Honeywell

Airflow, Force and Pressure Sensors

Product Range Guide

For innovation that's well apart, there's only Honeywell.

With more than 50,000 products ranging from snap-action, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios.

Honeywell sensor, switch, and control components are tailored to exact specifications for stronger performance, longer productivity, and increased safety. Enhanced accuracy and durability are built into every part, improving output and endurance. For our customers, this can reduce expenditures and operational costs. Our global footprint and channels help to competitively price such components for your chosen application and provide immediate technical support.

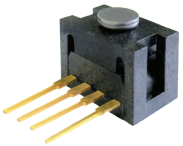
While Honeywell's switch and sensor solutions are suitable for a wide array of basic and complex applications, our custom-engineered solutions offer enhanced precision, repeatability, and ruggedness. We offer domain knowledge and technology resources, along with a close working relationship, to develop and deliver cost-effective, individually tailored solutions. Whether clean-slate development or simple modifications to an existing design are needed, our expertly engineered solutions help to meet the most stringent requirements with world-class product designs, technology integration, and customer-specific manufacturing.

Global service, sourcing, and manufacturing. Industry-leading engineers. Value-added assemblies and solutions. A one-stop, full-service, globally competitive supplier.

Table of Contents

Force Sensors

Measure the addition or backup of force, meaning the resistance of silicon-implanted piezoresistors will increase when flexed under applied force. Potential applications include infusion pumps, anesthesia monitors, blood pressure equipment, and more.


Series	FSA	FSG	FSS
Signal conditioning	amplified	unamplified	unamplified
Technology	silicon die (piezoresistive)	silicon die (piezoresistive)	silicon die (piezoresistive)
Output	ratiometric analog SPI- or I²C-compatible digital	360 mV typ.	360 mV typ.
Force range	N: 5, 7. 5, 10, 15, 20, 25 lb: 1, 1.5, 2, 3, 5 g: 500, 750 kg: 1, 2	0 N to 5 N, 0 N to 10 N, 0 N to 15 N, 0 N to 20 N	0 N to 5 N, 0 N to 10 N, 0 N to 15 N, 0 N to 20 N
Overforce	15 lb [6804 g]	60 N max. (range dependent)	60 N max. (range dependent)
Operating temperature range	0°C to 70°C [32°F to 158°F]	-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	5°C to 50°C [41°F to 122°F]	-	-
Measurements (H x W x D)	8,25 mm x 17,36 mm x 25,02 mm [0.32 in x 0.86 in x 0.99 in]	9,04 mm x 12,70 mm x 18,14 mm [0.36 in x 0.50 in x 0.71 in]	3,18 mm x 14,22 mm x 5,59 mm [0.13 in x 0.56 in x 0.22 in]
Features	calibrated and temperature compensated using on-board Application Specific Integrated Circuit (ASIC)	extremely low deflection, low repeatability and linearity error	low deflection, low voltage, direct mechanical coupling of actuator ball, small size



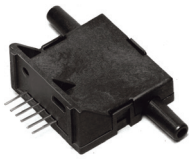
Series	FSS-SMT	TBF Basic	1865
Signal conditioning	unamplified	unamplified	unamplified
Technology	silicon die (piezoresistive)	silicon die (piezoresistive)	silicon die (piezoresistive)
Output	360 mV typ.	mV	**current excitation:** 100 mV typ. **voltage excitation:** 40 mV typ.
Force range or pressure range	0 N to 5 N, 0 N to 10 N, 0 N to 15 N, 0 N to 20 N	1 bar to 10 bar | 100 kPa to 1 MPa | 15 psi to 150 psi	0 psi to 5 psi, 0 psi to 10 psi, 0 psi to 15 psi, 0 psi to 25 psi, 0 psi to 30 psi
Overforce or overpressure	60 N max. (range dependent)	17 bar max. | 1.70 MPa max. | 245 psi max. (all range dependent)	60 psi max. (range dependent)
Operating temperature range	-40°C to 85°C [-40°F to 185°F]	0°C to 50°C [32°F to 122°F]	-28°C to 54°C [-18°F to 129°F]
Compensated temperature range	-	0°C to 50°C [32°F to 122°F]	-1°C to 54°C [30°F to 129°F]
Measurements (H x W x D)	3,18 mm x 13,70 mm x 5,59 mm [0.13 in x 0.54 in x 0.22 in]	3,89 mm x 7 mm x 7 mm [0.15 in x 0.28 in x 0.28 in]	11,05 mm x 17,15 mm x 17,15 mm [0.44 in x 0.68 in x 0.68 in]
Features	low deflection, low voltage, direct mechanical coupling of actuator ball, small size	pressure measurement for liquid media, extremely small size, low power consumption	pressure measurement for liquid media, 8-pin DIP electrical connection

Airflow Sensors

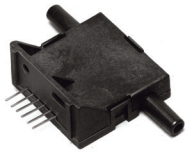
Contain advanced microstructure technology to provide a sensitive and fast response to flow, amount/direction of air or other gases. Potential applications include HVAC, gas metering, chromatography, vent hoods, and medical equipment.

Series	Honeywell Zephyr™ HAF Series-High Accuracy ±50 SCCM to ±750 SCCM	Honeywell Zephyr™ HAF Series-High Accuracy 10 SLPM to 300 SLPM
Signal conditioning	amplified, compensated	amplified, compensated
Technology	silicon die with thermally isolated heater	silicon die with thermally isolated heater
Flow/pressure range	±50 SCCM to ±750 SCCM	10, 15, 20, 50, 100, 200, 300 SLPM
Output	analog (Vdc), digital (I^2C)	digital (I^2C)
Power consumption	**3.3 Vdc:** 40 mW typ. (no load) (analog); 23 mW typ. (no load) (digital) **5.0 Vdc:** 55 mW typ. (no load) (analog); 38 mW typ. (no load) (digital)	**3 Vdc:** 60 mW max. **10 Vdc**: 200 mW max.
Port style	long port, short port	manifold mount, 22 mm OD tapered male fitting, G 3/8 female threaded fitting
Media compatibility	dry non-corrosive gases	dry non-corrosive gases
Temperature range	**operating:** -20°C to 70°C [-4°F to 158°F] **compensated:** 0°C to 50°C [32°F to 122°F]	**operating:** -20°C to 70°C [-4°F to 158°F] **compensated:** 0°C to 50°C [32°F to 122°F]
Dimensions (H x W x D)	**long port:** 20 mm x 36 mm x 19,9 mm [0.79 in x 1.42 in x 0.78 in]; **short port:** 17,6 mm x 28,8 mm x 19,9 mm [0.69 in x 1.13 in x 0.78 in]	110 mm x 54,4 mm x 54 mm [4.3 in x 2.14 in x 2.1 in] (22 mm OD, tapered male fitting - largest)
Features	high accuracy, high sensitivity at very low flows, high stability, low pressure, linear outpu,; customizable, full calibration and temperature compensation	built-in bypass provides high performance, easy integration and custom calibration

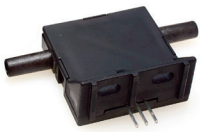
Series	AWM5000	AWM700
Signal conditioning	amplified	amplified
Technology	silicon die	silicon die
Flow/pressure range	0 SLPM to 5.0 SLPM; 0 SLPM to 10.0 SLPM; 0 SLPM to 15.0 SLPM; 0 SLPM to 20.0 SLPM	200 SLPM
Output	analog	analog
Power consumption	100 mW max.	60 mW max.
Port style	1/4 in-18 NPT	22 mm tapered
Media compatibility	dry gas only	dry gas only
Temperature range	**operating:** -20°C to 70°C [-4°F to 158°F] **compensated:** 0°C to 50°C [32°F to 122°F]	**operating:** -25°C to 85°C [-13°F to 185°F] **compensated:** 10°C to 40°C [50°F to 104°F]
Dimensions (H x W x D)	35,6 mm x 162,8 mm x 32,3 mm [1.40 in x 6.41 in x 1.27 in]	82,55 mm x 46,5 x 32,5 mm [3.25 in x 1.83 in 1.28 in]
Features	sensitivity to low flows, enhanced response time, low power consumption, analog output, laser trimmed	sensitivity to low flows, enhanced response time, low power consumption; analog output, highly stable



AWM1000

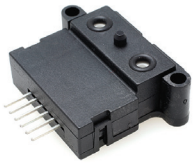


AWM2000



AWM3000

AWM1000	AWM2000	AWM3000
unamplified, compensated	unamplified, compensated	amplified
silicon die	silicon die	silicon die
±200 SCCM; 1000 SCCM to -600 SCCM; ±5,0 mbar [2.0 in H_2O]	±30 SCCM; ±200 SCCM; ±1000 SCCM; ±5,0 mbar [2.0 in H_2O]	30 SCCM; 200 SCCM; 1000 SCCM; ±1000 SCCM; 0 mbar to 1,25 mbar [0 in H_2O to 0.5 in H_2O]; 0 mbar to 5,0 mbar [0 in H_2O to 2 in H_2O]; 5,0 mbar [2.0 in H_2O]
analog	analog	analog
30 mW typ.	30 mW typ.	50 mW typ.
straight	straight	straight
dry gas only	dry gas only	dry gas only
-25°C to 85°C [-13°F to 185°F]	-25°C to 85°C [-13°F to 185°F]	-25°C to 85°C [-13°F to 185°F]
12,7 mm x 54,4 mm x 31,5 mm [0.5 in x 2.14 in x 1.24 in]	12,7 mm x 54,4 mm x 31,5 mm [0.5 in x 2.14 in x 1.24 in]	12,7 mm x 54,4 mm x 31,5 mm [0.5 in x 2.14 in x 1.24 in]
sensitivity to low flows, enhanced response time, low power consumption, analog output, bi-directional sensing capability	sensitivity to low flows, enhanced response time, low power consumption, analog output, bi-directional sensing capability	sensitivity to low flows, fast response time, low power consumption, analog output, amplified, bi-directional flow



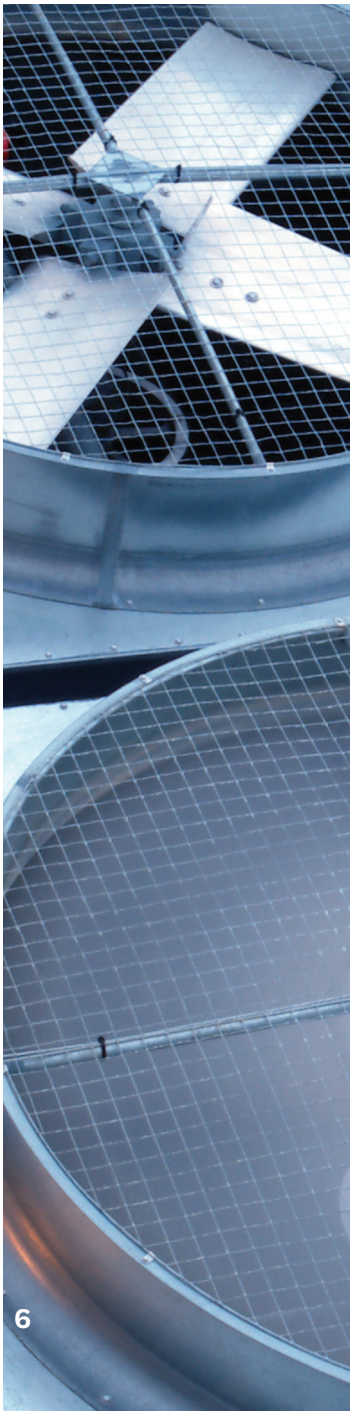
AWM40000

AWM90000

AWM40000	AWM90000
unamplified (compensated) or amplified	uncompensated
silicon die	silicon die
±25.0 SCCM; 1.0 SLPM; 6.0 SLPM	±200 SCCM; ±5,0 mbar [2.0 in H_2O]
analog	analog
60 mW max. or 75 mW max.	50 mW max.
manifold	parallel
dry gas only	dry gas only
operating inclusive: -40°C to 125°C [-40°F to 251°F] **compensated:**-25°C to 85°C [-13°F to 185°F]	-25°C to 85°C [-13°F to 185°F]
12,7 mm x 30,5 mm x 30,2 mm [0.50 in x 1.2 in x 1.19 in]	13,08 mm x 30,48 mm x 27,94 mm [0.52 in x 1.2 in x 1.1 in]
sensitivity to low flows, enhanced response time, low power consumption, analog output, laser trimmed	sensitivity to low flows, fast response time, low power consumption, analog output, bi-directional sensing capability

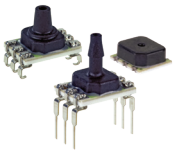
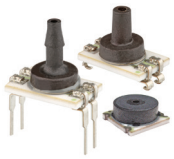
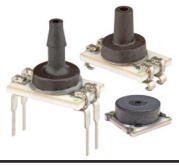
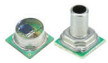
Board Mount Pressure Sensors

Utilize a specialized piezoresistive micro-machined sensing element which allows part interchangeability, and enhanced performance, reliability, and accuracy. Potential applications include medical, HVAC, data storage, industrial machinery, pumps, and robotics.



Series	TruStability™ RSC	TruStability™ HSC	TruStability™ SSC
Signal conditioning	amplified	amplified	amplified
Pressure range	±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH_20 to ±150 psi	±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH_20 to ±150 psi	±1.6 mbar to ±10 bar | ±160 Pa to ±1 MPa | ±0.5 inH_20 to ±150 psi
Device type	absolute, differential, gage	absolute, differential, gage	absolute, differential, gage
Output	24-bit digital SPI	digital (I^2C, SPI), analog (Vdc)	digital (I^2C, SPI), analog (Vdc)
Calibrated	yes	yes	yes
Temperature comp.	yes	yes	yes
Total error band	as low as ±0.25 %FSS depending on pressure range after customer auto-zero	±1 %FSS to ±3 %FSS depending on pressure range	±2 %FSS to ±5 %FSS depending on pressure range
Accuracy	±0.1 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL
Mounting options	DIP, SMT	DIP, SIP, SMT	DIP, SIP, SMT
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	-20°C to 85°C [-4°F to 185°F]	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	0°C to 50°C [32°F to 122°F]	-20°C to 85°C [-4°F to 185°F]
Dimensions (H x W x D)	varies by package style	varies by package style	varies by package style
Approvals	RoHS, WEEE	RoHS, WEEE	RoHS, WEEE
Features	uses a 24-bit analog-to digital converter with integrated EEPROM; high resolution, high accuracy; industry-leading, accuracy and flexibility; power consumption <10 mW typ.	industry-leading, long-term stability, total error band, accuracy and flexibility; high burst pressures and working pressure ranges; excellent repeatability; liquid media compatible on port 1	industry-leading, long-term stability, total error band, accuracy and flexibility; high burst pressures and working pressure ranges; excellent repeatability; liquid media compatible on port 1

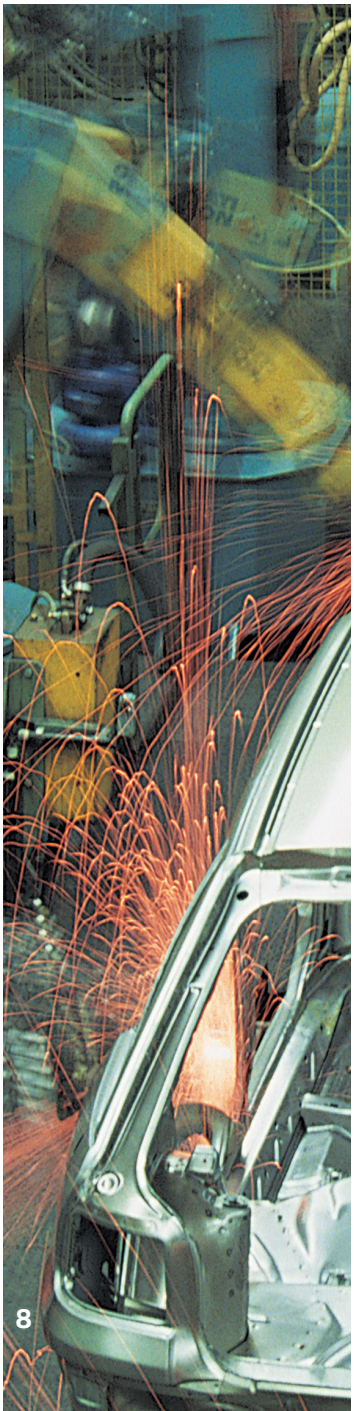


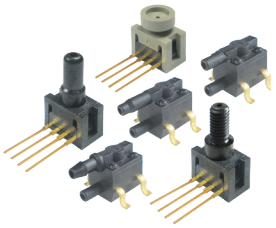





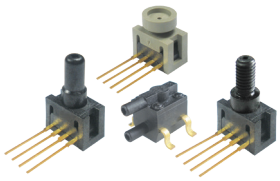
TruStability™ TSC	TruStability™ NSC	Basic ABP	Basic TBP	Basic NBP	MicroPressure MPR
unamplified	unamplified	amplified	unamplified	unamplified	amplified
±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi	±2.5 mbar to ±10 mbar | ±250 Pa to ±1 MPa | ±1 inH_20 to ±150 psi	±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi	±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi	±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi	60 mbar to 2.5 bar | 6 kPa to 250 kPa | 1 psi to 30 psi
differential, gage	absolute, differential, gage	differential, gage	gage	absolute, gage	absolute, gage
analog (mV)	analog (mV)	digital (I^2C, SPI), analog (Vdc)	analog (mV)	analog (mV)	24-bit digital I^2C, SPI
yes	no	yes	yes	no	yes
yes	no	yes	yes	no	yes
–	–	±1.5 %FSS BFSL	–	–	as low as ±1.5 %FSS after customer auto-zero
±0.25 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL
DIP, SIP, SMT	DIP, SIP, SMT	DIP, SMT, leadless SMT	DIP, SMT, leadless SMT	DIP, SMT, leadless SMT	leadless SMT
-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]	-40°C to 125°C [-40°F to 257°F]	-40°C to 125°C [-40°F to 257°F]	-40°C to 85°C [-40°F to 185°F]
0°C to 85°C [32°F to 185°F]	–	0°C to 50°C [32°F to 122°F]	0°C to 85°C [32°F to 185°F]	–	0°C to 50°C [32°F to 122°F]
varies by package style	varies by package style	as small as 7 mm x 7 mm x 3,84 mm [0.276 in x 0.276 in x 0.151 in]	as small as 7 mm x 7 mm x 3,84 mm [0.276 in x 0.276 in x 0.151 in]	as small as 7 mm x 7 mm x 3,84 mm [0.276 in x 0.276 in x 0.151 in]	as small as 5 mm x 5 mm x 3,13 mm [0.20 in x 0.20 in x 0.12 in]
RoHS, WEEE	RoHS, WEEE	RoHS, WEEE	RoHS, WEEE	RoHS, WEEE	REACH, RoHS
industry-leading, long-term stability allows customers the flexibility of sensor self calibration; liquid media compatible on port 1	industry-leading, long-term stability allows customers the flexibility of sensor self calibration; liquid media compatible on port 1	designed to provide a simple, cost-effective, basic performance, high quality solution for those medical and industrial applications where high performance, stability, and accuracy are not as critical; liquid media compatible on ports 1 and 2; food-grade compliant	designed to provide a simple, cost-effective, basic performance, high quality solution for those medical and industrial applications where high performance, stability, and accuracy are not as critical, liquid media compatible on port 1; food-grade compliant	designed to provide a simple, cost-effective, basic performance, high quality solution for those medical and industrial applications where high performance, stability, and accuracy are not as critical, liquid media compatible on port 1; food-grade compliant	designed to meet the requirements of higher volume medical (consumer and non-consumer) devices and commercial appliance applications; low power consumption; liquid media compatible; food-grade compliant

Board Mount Pressure Sensors

Utilizes a specialized piezoresistive micro-machined sensing element which allows part interchangeability, and enhanced performance, reliability, and accuracy. Potential applications include medical, HVAC, data storage, industrial machinery, pumps, and robotics.



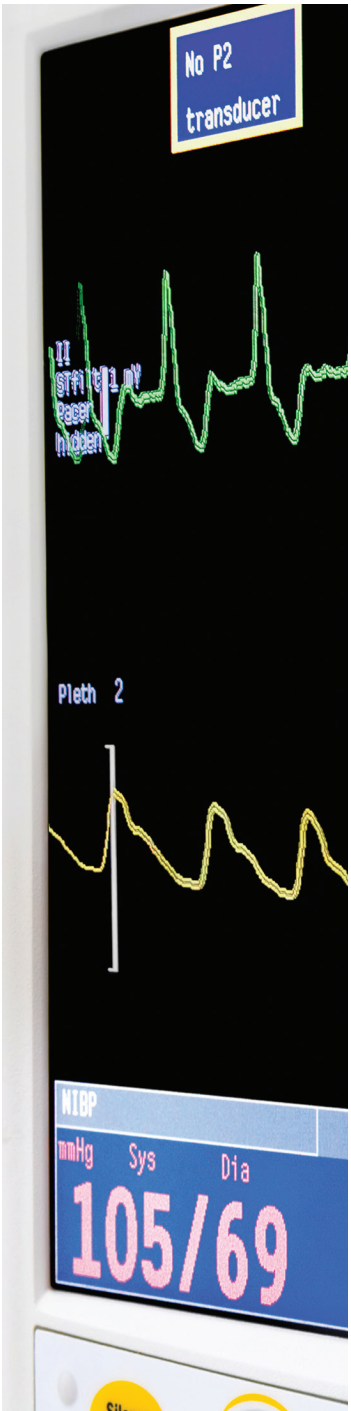




Series	24PC	26PC
Signal conditioning	unamplified	unamplified
Pressure range	0.5 psi to 250 psi (SIP, DIP) 1 psi to 15 psi (SMT)	1 psi to 250 psi (SIP, DIP) 1 psi to 15 psi (SMT)
Device type	absolute, differential, wet-wet differential, gage	differential, wet-wet differential, gage
Output	mV	mV
Calibrated	no	yes
Temperature compensation	no	yes
Accuracy	linearity and hysteresis: 0.5 % typ.	linearity and hysteresis: 0.5 % typ.
Mounting options	DIP, SIP, SMT	DIP, SIP, SMT
Operating temperature range	-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	–	0°C to 50°C [32°F to 122°F]
Dimensions (H x W x D)	**SIP, DIP:** 27,94 mm x 12,7 mm x 16,0 mm [1.10 in x 0.5 in x 0.63 in] **SMT:** 7,87 mm x 10,41 mm x 10,92 mm [0.31 in x 0.41 in x 0.43 in]	**SIP, DIP:** 27,94 mm x 12,7 mm x 16,0 mm [1.10 in x 0.5 in x 0.63 in] **SMT:** 7,87 mm x 10,41 mm x 10,92 mm [0.31 in x 0.41 in x 0.43 in]
Approvals	RoHS, WEEE	RoHS, WEEE
Features	**SIP, DIP:** true wet/wet differential sensing; miniature package; operable after exposure to frozen conditions; choice of termination for gage sensors **SMT:** true wet/wet differential sensing; pick-up feature; maximum peak reflow temperature of 260°C [500°F]; end-point calibration; elastomeric construction	**SIP, DIP:** true wet/wet differential sensing; miniature package; operable after exposure to frozen conditions; choice of termination for gage sensors **SMT:** true wet/wet differential sensing; pick-up feature; maximum reflow temperature of 260°C [500°F]; end-point calibration; elastomeric construction

Board Mount Pressure Sensors

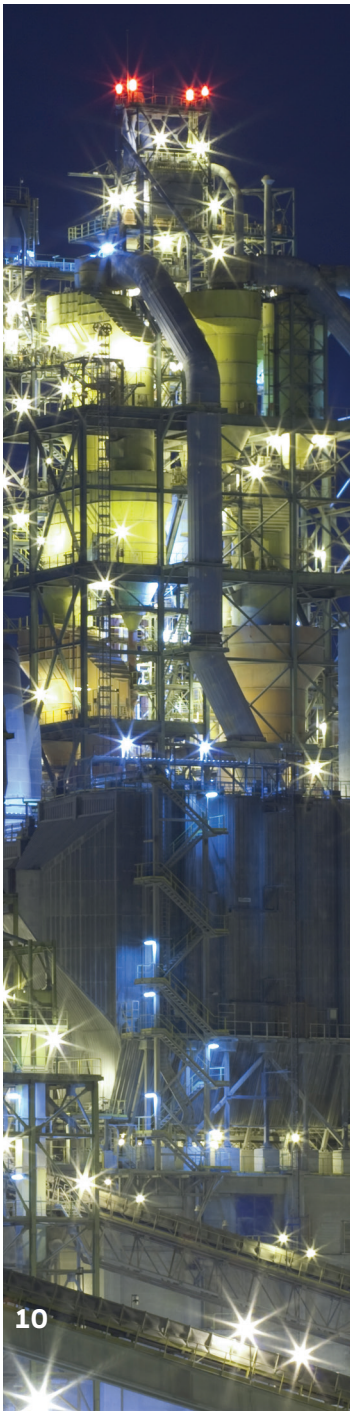
Features a sensing technology that utilizes a specialized piezoresistive micro-machined sensing element. Potential uses include measuring vacuum or positive pressure in medical and environmental applications.



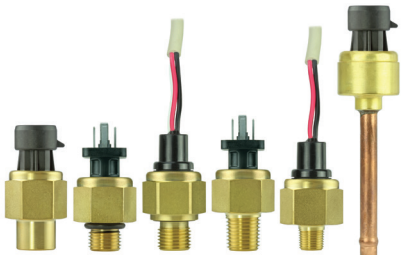
Series	24PC Flow-Through	26PC Flow-Through
Signal conditioning	unamplified	unamplified
Pressure range	1 psi to 100 psi	1 psi to 100 psi
Device type	flow-through gage	flow-through gage
Output	mV	mV
Calibrated	no	yes
Temperature compensation	no	yes
Accuracy	linearity and hysteresis: 0.75 % typ.	linearity and hysteresis: 0.35 % typ.
Mounting options	SIP	SIP
Operating temperature range	-40°C to 85°C [-40°F to 185°F]	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	–	0°C to 50°C [32°F to 122°F]
Dimensions (H x W x D)	8,89 mm x 25,65 mm x 12,7 mm [0.35 in x 1.01 in x 0.50 in]	8,89 mm x 25,65 mm x 12,7 mm [0.35 in x 1.01 in x 0.50 in]
Approvals	RoHS, WEEE	RoHS, WEEE
Features	miniature package; media flow-through port; operable after exposure to frozen conditions; choice of termination for gage sensors	

Pressure Transducers | Heavy Duty

Engineered to be resistant to a wide variety of media for use in most harsh environments. Potential applications include air compressors, general system and factory automation, pump, valve, and fluid pressure, transportation (heavy equipment and alternative fuel vehicles) system pneumatics and hydraulics. controls, tank pressure, and process control systems.



Series	13 mm	19 mm	SPT
Pressure connection	weld ring with back support, 1/8-27 NPT, 1/4-18 NPT, 7/16 UNF	weld ring 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)	1/8-27 NPT, 1/4-18 NPT, 7/16-20 UNF, 1/4-19 BSPP, 1/4 VCR gland
Measurement type	absolute, sealed gage	absolute, gage, vacuum gage	absolute, gage, sealed gage, vacuum gage pressures
Construction	wetted parts 316L SS	wetted parts 316L SS	wetted parts 316L SS
Pressure range	0 psi to 500 psi through 0 psi to 5000 psi	0 psi to 3 psi through 0 psi to 500 psi	0 psi to 3 psi through 0 psi to 5000 psi
Output	0 mV to 100 mV (nominal)	0 mV to 100 mV (nominal)	4 mA to 20 mA, 0 mV to 100 mV, 1 Vdc to 5 Vdc
Accuracy	±0.25 %BFSL max.	±0.25 %BFSL max.	±0.25 %BFSL max.
Total Error Band	–	–	–
Amplified	no	no	yes, amplified and unamplified
Operating temperature range	-40°C to 125°C [-40°F to 257°F]	-40°C to 125°C [-40°F to 257°F]	-40°C to 85°C [-40°F to 185°F]
Compensated temperature range	0°C to 82°C [32°F to 180°F]	0°C to 82°C [32°F to 180°F]	-10°C to 85°C [14°F to 185°F]
Electrical Connection	ribbon cable	ribbon cable	bayonet connector, cable
Dimensions (H x W x D)	varies by body type	varies by body type	22,2 mm x 22,2 mm x length varies [0.875 in x 0.875 in x length varies]
Certifications/ Approvals	RoHS	RoHS	–
Features	isolated stainless steel package, voltage or current supply options	isolated stainless steel package, vacuum compatible	calibrated and temperature compensated, NEMA 4 design, rugged 316 stainless steel wetted parts



MLH	PX2	PX3
1/4-18 NPT, 1/8-27 NPT, 7/16-20 UNF, 1/4 in 45° Flare Female Schrader with depressor, 1/2-14 NPT, R 1/4-19 BSPT, R 1/8-28 BSPT, 3/8-24 UNF with O-ring seal, 7/16-20 UNF with O-ring seal, 1/2-20 UNF with O-ring seal, 9/16-18 UNF with O-ring seal, M10x1 with O-ring seal, M12x1.5 with O-ring seal, M14x1.5 with O-ring seal, M16x1.5 with O-ring seal, M18x1.5 with O-ring seal, M20x1.5 with O-ring seal, G1/8-28 BSPP with bonded washer, G1/4-19 BSPP with bonded washer, G1/8-28 BSPP with elastomeric seal, G1/4-19 BSPP with elastomeric seal	7/16-20 UNF 1/4 in 45° Flare Female Schrader, 7/16-20 UNF 45° Flare Male, 7/16-20 UNF 37° Flare Male, G1/4, G1/8, M12 x 1.5, 1/4-18 NPT, 1/8-27 NPT, 9/16-18 UNF, 7/16-20 UNF	7/16-20 UNF 1/4 inch 45° Flare Female Schrader (SAE J512), G1/4 A-G (1179-3), G1/4 A-L (1179-2), M12 x 1.5 (ISO 6149-3), 1/4-18 NPT, (ANSI/ASME B1.20.1), 1/8-27 NPT, (ANSI/ASME B1.20.1), brazable tube
sealed gage, vented gage (relative)	absolute, sealed gage, vented gage	absolute, sealed gage
port: 304L stainless steel; **diaphragm:** Haynes 214 alloy	**port and housing:** 304 stainless steel **connector:** PBT 30% GF	**threaded ports:** brass C36000 (lead (Pb) content: 3.7% max.) **tube port:** copper UNS C12200 (lead (Pb) free)
6 bar to 550 bar | 50 psi to 8000 psi	1 bar to 70 bar | 100 kPa to 7 MPa | 15 psi to 1000 psi	1 bar to 50 bar | 15 psi to 700 psi
ratiometric (from 5 Vdc excitation): 0.5 Vdc to 4.5 Vdc; **regulated:** 1 Vdc to 6 Vdc, 0.25 Vdc to 10.25 Vdc, 0.5 Vdc to 4.5 Vdc, 1 Vdc to 5 Vdc; **current:** 4 mA to 20 mA	**ratiometric:** 5.0 V, 10 %Vs to 90 %Vs; 5.0 V, 5 %Vs to 95 %Vs; 3.3 V, 10 %Vs to 90 %Vs; 3.3 V, 5 %Vs to 95 %Vs **regulated:** 1 Vdc to 6 Vdc, 0.25 Vdc to 10.25 Vdc, 0.5 Vdc to 4.5 Vdc, 1 Vdc to 5 Vdc; **current:** 4 mA to 20 mA	**ratiometric:** 0.5 Vdc to 4.5 Vdc, 0.33 Vdc to 2.97 Vdc **current:** 4 mA to 20 mA
±0.25 %FSS (±0.5 %FSS on ranges below 100 psi)	±0.25 %FSS	±0.25 %FSS
±2 %FSS to ±15 %FSS (depending on temperature range and termination type)	±2 %FSS (-40°C to 125°C [-40°F to 257°F])	**±1.0 %FSS:** -20°C to 85°C [-4°F to 185°F] **±2.0 %FSS:** <-20°C, >85°C [<-4°F, >185°F]
yes	yes	yes
-40°C to 125°C [-40°F to 257°F]	-40°C to 125°C [-40°F to 257°F]	-40°C to 125°C [-40°F to 257°F]
ratiometric output: -40°C to 125°C [-40°F to 257°F] **regulated and 4 mA to 20 mA outputs:** -40°C to 125°C [-40°F to 257°F] (See literature for operating and temperature compensation informaiton.)	-40°C to 125°C [-40°F to 257°F]	-40°C to 125°C [-40°F to 257°F]
Metri-Pack 150, Hirschmann, M12 x 1 (Brad Harrison micro), DIN 43650-C, 8 mm male, AMP Superseal 1.5, cable harness (1 m or 3 m), flying leads (6 in), Deutsch DTM04-3P (integral)	Metri-Pack 150 (UL 94 HB or V-0 options), Micro M12, DIN, Deutsch, or cable harness (1 m, 2 m, 3 m, or 5 m)	Metri-Pack 150 (UL V-0), DIN (Male, EN 175301-803C), cable harness (PVC or XLPE)
27,0 mm x 27,0 mm x 55 mm [1.06 in x 1.06 in x 2.18 in]	66 mm x 21,5 mm dia. [2.60 in x 0.84 in dia.]	50 mm x 22,0 mm [2.0 in x 0.87 in]
RoHS, CE, UL component recognition for USA/Canada: file no. E258956	RoHS, CE	RoHS, REACH, CE
all-metal wetted parts, no internal elastomeric seals, input reverse voltage protection, less than 2 ms response time, easy customization, exceeds CE heavy industrial EMC for use in areas of high RFI/EMI	designed for configurability, cost-effective, global support, industry-leading Total Error Band, durable, designed to Six Sigma standards, good EMC protection	survives frost exposure (commonly found in refrigeration systems), compatible wth common HFC (hydrofluorocarbon) refrigerants and next generation low global warming potential (GWP) refrigerants

These sensors feature rugged, all welded, stainless steel construction and provide high accuracy, enhanced reliability, and measurement stability. Intrinsically safe options are available for hazardous environments. All are highly configurable for multiple accuracies, outputs, pressure ports, electrical terminations, and pressure ranges.

Series	FP5000
Pressure connection	1/4-18 NPT female, 1/4-18 NPT male, 7/16-20 UNF male, G1/4 B female, G1/4-B male
Measurement type	absolute, gage
Construction	wetted parts Ha C276 and 316L SS: fully welded, oil filled
Pressure range	35 kPa to 10000 kPa, 10 in-H_2O to 50 in-H_2O, 1 bar to 350 bar, 0.5 psi to 5000 psi, 30 in-Hg
Output	4 mA to 20 mA, 0 Vdc to 5 Vdc, 0 Vdc to 10 Vdc
Accuracy	0.2 %FSS BFSL (Standard accuarcy), 0.1 %FSS BFSL (High accuracy)

Thermal Effects Error Band

Comp. Temperature Range	TEB for Standard Accuracy	TEB for High Accuracy
0°C to 60°C [40°F to 140°F]	< ±0.75 %FSS	< ±0.5 %FSS
-20°C to 80°C [0°F to 176°F]	< ±1.5 %FSS	< ±1.0 %FSS
-40°C to 85°C [-40°F to 185°F]	< ±2.25 %FSS	< ±1.5 %FSS
-40°C to 125°C [-40°F to 50°F]	< ±2.25 %FSS	< ±1.5 %FSS

Amplified	yes

Operating temperature range

Connector	Operating Temperature	Sealing
PT-02A-10-6P	-40°C to 125°C [-40°F to 250°F]	IP67
DIN FORM A	-40°C to 125°C [-40°F to 250°F]	IP65
DIN FORM C	-40°C to 90°C [-40°F to 194°F]	IP65
Integral cable	-40°C to 80°C [-40°F to 176°F]	IP67

Compensated temperature range	0°C to 60°C [40°F to 140°F], -20°C to 80°C [0°F to 176°F], -40°C to 85°C [-40°F to 185°F], -40°C to 125°C [-40°F to 50°F]
Electrical connection	PT-02A-10-6P, DIN FORM A, DIN FORM C, Integral cable
Dimensions (H x W x D)	varies by pressure port and electrical connector type
Certifications/Approvals	RoHS, CE approved
Features	media-isolated piezoresistive silicon pressure sensor: compensated for sensor offset, sensitivity, temperature effects, and non-linearity to offer improved thermal stability and accuracy; Hastelloy® C276 and 316L stainless steel wetted parts provide durability with abrasive or corrosive media; full analog path, high speed, no digitization error signal; zero point null adjustment

TJE	A-105
1/4-18 NPT female, 1/4-18 NPT male , 7/16-20 UNF female, 7/16-20 UNF male, G 1/4 male, 9/16-18 UNF female, VCR male, VCR female	7/16-20 UNF male, M12 x 1.5 male
absolute, gage	gage
wetted parts 17-4 PH SS or 15-5 PH SS, 304 SS case material; fully welded	wetted parts 17-4 PH SS, Iconel X-750, fully welded, flush diaphragm
1 psi to 60,000 psi	300 psi to 15,000 psi
4 mA to 20 mA, 0 Vdc to 5 Vdc, 0 Vdc to 10 Vdc, mV/V	4 mA to 20 mA, 1 Vdc to 5 Vdc, 1 Vdc to 10 Vdc, mV/V
±0.10 % full scale	±0.5 % full scale

Characteristic	Measure	Characteristic	Measure
Temperature, compensated	15°C to 70°C [60°F to 160°F]	Temperature, compensated	-1°C to 70°C [30 °F to 160 °F] (amplified) 15°C to 70°C [60°F to 160°F] (unamplified)
Temperature effect, zero	0.0025 %FS/°F	Temperature effect, zero	0.015 %FS/°F (amplified) 0.01 %FS/°F (unamplified)
Temperature effect, span	0.0025 %Reading/°F	Temperature effect, span	0.02 %Reading/°F (amplified & unamplified)
Sealing	hermetically sealed, IP68/NEMA 6P	Sealing	–

yes, amplified and unamplified	yes, amplified and unamplified
-70°C to 160°C [-100°F to 325°F] up to 1000 psi, -70°C to 120°C [-100°F to 250°F] 1500 psi and above	-29°C to 85°C [-20°F to 185°F) amplified -54°C to 149°C (-65°F to 300°F) unamplified
15°C to 70°C [60°F to 160°F], -20°C to 85°C [0°F to 185°F], -30°C to 55°C [-20°F to 130°F], -30°C to 90°C [-20°F to 200°F], 20°C to 120°C [70°F to 250°F], 20°C to 160°C [70°F to 325°F], 20°C to 200°C [70°F to 400°F], -50°C to 120°C [-65°F to 250°F]	15°C to 70°C [60°F to 160°F], 0°C to 55°C [30°F to 130°F], -30°C to 90°C [-20°F to 200°F], 20°C to 120°C [70°F to 250°F], 20°C to 200°C [70°F to 400°F], -50°C to 120°C [-65°F to 250°F]
Bendix PT 6-pin, Amphenol MS 6-pin, integrated cable, 1/2-14 conduit with PVC cable, DIN 43650	Bendix PT 6 pin, integrated teflon cable, integrated submersible cable
varies by pressure port and electrical connector type	varies by electrical connector type
RoHS, CE approved	RoHS, CE approved
strain gage based transducer and features a unique “true gage” design that utilizes a second welded stainless steel diaphragm that hermetically seals the strain gage circuitry from atmospheric contamination. This design references the primary pressure sensing diaphragm to the atmosphere, and provides a stable zero regardless of the transducer environment	manufactured with a unitized stainless steel diaphragm. The advantage of this type of design is that a thin diaphragm and heavy sidewalls are made from one piece of stainless steel. This unitized diaphragm is rugged, but at the same time can be made thin enough to measure low pressures

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

For more information

Honeywell Sensing and Internet of Things services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit sensing.honeywell.com or call:

Asia Pacific	+65 6355-2828
Europe	+44 1698 481481
USA/Canada	+1-800-537-6945

Honeywell Sensing and Internet of Things
9680 Old Bailes Road
Fort Mill, SC 29707
www.honeywell.com

008081-26-EN | 26 | 04/19

Honeywell