setra
800-257-3872

Model 524 Specifications

Performance Data

Accuracy RSS* (at constant temp) $\pm 0.25\%$ FS

Thermal Effects**

Compensated Range °F (°C) -15 to +120 (-10 to +50)

Thermal Error (30° to 120°F) 0.5% Typical

Long-Term Stability 0.2% FS/year

Proof Pressure 1.5 x FS Nominal Range

Burst Pressure 3 x FS

Response Time < 10 ms

*RSS of Non-Linearity, Non-Repeatability and Hysteresis.

**Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

Environmental Data

Temperature

Operating* °F (°C) -40 to +180 (-40 to +80)

Storage °F (°C) -40 to +180 (-40 to +80)

Vibration 35g Peak to Peak Sinusoidal,
5 to 2000 Hz

Shock Withstands freefall to IEC 68-2-32
Procedure 1

*Operating temperature limits of the electronics only.

Pressure media temperatures may be considerably higher or lower.

Electrical Data (Millivolt)

Circuit 4-Wire (+Exc, -Out, +Out, -Exc)

Excitation 10 VDC (15 VDC Max.) Regulated

Output* 100 mV ± 1 mV

Bridge Resistance 3K5 $\pm 20\%$ @ 25°C

*Zero output is factory set to 1.0% of Full Scale

*Span output is factory set 1.0% of Full Scale

Electrical Data (Voltage)

Circuit 3-Wire (Exc, Out, Com)

Excitation 13 to 28VDC

Output* 0 to 10VDC

Load Resistance (FS output/2) Kohms

Current Consumption Approximately 6 mA @ 6VDC

*Zero output is factory set to 1.0% of Full Scale

*Span output is factory set 1.0% of Full Scale

Electrical Data (Current)

Circuit 2-Wire

Output* 4 to 20 mA**

Loop Supply Voltage 24 VDC, (8-28 VDC)

Maximum Loop Resistance (Vs-7) x 50 Ohms

*Zero output factory set to within ± 0.16 mA

*Span output factory set to within ± 0.16 mA

Physical Description

Case 316 Stainless Steel

Ratings NEMA 6/IP68 f

Wetted Parts 316 Stainless Steel, Polyurethane, Acetal

Electrical Connection Polyurethane Cable

Pressure Fitting G1/4" AT External Fitted with Nose Cone

Weight 3.5oz (100g)

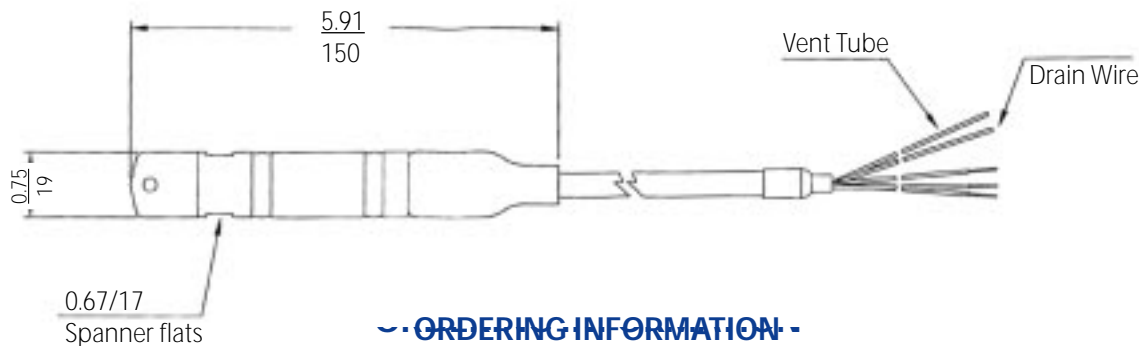
Media

Liquids or gases compatible with 17-4 PH Stainless Steel

*Note: Hydrogen not recommended for use with 17-4 PH Stainless Steel

Specifications are subject to change without notice.

Outline Drawings



ORDERING INFORMATION -

Code all blocks in table.

Example: Part No 524110WDG1MBPXXF - For a Model 524 Pressure Transducer, 10mWG, Gauge Pressure, G 1/4" AT NPT Male Fitted w/Nosecone, 4-20 mA Output, Submersible Cable, 0.25% Accuracy

Model	Range	Pressure	Pressure Fitting	Output	Elec. Termination	Accuracy
5241 = 524	<u>100 mV Output Range</u> 010WD = 10mWG 020WD = 20mWG 050WD = 50mWG 100WD = 100m WG 200WD = 200m WG	G = Gauge	1M = G 1/4" AT External Fitted w/Nosecone	BP = 100 mV 11 = 4-20 mA 2C = 0-10 VDC	xx = Submersible Cable ** ** Order from 01 to 30 Meters (Additional charges apply over standard 1 meter length.)	F = 0.25% FS
	<u>4 to 20 mA & 0 to 100 VDC Output Range</u> ZZZWD = 4 up to 200m WG*					
	*Range in 1 meter increments from 004 to 200 meters					

Please contact factory for configurations not shown.