



P52 Pressure Sensor

PRODUCT OVERVIEW

The new SSI Technologies P52 series pressure transducer is a robust, media isolated transducer, housed in a compact design, suitable for both harsh and benign media. Designed to withstand challenging conditions, the P52 series offers a cost-effective pressure transducer solution delivering superior accuracy and dependable performance for a wide variety of applications and markets.

FEATURES & BENEFITS

- Media Isolated, oil-filled sensors
- Corrosion resistant
- Temperature stability
- Accurate and precise measurement
- Precision ASIC based electronics
- Wide options of pressure ranges available
- Multiple part configurations, including custom available
- Compatible with a wide variety of materials
- Choice of electrical connections
- Voltage and current outputs
- Reverse wiring protection available
- Life > 10M pressure & temp cycles
- Superb quality and support
- CE compliant
- Made in USA



TYPICAL APPLICATIONS

- Refrigeration
- Hydraulics & Pneumatics*
- Pumps (water, hydraulic fluids)
- Compressors
- Process Controls
- Agriculture Equipment
- Robotics
- Sterilizers
- Fuel Pressure (Gas, Diesel, Propane)
- Coolant Pressure
- Sprayers
- Hydrogen Storage
- Level Sensing
- Oil Pressure
- Turbo Pressure
- Saltwater Applications **

MARKETS

- Medical
- Mil/Aero
- Industrial
- HVOR
- HVAC/R
- AG
- Automotive
- Construction
- Performance Sports
- Fuel Cells
- Energy and Water Management

* These applications we recommend using the IS (snubber) port

** Must choose 316L, for seaside applications only

PERFORMANCE SPECIFICATIONS (ALL VALUES AT 22°C UNLESS OTHERWISE NOTED)

Pressure Ranges - PSI	Gauge: 15-300 PSI, Absolute: 15-7500 PSI, Sealed Gauge: 51-7500 PSI		
Pressure Ranges - BAR	Gauge: 1.034BAR to 20.684BAR, Absolute: 1.034BAR to 517.106BAR, Sealed Gauge: 3.516BAR to 517.106BAR		
	OUTPUT TYPE		
	0.5 — 4.5 V	1 — 5 V	4 — 20 MA
Supply Voltage	5V ±0.5V	8V to 30V	
Reverse Voltage (24V over 5 mins)	Standard	Standard	
Overvoltage	24V for 5 mins	N/A	
Current Draw	< 8mA	< 4mA	
Output Current Sink /Source	5mA max, Rload >1kΩ	18mA max	
Output Type	Ratiometric	Absolute	
Zero Pressure Output	0.50 V	1.0 V	
Full Scale Output (@ pressure FS)	4.5 V	5.0 V	
Accuracy ¹ (@ 25°C)			
Accuracy BFS ^{1,7}	±0.25% typical	±0.25% typical	
Total Error Band ⁸	15-50 PSI: ±2.0% FSS 50-750 PSI: ±1.0% FSS 750-7500 PSI: ±2.0% FSS	15-50 PSI: ±2.0% FSS 50-750 PSI: ±1.0% FSS 750-7500 PSI: ±2.0% FSS	
Longterm Stability (Typical)	<±0.25 FS/Year	<±0.25 FS/Year	
Stability (Typical)	± 0.25% FS/Yr	± 0.25% FS/Yr	
Operating Temperature			
Integral Connector	-40 to 125°C	-40 to 125°C	
Storage Temperature			
Integral Connector	-40 to 125°C	-40 to 125°C	
Proof Pressure	3 X FS	3 X FS	
Burst Pressure			
Gauge	3 X FS	3 X FS	
Absolute, Sealed Gauge	10 X FS or 15,000 PSI (whichever is less)	10 X FS or 15,000 PSI (whichever is less)	
Response Time	< 1ms	< 1ms	
RELIABILITY SPECIFICATIONS			
Pressure/Temperature Cycles ² (Life) FS pressure @ 6-7Hz; and -40°C to 105°C	>10M	>10M	
Thermal Shock -40°C to 105°C, 0.5 hr soaks at Temp. (<30s Transfer)	300 Cycles	300 Cycles	
Vibration 100 to 2000 Hz, 20G Sweep Sinusoidal	144 Hours	144 Hours	
Humidity 85°C and 90% to 95% relative humidity	250 Hours	250 Hours	
ELECTRICAL SPECIFICATIONS			
EMC Rating (CE Conformity)			
Electrostatic Discharge	Per IEC61000-4-2	Per IEC61000-4-2	
Radiated Immunity	Per IEC61000-4-3	Per IEC61000-4-3	
Radiated and Conducted Emissions	Per EN 55011	Per EN 55011	

ENVIRONMENTAL SPECIFICATIONS

Material Compatibility	Must be compatible with 304L	Must be compatible with 304L	IN DEVELOPMENT
Available Ports ⁴ 15-7500 PSI	2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2J, 2K, 2L	2A, 2B, 2C, 2D, 2E, 2F, 2G, 2H, 2J, 2K, 2L	
Ingress Protection			
Metri-Pack 150 3-Pin ³	IP67	IP67	
Deutsch DT04-3P ⁵	IP68	IP68	
Wetted Materials			
Port	304L, 316L***	304L, 316L***	
Diaphragm	316L	316L	
External Seal for Ports	316L	316L	
Electrical Connector Material			
Metri-Pack 150 3-Pin ³	Nylon 6/6 25% GF Black, tin plated terminals	Nylon 6/6 25% GF Black, tin plated terminals	
Deutsch DT04-3P ⁵	Nylon 6/6 25% GF Black, tin plated terminals	Nylon 6/6 25% GF Black, tin plated terminals	
Weight P52 with 9/16"-18 NPT UNF-2A port	Approx. 0.04kg (0.10 lbs)		

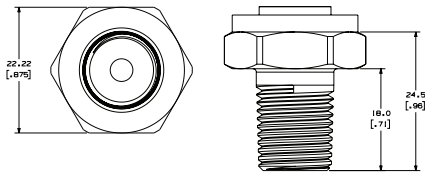
¹ Includes Repeatability, Hysteresis and linearity² Pressure Cycling performed at rated full scale pressure. 0 to FS³ Mating Packard Connector PN 12065287, Mating Terminal PN 12103881⁴ Other Port configurations may be available. Consult factory for assistance. MOQ's may apply.⁵ Mating Deutsch Connector DT06-3S⁶ The maximum deviation in output from a Best Fit Straight Line (BFSL) fitted to the output measured over the pressure range at 25°C (77°F). Includes all errors due to linearity, pressure hysteresis, and pressure non-repeatability. Temperature -40°C to 105°C.⁷ Above 100°C (212°F) for pressure ratings less than 4 bar (58 psi), TEB is ±1.5% FSS for ratiometric outputs and 2.0% FSS for other outputs.⁸ Total Error Band (TEB) includes errors due to offset, full scale span, BFSL, thermal effects on offset, span and hysteresis. FSS = Full Scale Span

*** Contact the factory for pricing and availability. MOQ's may apply.

PORTS

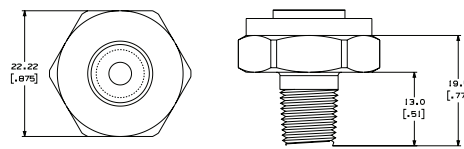
2A

PORT CODE 2A



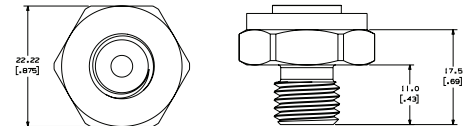
2B

PORT CODE 2B

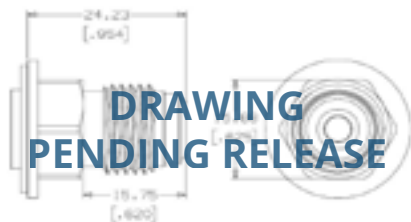


2C

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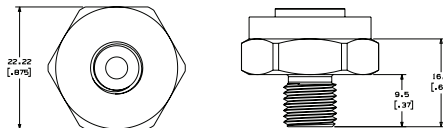


2D



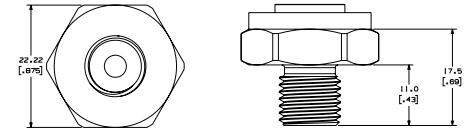
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PORT CODE 2E



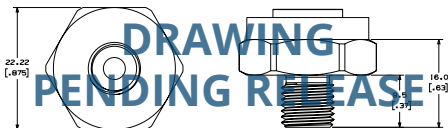
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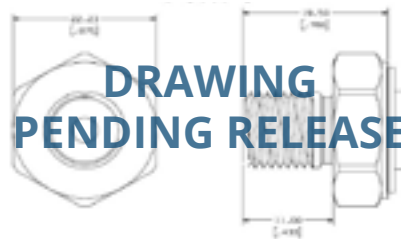


2G

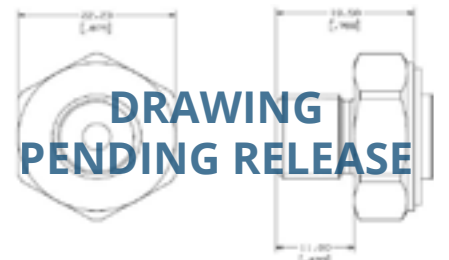
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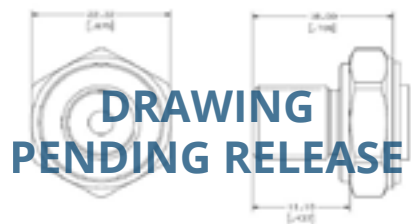
2H



2J

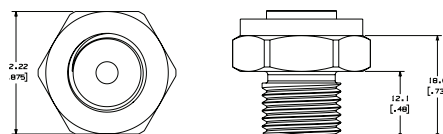


2K



2L

PORT CODE 2L



P52 MEDIASENSOR™ ORDERING SYSTEM

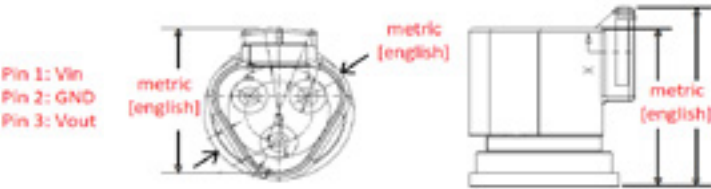
PART #: P52-100-G-2A-P-4.5V-000-000

P52	100	G	2A	P	4.5 V	000—000																																																																																
FAMILY	FULL SCALE	PRESSURE TYPE	PORT CONFIGURATION	CONNECTOR	OUTPUT OPTIONS	PLACEHOLDER																																																																																
	Pressure (15 — 7,500 PSI)	A = Absolute (15 — 7,500 PSI) G = Gauge (15 — 300 PSI) S = Sealed Gauge (15 — 7,500 PSI)	<table><tr><th>Code</th><th>Hex</th><th>Thread</th><th>Port</th></tr><tr><td>2A</td><td>7/8"</td><td>1/4"-18 NPT</td><td>304L SS</td></tr><tr><td>2B</td><td>7/8"</td><td>1/8"-27 NPT</td><td>304L SS</td></tr><tr><td>2C</td><td>7/8"</td><td>M12-1.5, 6g</td><td>304L SS</td></tr><tr><td>2D</td><td>7/8"</td><td>7/16"-20</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2A (Has Boss)</td><td></td></tr><tr><td>2E</td><td>7/8"</td><td>3/8"-24</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2A</td><td></td></tr><tr><td>2F</td><td>7/8"</td><td>7/16"-20</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2A</td><td></td></tr><tr><td>2G</td><td>7/8"</td><td>1/8"-27</td><td>304L SS</td></tr><tr><td></td><td></td><td>NPTF</td><td></td></tr><tr><td>2H</td><td>7/8"</td><td>1/4" - 18</td><td>304L SS</td></tr><tr><td></td><td></td><td>NPT (6mm ID)</td><td></td></tr><tr><td>2J</td><td>7/8"</td><td>7/16"-20</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2A (Snubbed)</td><td></td></tr><tr><td>2K</td><td>7/8"</td><td>7/16"-20</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2B (Female)</td><td></td></tr><tr><td>2L</td><td>7/8"</td><td>9/16"-18</td><td>304L SS</td></tr><tr><td></td><td></td><td>UNF-2A</td><td></td></tr></table>	Code	Hex	Thread	Port	2A	7/8"	1/4"-18 NPT	304L SS	2B	7/8"	1/8"-27 NPT	304L SS	2C	7/8"	M12-1.5, 6g	304L SS	2D	7/8"	7/16"-20	304L SS			UNF-2A (Has Boss)		2E	7/8"	3/8"-24	304L SS			UNF-2A		2F	7/8"	7/16"-20	304L SS			UNF-2A		2G	7/8"	1/8"-27	304L SS			NPTF		2H	7/8"	1/4" - 18	304L SS			NPT (6mm ID)		2J	7/8"	7/16"-20	304L SS			UNF-2A (Snubbed)		2K	7/8"	7/16"-20	304L SS			UNF-2B (Female)		2L	7/8"	9/16"-18	304L SS			UNF-2A		D = Deutsch P = Packard	4.5 V = 0.5 - 4.5 V (5 V input only. Includes over voltage protection.) 5 V = 1 - 5 V (8 to 30 V input only) 20 mA = 4 - 20 mA (8 to 30 V input only)	
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INSTALLATION INSTRUCTIONS

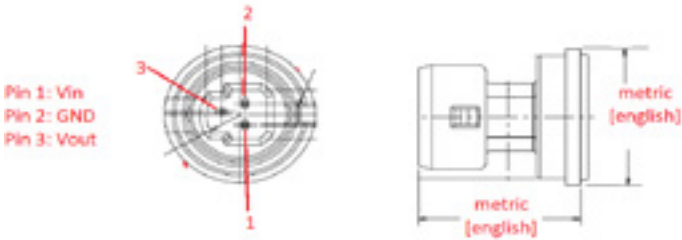
CONNECTORS

DEUTSCH (14994.2)



MATING DEUTSCH CONNECTOR
DT06-3S

PACKARD (14964.2)



MATING PACKARD CONNECTOR
PN 12065287

MATING PACKARD TERMINAL
PN 12103881

TYPICAL CONNECTIONS

The following torque limits should be used when mounting the MediaSensor™ pressure port.

STRAIGHT THREAD W/O-RING	RECOMMENDED TORQUE
NPTF Thread	150 in lb, 2 Turns from finger tight.
STRAIGHT THREAD W/O-RING	RECOMMENDED TORQUE
SAE#-4, SAE #6	300 in lb
NPT THREAD	
1/8 - 27	Working: 100 in lb, Maximum: 175 in lb
1/14 - 18	Working: 150 in lb, Maximum: 300 in lb
High Pressure (> 750 psi)	300 in lb
Male Ports	150 in lb
All Female Ports	120 in lb



SSI Technologies, LLC

— an Amphenol Company —

SSI Technologies, LLC is an Amphenol Advanced Sensors company.

CONTACT

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WARRANTY

LIMITED WARRANTY: All SSI products are warranted against defective materials and workmanship for a period of one (1) year from the date of delivery to the original purchaser. Any product that is found to be defective within the one year period will be replaced at the discretion of SSI. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE.** SSI is not an expert in the customer's technical field and therefore does not warrant the suitability of its products for the applications selected by the customer. SSI accepts no responsibility for misuse, misapplication or unauthorized modification of its products. **LIMITATION OF LIABILITY:** SSI's obligation under this limited warranty is strictly and exclusively limited to the repair or replacement free of charge of such articles as are found to be defective in material or workmanship on the condition that the purchaser gives prompt written notice to SSI of any claim to breach of warranty within the warranty period, and, if requested, returns the defective articles to SSI. SSI will not assume any expenses or liability for repairs made to its articles outside of its plant, without its prior written consent. SSI reserves the right to satisfy its warranty obligation in full, with respect to defective articles, by the payment to the purchaser of all sums paid by the purchaser to SSI for such articles. **IN NO EVENT SHALL SSI BE LIABLE FOR CLAIMS (BASED UPON BREACH OF EXPRESS OR IMPLIED WARRANTY, NEGLIGENCE OR OTHERWISE) FOR ANY DAMAGES, WHETHER DIRECT, IMMEDIATE, INCIDENTAL, FORESEEABLE, CONSEQUENTIAL, OR SPECIAL.**

TERMS & CONDITIONS

Please visit
www.ssi-sensors.com/contact/supplier-portal for information regarding the SSI Technologies, LLC Terms & Conditions.

NOTE

Specs are subject to change without notice.



MADE IN USA

