Honeywell

Stainless Steel Media Isolated Pressure Sensors Line Guide

Stainless products. Steeled expertise. Honeywell Sensing and Control (S&C) offers decades of experience in the stainless steel pressure transducers industry. That's why, industry-wide, our transducers are known for enhanced quality, reliability, and service – which adds up to outstanding value for your applications. Most Honeywell S&C transducers take advantage of piezoresistive technology, and are fully steel media isolating with stainless steel or aerospace alloys and no internal elastometric seals. This design often makes them resistant to harsh, aggressive media and challenging environments. What's more, long before they're shipped, our transducers are tested against critical manufacturing specifications. Then again, you expect meticulous attention to detail from an industry leader.

FEATURES

STAINLESS STEEL MEDIA ISOLATED PRESSURE SENSORS

13 mm Series.

Features: Rugged, isolated stainless steel package • Accommodates media that will not adversely affect 316L stainless steel • Often reliable semiconductor technology • Calibrated and temperature compensated • Voltage or current supply options • Absolute and sealed gage pressures • For potential applications from 500 psi to 5,000 psi

Benefits: Used in high pressure potential applications involving measurement of hostile media in harsh environments. Piezoresistive semiconductor sensor chip in oil-isolated housing with or without an integral ceramic for temperature compensation and calibration is designed to provide reliable, stable, and accurate performance. Weld-ring collar and special back support ring for enhanced cycle life capability as well as further package integration in OEM applications. Potential applications include industrial and hydraulic controls, tank pressure, pressure transmitters, and process control systems.

19 mm Series.

Features: Rugged, isolated stainless steel package • Accommodates media that will not adversely affect 316L stainless steel • Small size • Often reliable semiconductor technology • Absolute and gage pressures • Vacuum compatible, isolated sensors • Calibrated and temperature compensated (some listings) • For potential applications up to 500 psi

Benefits: Variety of pressure connections allow use in wide range of OEM equipment. Uncompensated version for use in potential applications using specialized circuit designs. Rugged and often reliable for use in potential applications where corrosive liquids or gases are monitored and may also be exposed to a vacuum such as industrial controls, process control systems, industrial automation and flow control, and pressure calibrators.

40PC Series.

Features: Calibrated and temperature compensated • Monolithic design • Miniature size • Port designed for O-ring interface

Benefits: Covers wide range of temperature extremes in potential medical, environmental, instrumentation, and robotics applications. Compatible with broad array of media, from dry air and water to refrigerant coolants and engine fuel. Zero analog output voltage signal linearly proportional to input pressure. Miniature size often ideal where space on PCB is minimal.

AB Series.

Features: Flush-mount • Many mounting options • Easy to clean • Enhanced accuracy • Two thermally matched strain gages • PSIA and bi-directional models • Applicable to special packaging • Temperature compensated and calibrated

Benefits: Flush-mounted for use in potential applications where ease of cleaning or low-fluid volumes are important requirements. May also be mounted in adapter for more conventional installations. Both zero and full-scale temperature compensation are held to extremely narrow limits. Potential applications include respirators, fire

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When reliability is demanded, Honeywell delivers.
Stainless steel pressure transducers are found in applications where sensors cannot be easily replaced — where supreme durability is a top priority. That's why you'll find Honeywell S&C pressure transducers performing expertly in potential applications, such as compressors and hydraulic controls, and in industries as diverse as aerospace, medical, transportation, agriculture, refrigeration, and industrial. Our full line of sensors deliver enhanced performance and reliability, plus: bonded strain gage technology enhances resistance to shock, vibration and hostile conditions; absolute, gage and sealed-gage measurement; a wide array of pressure ranges, port styles, termination types, and outputs; package types from miniature surface mount sensors to high-end stainless steel isolated transmitters (for stringent process control); pressure ranges from 3 psi to 20 kpsi; and corrosion resistance.

Pressure Sensors	13 mm Series	19 mm Series
Pressure connection	ring with back support, 1/8-27 NPT, 1/4-18 NPT, 7/16 UNF	cell with body O-ring, flush mount, flush mount with flange, 1/8-27 NPT, 1/4-18 NPT, 7/16 UNF, 1/4 BSPP, Euro O-ring, 1/4 VCR (female nut)
Measurement type	absolute, sealed gage	absolute, gage, vacuum gage
Construction	wetted parts 316L SS	wetted parts 316L SS
Pressure range	0 psi to 500 psi through 0 psi to 5000 psi	0 psi to3 psi through 0 psi to 500 psi
Output signal	0 mV to 100 mV (nominal)	0 mV to 150 mV (nominal)
Accuracy	±0.25% BFSL max.	±0.25% BFSL max.
Amplified	no	no
Compensated temperature range	0 °C to 82 °C [32 °F to 180 °F]	0 °C to 82 °C [32 °F to 180 °F]
Termination	ribbon cable	ribbon cable

Pressure Sensors	40PC Series
Signal conditioning	amplified
Pressure range	0 psi to 500 psi (inclusive)
Device type	gage, bidirectional gage, vacuum gage
Output	Vdc
Calibrated	yes
Compensated	yes
Operating temperature range	-45 °C to 85 °C [-49 °F to 185 °F] (compensated)

Pressure Sensors

	AB Series	BL Series	BX Series
Pressure connection	flush diaphragm	flush diaphragm	flush diaphragm
Measurement type	psia, psis, psig	absolute, gage, sealed gage	gage
Construction	316L or 15-5PH stainless steel	wetted parts 15-5 PH/316L SS	wetted parts 304 SS
Pressure range	0 psi to 20000 psi, -14.7 psia to 50 psia	0 psi to 20000 psi	0 psi to 300 psi
Output signal	0 mV to 100 mV	4 mA to 20 mA	0 mVdc to 50 mVdc
Accuracy	0.5% full scale BFSL, 0.25 % full scale BFSL	0.25% to 1% full scale BFSL	1% full scale BFSL
Amplified	no	yes	no
Compensated temperature range	-1 °C to 71 °C [30 °F to 160 °F]	-1 °C to 54 °C [30 °F to 130 °F]	0 °C to 80 °C [32 °F to 176 °F]
Termination	4-conductor shielded cable (various lengths), Bendix high temperature connector	Bendix connector, cable	pin

Pressure Sensors

	Datamate (DM) Series	DG Series	EA Series
Pressure connection	1/8-27 NPT, 3/8-24 UNF	3/8-24 UNF, 1/8-27 NPT, PT-1/4	1/4 tube, 1/8-27 NPT, 3/8-24 UNF
Measurement type	gage, sealed gage	sealed gage	gage
Construction	wetted parts 303 & 304 SS/housing 304 SS	wetted parts 303 & 304 SS/housing 304 SS	wetted parts 304 SS, Valox plastic case
Pressure range	0 psi to 5000 psi, 0 bar to 345 bar	0 bar to 500 bar 0 psi to 7100 psi	0 psi to 5000 psi
Output signal	4 mA to 20 mA	0.25 Vdc to 4.75 Vdc	1 Vdc to 6 Vdc
Accuracy	1.0% full scale BFSL	1.0% full scale BFSL	1% full scale BFSL
Amplified	yes	yes	yes
Compensated temperature range	-1 °C to 54 °C [30 °F to 130 °F]	-40 °C to 125 °C [-40 °F to 257 °F] (compensated)	-1 °C to 85 °C [30 °F to 185 °F]
Termination	3 Wire 24 AWG, 1/2 in NPT conduit	Packard Metri-Pack	push-on automotive type with crimp pins

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Pressure Sensors	Eclipse (EC) Series	Mediamate (MM) Series
Pressure connection	1/8-27 NPT, G1/4 BSP	1/8-27 NPT, 3/8-24 UNF, G 1/8 BSP, G 1/4 BSP
Measurement type	gage, sealed gage	psig, psis
Construction	wetted parts 303 & 304 SS/housing 304 SS	wetted parts 303 & 304 SS/housing 304 SS
Pressure range	0 bar to 500 bar 0 psi to 7100 psi	0 psi to 7000 psi, 0 bar to 500 bar
Output signal	1 Vdc to 6 Vdc regulated, 0.5 Vdc to 4.5 Vdc, 4 mA to 20 mA	0 mV to 50 mV
Accuracy	0.25% full scale BFSL	0.5% full scale BFSL, 0.25 % full scale BFSL
Amplified	yes	no
Compensated temperature range	-1 °C to 82 °C [30 °F to 180 °F] (compensated)	-1 °C to 82 °C [30 °F to 180 °F]
Termination	Hirschmann connector, Packard Metri-Pack and cable	Hirschmann connector, solder, or push-on spades

Pressure Sensors	MLH Series
Pressure connection	1/4-18 NPT, M12 x 1.5 (ISO 6149), M14 x 1.5 (ISO 6149), 3/8-24 UNF (SAE-3 O-ring boss), M18 x 1.5 (ISO 6149), 1/8 in-27 NPT, 1/2 in-20 UNF (SAE-5 O-ring boss), M10 x 1 (ISO 6149), 1/4 in SAE Female Schrader, 7/16-20 UNF (SAE-4 O-ring boss), 1/2 in NPT, 9/16-18 UNF (SAE-6 O-ring boss), PT 1/4-19 BSP Tapered Thread, G 1/4-19 (DIN 3852-2), G 1/8 with O-ring groove, M16 x 1.5 (ISO 6149), G 1/4 with O-ring groove, G 1/8 (DIN 3852-2), PT1/8-28 BSP Tapered Thread, M20 x 1.5 (ISO 6149), 1/2-20 37° Flare (SAE JIC)
Measurement type	gage, sealed gage
Construction	port - 304L stainless steel; diaphraghm - Haynes 214 alloy
Pressure range	0 psi to 50 psi through 0 psi to 8000 psi
Output signal	0.5 Vdc to 4.5 Vdc ratiometric output at 5 Vdc excitation, 4 mA to 20 mA current from 9.5 Vdc to 30 Vdc excitation, 1.0 Vdc to 6.0 Vdc regulated output from 8 Vdc to 30 Vdc excitation, 0.25 Vdc to 10.25 Vdc regulated output from 14 Vdc to 30 Vdc excitation, 0.5 Vdc to 4.5 Vdc regulated output from 7 Vdc to 30 Vdc excitation, 0 mV to 50 mV from 5 Vdc excitation, 1 Vdc to 5 Vdc output from 8 Vdc to 30 Vdc excitation
Accuracy	±0.25% full scale BFSL (±0.5% full scale BFSL on ranges below 100 psi)
Amplified	yes
Compensated temperature range	-40 °C to 125 °C [-40 °F to 257 °F]
Termination	Packard MetriPak 150, Hirschmann, M12 x 1 (Brad Harrison micro), DIN 72585 (Cannon APD type), DIN 43650-C (IP65), Amp Superseal 1.5 (IP67), cable, flying leads, Deutsch DTM04-3P (integral)

Pressure Sensors

	SA Series	SPT Series
Pressure connection	G1/4-28 BSP, 1/8-27 NPT, 3/8-24 UNF, PT-1/4	1/8-27 NPT, 1/4-18 NPT, 7/16-20 UNF, 1/4-19 BSPP, 1/4 VCR gland
Measurement type	absolute, gage, sealed gage	absolute, gage, sealed gage, vacuum gage pressures
Construction	wetted parts 303 & 304 SS/housing 304	wetted parts 316L SS
Pressure range	0 psi to 7000 psi 0 bar to 500 bar	0 psi to 3 psi through 0 psi to 5000 psi
Output signal	1 Vdc to 6 Vdc, 1 Vdc to 5 Vdc	4 mA to 20 mA, 0 mV to 100 mV, 1 Vdc to 5 Vdc
Accuracy	1.0% full scale BFSL	±0.25% BFSL max.
Amplified	yes	yes, amplified and unamplified
Compensated temperature range	-1 °C to 85 °C [30 °F to 185 °F] (compensated)	-10 °C to 85 °C [14 °F to 185 °F]
Termination	Hirschmann connector, 3-conductor shielded cable	bayonet connector, cable

Pressure Sensors

	SR Series	XPRO (XP) Series
Pressure connection	capsule	1/8-27 NPT, 3/8-24 UNF, PT-1/4
Measurement type	gage	absolute, gage, sealed gage
Construction	wetted parts 304 SS or 316 SS	wetted parts 303 & 304 SS/housing 304 SS
Pressure range	0 psi to 2000 psi, 0 bar to 100 bar	0 psi to 7000 psi, 0 bar to 500 bar
Output signal	25 mV/mA	4 mA to 20 mA
Accuracy	1% full scale BFSL	1.0% full scale BFSL
Amplified	no	yes
Compensated temperature range	0 °C to 75 °C [32 °F to 167 °F]	-1 °C to 85 °C [30 °F to 185 °F]
Termination	pin	Hirschmann connector, 3-conductor shielded cable

fighting equipment, drilling mud density, kidney dialysis machines, hydraulic servo valves, gas monitoring, transit vehicle braking systems, liquid-level measurement, landing gear hydraulic pressure, geophysical research, engine monitor control, and diesel engines.

BL Series.

Features: Flush diaphragm • Hermetically sealed • Easily cleaned/adaptable • FM approval • Accuracies to 0.25% • Measures vacuum • Reverse polarity protection • Amplified 4 to 20 mA output and temperature compensated

Benefits: Flush diaphragm suited to measuring viscous fluids, slurries, and media where system flushing is necessary. May be mounted in an adapter. Factory Mutual approval as an intrinsically safe device when used with approved barriers for use in hazardous areas. Potential applications include depth sensing, water resource management, process controls, marine instrumentation, chemical manufacture, tank/liquid level, and paint spraying applications. May also potentially be used in food & beverage, pulp & paper, and petro-chemical industries.

BX Series.

Features: Low cost • Small size • Oil-free isolated sensor • Flush-mount, non-corrugated diaphragm • High-impedance • Constant current • Temperature compensated

Benefits: Enhanced performance, calibrated, and temperature compensated. Small size often ideal for portable equipment. Stainless steel construction designed to tolerate a wide variety of corrosive media. Small, flush mount diaphragm often ideal for medical, beverage, and food processing potential applications where stringent sanitation requirements are necessary. Other potential applications include pressure transmitters, solid-state pressure switches, “smart” valves, and OEM medical equipment.

Datamate (DM) Series.

Features: Conduit connections for process industry • Waterproof exterior • Factory calibration • Designed to be intrinsically safe • Wide choice of pressure ranges • Reverse polarity protected • Amplified and temperature compensated

Benefits: Two-wire pressure transmitter compatible with data loggers and instrumentation used in processing environments. 4 mA to 20 mA output for remote monitoring of primary and secondary process variables. Threaded connector allows conduit to be easily attached. Often suitable for use with media in potential applications that would otherwise require isolators such as liquid level measurement, plant utilities, gas transmission pipeline, flow detection, geophysical monitoring, and lubrication.

DG Series.

Features: Meets SAE J1211 specifications for under hood applications • High temperature capability [125 °C, 257 °F] • Wide choice of pressure ranges (100 psis to 7000 psis) • Integral automotive type connector • Reverse polarity and output protection • Ratiometric output • Sealed steel case • Amplified and temperature compensated • Enhances installation

Benefits: Steel case seals internal electronics from environment for enhanced reliability in tough, hostile environments. Output can interface directly with many microprocessors with onboard A/D converters, reducing typical transducer support circuitry. Potential applications include automotive brake systems, fuel rail/injection engine oil, continuously variable transmissions, active suspensions, and energy management.

EA Series.

Features: Large choice of pressure ranges • UL approval • Rugged, lightweight Valox case • Compatible with microprocessors • Amplified and temperature compensated • Corrosion resistance

Benefits: Pressure port, amplifier, and voltage supply-regulator packaged in Valox case. Operates through millions of pressure cycles without damage and is well suited for cycling regimes. Potential applications include agricultural sprayers, air conditioning, refrigeration, engine controls, environmental control systems, compressors, hydraulic and pneumatic controls, robotics, transmissions, and waste management.

Eclipse (EC) Series.

Features: Voltage or current output • Broad selection of ranges • CE, UL, and cUL listings for some combinations • Weatherproof-type connector • IP65 sealed case with appropriate connector • IP66 with cable termination • Often suitable for marine or off-road vehicle use • Internal signal amplification • Low-excitation voltage • Reverse polarity protection

Benefits: Designed for high volume OEMs requiring a low-cost pressure transmitter for industrial and heavy-duty applications. Rugged packaging and plated steel case provide environmental protection for electronics. Output in mA useful for applications with high RFI/EMI electrical noise. Potential applications include automotive systems, hydraulic/pneumatic controls, air compressors, energy management (compressors, refrigeration/chiller control), process control systems, and engine controls and monitors.

Mediamate (MM) Series.

Features: Low cost • Wide choice of pressure ranges • Rugged, compact configuration • Corrosion resistant • PC mountable • Threaded port • No adapter required • Easy to package • Temperature compensated • CE mark with Hirschmann connector

Benefits: Rugged construction and proven reliability. Fully compensated and completely interchangeable without further calibration. Used with a wide variety of corrosive media such as ammonia, water, and hydraulic fluids

in gas chromatography, paint-spraying systems, electronic pressure switches, medical diagnostics, heat pumps, hydraulic controls, irrigation systems, and automotive.

MLH Series.

Features: All-wetted parts • No internal elastomeric seals • Stable and creep free • Reverse voltage and output short circuit protected • Less than 2 ms response time • Easy customization • Rated IP65 or better • Exceeds CE heavy industrial EMC for use in areas of high RFI/EMI • Amplified and temperature compensated • Wide choice of connections and terminations • Calibration for special pressure ranges

Benefits: Combines ASIC technology with media isolated, metal diaphragm. All metal wetted parts for use in a variety of potential fluid applications. Amplified outputs often eliminate cost of external amplifiers. Wide selection of industry standard connectors and process ports for enhanced reliability and user flexibility. Potential applications include diesel engines, refrigeration and HVAC/R, general industrial and hydraulics, off-road vehicles, braking systems, natural gas vehicles, and medical.

SA Series.

Features: Sealed construction • Wide choice of pressure ranges • UL approved • Reverse polarity protection • RFI/EMI protection • PSIG, PSIS, and PSIA versions • Amplified and temperature compensated • Calibrated and compensated • Field interchangeable

Benefits: Water-resistant, rugged, stainless steel case for protection from harsh environments. Internal hermetic sealing provides measurement of absolute pressures or those referenced to a sealed chamber. Approved by Underwriters Laboratories as a component infloat and pressure-operated motor controller. Potential applications include freon and ammonia refrigerant monitoring in HVAC/R systems, hydraulic controls, blood diffusion, agriculture sprayers and dusters, compressors, engine controls, energy management systems, robotics, automated machining, automotive systems, and general industrial pressure monitoring/control systems.

SPT Series.

Features: Often reliable semiconductor technology • Rugged, 316L stainless steel wetted parts • Calibrated and temperature compensated • NEMA 4 design • Absolute, gage, sealed gage, and vacuum gage pressures • Often ideal for potential applications where medial compatibility is a problem

Benefits: Variety of pressure connections allows use in wide range of OEM equipment. For use in potential applications where corrosive liquids and gases are monitored such as industrial automation and flow control, pressure instrumentation, hydraulic systems, and process control.

SR Series.

Features: Low cost • High-impedance silicon strain gages • Small size • Stainless steel • Low-current draw • Enhanced reliability • Enhanced corrosion resistance • Wide range of pressure measurements • Constant current excitation • Temperature compensated

Benefits: Low current draw allows use with batteries. Sensing elements isolated from media. Provides high working pressures, high overload and burst pressures often at no additional cost. Temperature compensated to improve system performance often at no additional cost, unlike other low cost sensors. Works with readily available 4 mA to 20 mA amplifier ICs. Potential applications include pressure transducers, “smart” valves, solid-state pressure switches, and pressure transmitters.

XPRO (XP) Series.

Features: Sealed, rugged package • 1% accuracy for secondary process measurements • Low cost • Stainless steel • Designed to be ntrinsically safe • Corrosion resistant • Often suited for industrial environments • Amplified and temperature compensated

Benefits: 4 mA to 20 mA output suited for long cable-runs in electrically noisy environments. Silicon strain gages mounted on a beam coupled to stainless steel diaphragm for maximum isolation from thermal transients. Stainless steel pressure cavity has no elastomer seals or adhesive bonds to corrode. Designed to be intrinsically safe for use in hazardous locations when used with approved barriers. Potential applications include freon and ammonia refrigeration, process control, flow detection, pneumatic systems, water resource management, and liquid level measurement.

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PERSONAL INJURY

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Failure to comply with these instructions could result in death or serious injury.

⚠ WARNING
MISUSE OF DOCUMENTATION

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Failure to comply with these instructions could result in death or serious injury.

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