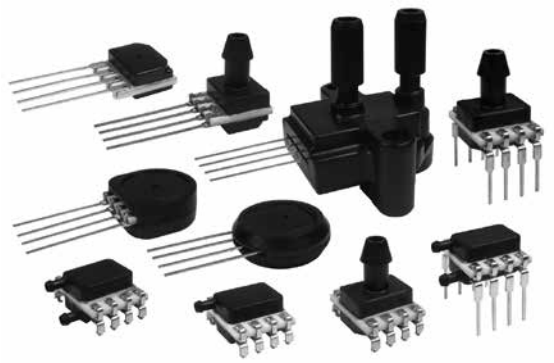
Honeywell

Board Mount Pressure Sensors Line Guide



The pressure is on. The answer is here. No matter the need, Honeywell Safety and Productivity Solutions (S&PS) has the microstructure, pressure sensor solution. Our sensing element design consists of four piezoresistors on a chemically etched silicon diaphragm. A pressure change will cause a strain in the diaphragm and the buried resistors. The resistor values will change in proportion to the stress applied, which produces an electrical output. You will find our components performing in potential applications including dialysis equipment, blood analysis, centrofusion and oxygen and nitrogen gas distribution, HVAC devices, data storage, process controls, industrial machinery, pumps, and robotics. Honeywell S&PS is always working harder, no matter the situation. Or the pressure.

FEATURES

ULTRA-LOW PRESSURE SENSORS

TruStability™ RSC Series.

Features: Enhanced performance • Proprietary Honeywell technology • Cost-effective, high volume solution with variety of options • High burst and working pressures • Enhanced reliability • Easy to design in • Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements • Energy efficient

Benefits: Output accelerates performance through reduced conversion requirements and direct interface to microprocessors. High sensitivity with high burst and overpressure while providing industry-leading stability (performance factors difficult to achieve in the same sensor) provide flexibility in implementation and minimize requirements for protecting the sensor without sacrificing ability to sense very small changes in pressure. High burst pressures promote system reliability, minimize downtime, and can simplify design; high working pressures allow ultra-low sensors to be used continuously above the calibrated pressure range. Package is small when compared to many similar sensors, occupying less area on the PCB. Port and housing options simplify integration. Wide pressure range simplifies use. IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements allows avoidance of thermal and mechanical damage during solder reflow attachment and/or repair that lesser rated sensors would incur, allows unlimited floor life when stored as specified (simplifying storage and reducing scrap), eliminates lengthy bakes prior to reflow, and allows for lean manufacturing due to stability and usability shortly after reflow. Energy efficiency reduces system power requirements and enables extended battery life. Potential medical applications include airflow monitors, anesthesia machines, blood analysis machines, gas chromatography, gas flow instrumentation, hospital room air pressure, kidney dialysis machines, nebulizers, pneumatic controls, respiratory machines, sleep apnea equipment, spirometers, and ventilators. Potential industrial applications include barometry, drones, flow calibrators, gas chromatography, gas flow instrumentation, HVAC clogged filter detection, HVAC systems, HVAC transmitters, indoor air quality, life sciences, pneumatic control, VAV (Variable Air Volume) control, and weather balloons.

TruStability™ HSC Series.

Features: Proprietary Honeywell technology • Industry-leading long-term stability, Total Error Band, and accuracy • High burst pressures • High working pressure ranges • Industry-leading flexibility • Excellent repeatability • Onboard signal conditioning • Wide variety of pressure ranges • Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements • Insensitive to mounting orientation • Custom calibration • Insensitive to vibration • Internal diagnostic functions • Energy efficient • I^2C- or SPI-compatible digital output or analog output • Small size • RoHS compliant • Protected by multiple global patents • Intended for use with non-corrosive, non-ionic working fluids

Benefits: Proprietary Honeywell technology combines high sensitivity with high overpressure and burst pressure to give the customer more flexibility in sensor implementation and reduce the customer design requirements for protecting the sensor without sacrificing the ability to sense very small changes in pressure. Industry-leading long-term stability minimizes system calibration needs, maximizes system performance, and helps support system uptime by

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Board Mount Pressure Sensors Line Guide

Working better under pressure.
The human body is a supremely sensitive mechanism, requiring equally perceptive observation. Honeywell S&PS offers a line of pressure sensors equal to every task — including sensors that measure the amount of pressure delivered to the human body.

From medical applications to industrial needs to any industry, we've got the right solution. Our categories of pressure sensor measurement include absolute, differential, gage or vacuum gage — with unamplified or amplified sensors covering wide pressure ranges. You'll also find a variety of mounting and package styles, digital output, small size, reduced cost, enhanced reliability, enhanced repeatability and accuracy under extreme conditions, enhanced operating characteristics between sensors, and interchangeability without recalibration.

Ultra-Low Pressure Sensors

	TruStability™ RSC Series	TruStability™ HSC Series
Signal conditioning	amplified	amplified
Pressure range	±1.6 mbar to ±40 mbar | ±160 Pa to ±4 kPa | ±0.5 inH_2O to ±30 inH_2O	±1.6 mbar to ±40 mbar | ±160 Pa to ±4 kPa | ±0.5 inH_2O to ±30 inH_2O
Device type	differential, gage	differential, gage
Output	24-bit digital (SPI)	analog (Vdc) or digital (I^2C or SPI)
Calibrated	yes	yes
Temperature Compensated	yes	yes
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F] (compensated)	0 °C to 50 °C [32 °F to 120 °F] (compensated)
Total error band	as low as ±0.25 %FSS depending on pressure range (after auto zero)	±1 %FSS to ±3 %FSS depending on pressure range
Accuracy	±0.1 %FSS BFSL	±0.25 %FSS BFSL
Mounting options	DIP, SMT	DIP, SIP, SMT

Ultra-Low Pressure Sensors

	ASDX Series
Signal conditioning	amplified
Pressure range	±5 inH_2O, ±10 inH_2O
Device type	differential, bidirectional gage
Output	analog (Vdc), digital (I^2C or SPI)
Calibrated	yes
Temperature compensated	yes
Operating temperature range	0 °C to 85 °C [32 °F to 185 °F] (compensated)
Total error band	±2.0 %FSS max.
Accuracy	-
Mounting options	DIP

Ultra-Low Pressure Sensors

	TruStability™ SSC Series	TruStability™ NSC Series
Signal conditioning	amplified	unamplified
Pressure range	±1.6 mbar to ±40 mbar | ±160 Pa to ±4 kPa | ±0.5 inH_2O to ±30 inH_2O	±2.5 mbar to ±40 mbar | ±250 Pa to ±4 kPa | ±1 inH_2O to ±30 inH_2O
Device type	differential, gage	differential, gage
Output	analog (Vdc) or digital (I^2C or SPI)	mV
Calibrated	yes	no
Temperature compensated	yes	no
Operating temperature range	-20 °C to 85 °C [-4 °F to 185 °F] (compensated)	-40 °C to 85 °C [-40 °F to 185 °F]
Total error band	±2 %FSS to ±5 %FSS depending on pressure range	-
Accuracy	±0.25 %FSS BFSL	±0.25% FSS BFSL
Mounting options	DIP, SIP, SMT	DIP, SIP, SMT

Ultra-Low Pressure Sensors

	SCXL Series	SDX005IND4 SDX010IND4	SXL Series
Signal conditioning	unamplified	unamplified	unamplified
Pressure range	4 inH_2O to 10 inH_2O	±5 inH_2O to ±10 inH_2O	±10 inH_2O
Device type	differential, gage	differential, gage	differential, gage
Output	mV	mV	mV
Calibrated	yes	yes	no
Temperature compensated	yes	yes	no
Operating temperature range	0 °C to 50 °C [32 °F to 122 °F] (compensated)	0 °C to 50 °C [32 °F to 122 °F] (compensated)	0 °C to 50 °C [32 °F to 122 °F]
Total error band	-	-	-
Accuracy	linearity and hysteresis 0.2% typ.	linearity and hysteresis 0.2% typ.	linearity and hysteresis 0.2% typ.
Mounting options	SIP	DIP	SIP

Low Pressure Sensors

	TruStability™ RSC Series	TruStability™ HSC Series	TruStability™ SSC Series
Signal conditioning	amplified	amplified	amplified
Pressure range	±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
Device type	absolute, differential, gage	absolute, differential, gage	absolute, differential, gage
Output	24-bit digital (SPI)	analog (Vdc) or digital (I^2C or SPI)	analog (Vdc) or digital (I^2C or SPI)
Calibrated	yes	yes	yes
Compensated	yes	yes	yes
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F] (compensated)	0 °C to 50 °C [32 °F to 122 °F] (compensated)	-20 °C to 85 °C [-4 °F to 185 °F] (compensated)
Total error band	as low as ±0.25 %FSS depending on pressure range (after auto zero)	±1 %FSS	±2 %FSS
Accuracy	±0.1 %FSS BFSL	±0.25 %FSS BFSL	±0.25 %FSS BFSL
Mounting options	DIP, SMT	DIP, SIP, SMT	DIP, SIP, SMT

Low Pressure Sensors

	Basic ABP Series	Basic TBP Series	Basic NBP Series
Signal conditioning	amplified	unamplified	unamplified
Pressure range	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
Device type	gage, differential	gage	gage, absolute
Output	digital (I^2C, SPI) or ratiometric analog	mV	mV
Calibrated	yes	yes	no
Compensated	yes	yes	no
Operating temperature range	0 °C to 50 °C [32 °F to 122 °F] (compensated)	0 °C to 85 °C [32 °F to 185 °F] (compensated)	40 °C to 125 °C [-40 °F to 257 °F]
Total error band	±1.5 %FSS	-	-
Accuracy	±0.25 %FSS BFSL	±0.25 %FSS	±0.25 %FSS
Mounting options	DIP, leadless SMT, SMT	DIP, leadless SMT, SMT	DIP, leadless SMT, SMT

Low Pressure Sensors

	TruStability™ TSC Series	TruStability™ NSC Series
Signal conditioning	unamplified	unamplified
Pressure range	±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
Device type	differential, gage	absolute, differential, gage
Output	mV	mV
Calibrated	yes	no
Compensated	yes	no
Operating temperature range	0 °C to 85 °C [32 °F to 185 °F] (compensated)	40 °C to 85 °C [-40 °F to 185 °F]
Total error band	-	-
Accuracy	0.25 %FSS BFSL	0.25 %FSS BFSL
Mounting options	DIP, SIP, SMT	DIP, SIP, SMT

Low Pressure Sensors

	24PC Series	26PC Series	ASDX Series
Signal conditioning	unamplified	unamplified	amplified
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)	1 psi to 100 psi
Device type	absolute, differential, wet-wet differential, gage	differential, wet-wet differential, gage	absolute, differential, gage, bidirectional
Output	mV	mV	analog (Vdc), digital (I^2C or SPI)
Calibrated	no	yes	yes
Compensated	no	yes	yes
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	0 °C to 50 °C [32 °F to 122 °F] (compensated)	0 °C to 85 °C [32 °F to 185 °F] (compensated)
Total error band	-	-	±2.0% FSS max.
Accuracy	linearity & hysteresis 0.5% typ.	linearity & hysteresis 0.25% typ.	-
Mounting options	DIP, SIP, SMT	DIP, SIP, SMT	DIP

Low Pressure Sensors

	SCX Series	SDX Series
Signal conditioning	unamplified	unamplified
Pressure range	1 psi to 150 psi	1 psi to 100 psi
Device type	absolute, differential, gage	absolute, differential, gage
Output	mV	mV
Calibrated	yes	yes
Compensated	yes	yes
Operating temperature range	0 °C to 70 °C [32 °F to 158 °F] (compensated)	0 °C to 50 °C [32 °F to 122 °F] (compensated)
Total error band	-	-
Accuracy	linearity and hysteresis 0.1% typ.	linearity and hysteresis 0.25% typ.
Mounting options	SIP	DIP

Low Pressure – Flow Through Sensors

	24PC Flow-Through Series	26PC Flow-Through Series
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
Compensated	no	yes
Operating temperature range	-40 °C to 85 °C [-40 °F to 185 °F]	0 °C to 50 °C [32 °F to 122 °F] (compensated)
Total error band	-	-
Accuracy	linearity and hysteresis 0.75% typ.	linearity and hysteresis 0.75% typ.
Mounting options	SIP, DIP	SIP, DIP

eliminating the need to service or replace the sensor during its application life. Industry-leading Total Error Band provides the sensor's true accuracy over a compensated temperature range of 0 °C to 50 °C [32 °F to 122 °F], eliminating individual sensor testing and calibration (which can increase manufacturing time and process) supporting system accuracy and warranty requirements, helping optimize system uptime, and providing excellent sensor interchangeability. Industry-leading accuracy reduces software needed to correct system inaccuracies, minimizing system design time, supporting system accuracy and warranty requirements, and helping to optimize system uptime. High burst pressures allow the sensor to endure a wide range of conditions while maintaining a high level of sensitivity which measures even the smallest change in pressure, simplifying the design process. High working pressure ranges allow the sensors to be used continuously well above the calibrated pressure range. Modular, flexible design with many package styles (with the same industry-leading stability), pressure ports, and options simplify integration into the device manufacturer's application. Onboard signal conditioning typically allows for the removal of signal conditioning components from the PCB, reducing costs and simplifying production processes. Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements which allows the customer to avoid the thermal and mechanical damage during solder reflow attachment and/or repair that lesser rated products would incur, and allows unlimited floor life when stored as specified (<30 °C/ 85 %RH), simplifying storage and reducing scrap. Customers may position the sensor in the most optimal point in the system, eliminating concern for positional effects. Reduced susceptibility to application-specific vibration that occurs with changes in pressure minimizes inaccurate pressure readings. Custom calibration typically allows for the removal of additional components associated with signal conditioning from the PCB, reducing PCB size as well as costs often associated with those components. Internal diagnostic functions increase system reliability. Extremely low power consumption (less than 10 mW, typ.), provides extended battery life, and promotes energy efficiency. I²C- or SPI-compatible 14-bit digital output (min. 12-bit sensor resolution) accelerates performance through reduced conversion requirements and the convenience of direct interface to microprocessors or microcontrollers; analog output also available. Miniature 10 mm x 10 mm [0.39 in x 0.39 in] package is very small when compared to most board mount pressure sensors. Potential applications include medical (ventilators, anesthesia machines, spirometers, nebulizers, hospital room air pressure) and industrial (VAV (Variable Air Volume) control, static duct pressure, clogged HVAC (Heating, Ventilation, and Air Conditioning) filter detection, HVAC transmitters indoor air quality).

TruStability™ SSC Series.

Features: Proprietary Honeywell technology • Industry-leading long-term stability, Total Error Band, and accuracy • High burst pressures • High working pressure ranges • Industry-leading flexibility • Excellent repeatability • Onboard signal conditioning • Wide variety of pressure ranges • Meets IPC/ JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements • Insensitive to mounting orientation • Custom calibration • Insensitive to vibration • Internal diagnostic functions • Energy efficient • I²C- or SPI-compatible digital output or analog output • Small size • RoHS compliant • Protected by multiple global patents • Intended for use with non-corrosive, non-ionic working fluids

Benefits: Proprietary Honeywell technology combines high sensitivity with high overpressure and burst pressure to give the customer more flexibility in sensor implementation and reduce the customer design requirements for protecting the sensor without sacrificing the ability to sense very small changes in pressure. Industry-leading long-term stability minimizes system calibration needs, maximizes system performance, and helps support system uptime by eliminating the need to service or replace the sensor during its application life. Industry-leading Total Error Band provides the sensor's true accuracy over a compensated temperature range of -20 °C to 85 °C [-4 °F to 185 °F], eliminating individual sensor testing and calibration (which can increase manufacturing time and process) supporting system accuracy and warranty requirements, helping optimize system uptime, and providing excellent sensor interchangeability. Industry-leading accuracy reduces software needed to correct system inaccuracies, minimizing system design time, supporting system accuracy and warranty requirements, and helping to optimize system uptime. High burst pressures allow the sensor to endure a wide range of conditions while maintaining a high level of sensitivity which measures even the smallest change in pressure, simplifying the design process. High working pressure ranges allow the sensors to be used continuously well above the calibrated pressure range. Modular, flexible design with many package styles (with the same industry-leading stability), pressure ports, and options simplify integration into the device manufacturer's application. Onboard signal conditioning typically allows for the removal of signal conditioning components from the PCB, reducing costs and simplifying production processes. Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements which allows the customer to avoid the thermal and mechanical damage during solder reflow attachment and/or repair that lesser rated products would incur, and allows unlimited floor life when stored as specified (<30 °C/85 %RH), simplifying storage and reducing scrap. Customers may position the sensor in the most optimal point in the system, eliminating concern for positional effects. Reduced susceptibility to application-specific vibration that occurs with changes in pressure minimizes inaccurate pressure readings. Custom calibration typically allows for the removal of additional components associated with signal conditioning from the PCB, reducing PCB size as well as costs often associated with those components. Internal diagnostic functions increase system reliability.

Extremely low power consumption (less than 10 mW, typ.) reduces power consumption, provides extended battery life, and promotes energy efficiency. I²C- or SPI-compatible 14-bit digital output (min. 12-bit sensor resolution) accelerates performance through reduced conversion requirements and the convenience of direct interface to microprocessors or microcontrollers; analog output also available. Miniature 10 mm x 10 mm [0.39 in x 0.39 in] package is very small when compared to most board mount pressure sensors. Potential applications include medical (ventilators, anesthesia machines, spirometers, nebulizers, hospital room air pressure) and industrial (VAV (Variable Air Volume) control, static duct pressure, clogged HVAC (Heating, Ventilation, and Air Conditioning) filter detection, HVAC transmitters indoor air quality).

TruStability™ NSC Series.

Features: Industry-leading long-term stability, accuracy and flexibility • Small size • Excellent repeatability • Extremely low power consumption • Low operating voltage • Sensitive • Virtually insensitive to mounting orientation • Ratiometric analog output • Infinite resolution • Fast response time • RoHS compliant

Benefits: Allows customers the flexibility of sensor self-calibration. Industry-leading long-term stability minimizes system calibration needs and maximizes system performance. Industry-leading accuracy reduces software needed to correct system inaccuracies, minimizing system design time. Industry-leading flexibility, due to numerous package styles, pressure ports, and options, which simplifies integration into the device manufacturer's application. Single side liquid media option allows the end customer to use one port of the sensor with condensing humidity or directly with non-corrosive liquid media. Miniature 10 mm x 10 mm [0.39 in x 0.39 in] package is very small when compared to most board mount pressure sensors. Provides excellent repeatability, high accuracy and reliability under many demanding conditions. Extremely low power consumption (operating supply voltage as low as 1.8 Vdc) which reduces power consumption, provides extended battery life and promotes energy efficiency. Sensitive: meets specified pressure level requirements, providing enhanced sensitivity and accuracy over the range. Potential medical applications include respiratory breathing circuits such as nebulizers, spirometers and patient monitoring; hospital gas supply; and precise sampling/gas flow such as blood analysis, gas chromatography and analytical instrument sampling systems. Potential industrial applications include pneumatic components such as valves, pumps and actuators; pneumatic systems such as HVAC transmitters, pneumatic automated assembly equipment and pneumatic operator control systems; gas collection/delivery; and precise sampling/gas flow applications such as barometry, gas chromatography and analytical instrument sampling systems.

ASDX Series.

Features: Calibrated and temperature compensated • ASIC-enhanced output • Analog output with 12-bit resolution • 12-bit digital output (I²C- or SPI-compatible protocol) • Ratiometric output • Enhanced response time and accuracy • DIP package • Cost effective

Benefits: Fully calibrated and temperature compensated with on-board ASIC designed to provide digital correction of sensor offset, sensitivity, temperature coefficients, and non-linearity. Analog output ratiometric with supply voltage over compensated supply range with 12-bit resolution. 12-bit I²C- or SPI-compatible protocol allows easy interfacing to most commonly used microcontrollers and microprocessors without additional components and electronic circuitry. Output is corrected pressure value in hexadecimal format with 12-bit accuracy (unsigned) and independent of the supply voltage. Offers high level output on a cost-effective basis. Intended for use with non-corrosive, non-ionic working fluids such as air and dry gases in potential applications such as flow calibrators, ventilation and airflow monitors, gas flow instrumentation, sleep apnea monitoring, and therapy equipment.

SCXL Series.

Features: Calibrated and temperature compensated • Small size • Low noise • High impedance, low current

Benefits: Designed to provide cost-effective solutions for potential applications requiring enhanced accuracy over very low operating pressure ranges. Calibrated and temperature compensated. Bridge output is ratiometric to supply voltage. High impedance for potential low power applications.

SDX005IND4, SDX010IND4.

Features: Calibrated and temperature compensated • Compact, solvent-resistant case • Cost effective • Small size • Low noise • High impedance, low current • Prime grade available

Benefits: Cost-effective solution for potential pressure applications requiring small size and enhanced performance such as computer peripherals and pneumatic controls. Calibration and compensation designed to provide stable output over temperature range. Bridge output is ratiometric to supply voltage. Small, DIP package allows use of multiple sensors in limited space. Package provides enhanced corrosion resistance and isolation to external stress. Through-hole pins anchor sensor to the PCB to provide secure and stable unit. High impedance for potential low power applications. Intended for use with non-corrosive, non-ionic working fluids, such as air and dry gases.

SXL Series.

Features: Enhanced accuracy, low pressure readings • Cost effective • High impedance bridge • Low noise

Benefits: Cost-effective components for measuring very low pressures. Low power consumption for portable and battery-operated equipment. Intended for use with non-corrosive and non-ionic media, such as air and dry gases in potential medical instrumentation, environmental controls, and portable monitor applications.

LOW PRESSURE SENSORS

TruStability™ RSC Series.

See page 1.

TruStability™ HSC Series.

See page 1.

TruStability™ SSC Series.

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TruStability™ TSC Series.

Features: Industry-leading long-term stability • Industry-leading accuracy • Industry-leading flexibility • Insensitive to mounting orientation • Small size • Repeatability • Supports lean manufacturing • Extremely low power consumption • Absolute, differential and gage types • RoHS and ISO9001 compliance

Benefits: Even after long-term use and thermal extremes, these sensors perform substantially better relative to stability than any other pressure sensor available in the industry today which minimizes system calibration needs, maximizes system performance and helps support system uptime by eliminating the need to service or replace the sensor during its application life. Extremely tight accuracy down to ±0.25 %FSS BFSL reduces software needed to correct system inaccuracies, minimizing system design time, and supports system accuracy and warranty requirements. Modular, flexible design with numerous package styles, pressure ports, and options simplifies integration into the device manufacturer's application. Single side wet media option allows the end customer to use one port of the sensor with condensing humidity or directly with non-corrosive liquid media. Miniature 10 mm x 10 mm [0.39 in x 0.39 in] package is very small when compared to most board mount pressure sensors which occupies less area on the PCB and typically allows for easy placement on crowded PCBs or in small devices. Provides excellent repeatability, high accuracy and reliability under many demanding conditions. J-STD-020-D MSL 1 unlimited shelf life after packaging is opened, system can be calibrated within one hour after reflow solder and is compatible with modern lead-free and no-clean solder processes. Operating supply voltage as low as 1.5 Vdc which reduces power consumption, provides extended battery life, and promotes energy efficiency. Potential medical appliations include nebulizers, spirometers, patient monitoring equipment, therapeutic hospital beds, hospital gas supply, oxygen concentrators, blood analysis, gas chromatography, and analytical instruments. Potential industrial applications include valves, pumps, actuators, HVAC transmitters, automated pneumatic assembly equipment, pneumatic operator control systems, industrial gas supply, barometry, gas chromatography, and analytical instrument sampling systems.

TruStability™ NSC Series.

See page 8.

Basic ABP Series

Features: Proprietary Honeywell technology • Protected by multiple global patents • Industry-leading long-term stability: ±0.25 %FSS • Total Error Band (TEB): ±1.5 %FSS • Industry-leading accuracy: ±0.25 %FSS BFSL • High burst pressures • Industry-leading flexibility • Wide pressure range: 60 mbar to 10 bar | 6 kPa to 1 MPa | 1 psi to 150 psi • Meets IPC/JEDEC J-STD-020D.1 Moisture Sensitivity Level 1 requirements • Optional internal diagnostic functions • Energy efficient • Output: ratiometric analog; I^2C- or SPI-compatible 14-bit digital output (min. 12-bit sensor resolution) • Small size: As small as 8 mm x 7 mm • REACH and RoHS compliant • Sleep mode option) • Temperature output option • Liquid media option

Potential Applications: Medical: CPAP, blood analysis, blood pressure monitoring, breast pumps, drug dosing, hospital beds, massage machines, oxygen concentrators, patient monitoring, sleep apnea equipment, urine analyzers, ventilators/portable ventilators, wound therapy. Industrial: air brakes, HVAC/transmitters, life sciences, material handling, pneumatic control, pneumatic regulator, process gas monitoring, valve positioning and positioners. Commercial: air beds, coffee makers, washing machines.

Basic TBP Series

Features: Cost-effective sensors with many options • Small package size • Wide operating temperature range of -40 °C to 125 °C [-40 °F to 257 °F] • Media compatibility options • ROHS AND ISO 9001 compliance • Many package styles, pressure ranges, silicone gel coating and porting options • Supports lean manufacturing • Manufacturing excellence • Reliable supply chain • Designed to Six Sigma standards • Supporting documentation

Benefits: Helps customers to meet their specific application needs. Package size of 7 mm x 7 mm [0.276 in x 0.276 in] is very small when compared to most board mount pressure sensors, occupies less space on the PCB (printed circuit board) and typically allows for easy placement on crowded PCBs or in small devices. Choice of no gel coating for use with non-corrosive, non-ionic media such as dry air and gases, or silicone gel coating which allows use in applications where condensation can occur. J-STD-020-D MSL 1 unlimited shelf life after packaging is opened. System can be calibrated within one hour after reflow solder, and compatible with modern lead-free and no-clean solder processes. Honeywell has more than 100 years of manufacturing and engineering excellence. Honeywell's effective inventory management and dependable supply chain are there throughout your product life cycle. Six Sigma standards provide the highest level of product quality, performance and consistency, provides confidence that the sensor will perform to specification. Honeywell's Web site provides technical materials to assist in application needs.

Basic NBP Series.

Features: Cost-effective • Honeywell brand • Small size • Durable • Flexible • Robust

Benefits: Cost-effective pressure sensing solution with a variety of options that allow customers to meet their specific application needs. The Honeywell brand provides manufacturing excellence, fast response to request for quotes and samples, reliable supply chain, Six

Sigma standards design, and supporting documentation. Small package size (as small as 7 mm x 7 mm [0.276 in x 0.276 in]) is very small when compared to most board mount pressure sensors, occupying less space on the PCB and typically allowing for easy placement on crowded PCBs or in small devices. Wide operating temperature range (-40 °C to 125 °C [-40 °F to 257 °F]), gel or non-gel coating media compatibility options, and ISO 9001 compliance allow for use in tough environments. Numerous package styles, pressure ranges, housings, gel coating, and porting options simplify integration into the device manufacturer's application. Reflow mounting J-STD-020D, MSL 1 and rapid stabilization after reflow soldering allow calibration immediately after mounting. Potential medical applications include hospital beds, oxygen concentrators, wound therapy, and blood pressure monitoring. Potential industrial applications include HVAC transmitters, air movement control, environmental control, level indicators, leak detection, industrial controls, pneumatic controls, and other commercial applications.

24PC Series.

Features: True wet/wet differential sensing • Miniature package • Operable after exposure to frozen conditions • Choice of termination for gage sensors • DIP and SMT packages

Benefits: Piezoresistive sensing technology designed to provide inherently stable outputs over sensing range. Variety of gage pressure port configurations for quick and easy modification. Reduces sensitivity shift over temperature. Used to measure vacuum or positive pressure in potential medical, environmental, and industrial instrumentation applications.

26PC Series.

Features: Calibrated and temperature compensated • True wet/wet differential sensing • Miniature size • Media flow-through port • Flow path with minimal dead space • Operable after exposure to frozen conditions • Choice of termination for gage sensors • SIP and DIP packages

Benefits: Piezoresistive sensing technology designed to provide part interchangeability and enhanced performance, reliability and accuracy. Factory-calibrated sensors designed to provide pressure sensing performance with enhanced precision and reliability in a miniature package. Variety of gage pressure port configurations designed to provide quick and easy modification. Used to measure vacuum or positive pressure in potential medical, environmental, and industrial instrumentation applications.

ASDX Series.

See page 8.

SCX Series.

Features: Cost effective • Calibrated and temperature compensated • Small size • Low noise • Enhanced accuracy • High impedance for low power applications • Corrosion resistant

Benefits: Cost-effective solution for potential pressure applications requiring operation over wide temperature range. Output with enhanced accuracy and stability. Integrated circuit sensor element and laser trimmed thick film ceramic housed in compact, solvent-resistant case. Housing provides enhanced corrosion resistance and isolation from external packaging stresses. Convenient mounting holes and pressure ports for use with standard plastic tubing. Two pins provide output voltage proportional to temperature available for use with external circuitry. Enhanced response time for potential computer peripherals and pneumatic control applications. Used with non-corrosive, non-ionic working fluids such as air and dry gases in potential medical equipment applications.

SDX Series.

Features: Cost effective • Calibrated and temperature compensated • Small size • Low noise • High impedance for low power applications • Corrosion resistant • Available in two grades

Benefits: Cost-effective solution for potential applications requiring small size plus performance. Enhanced accuracy and stability output over temperature range. Available in standard commercial and prime grades for optimization of accuracy and cost in a given application. Integrated circuit sensor element and laser trimmed thick film ceramic housed in compact, solvent-resistant case. Housing provides enhanced corrosion resistance and isolation from external package stress. Extremely small size allows multiple sensors in limited space. Though-hole pins for secure and stable anchoring to PCB. Used with non-corrosive, non-ionic working fluids such as air and dry gases in potential medical equipment, computer peripherals, and pneumatic control applications.

LOW PRESSURE – FLOW THROUGH SENSORS

24PC Flow-Through Series.

Features: Miniature package • Media flow-through port • 1,78 mm [0.070 in] diameter or 5,0 mm [0.200 in] diameter flow path with minimal dead space • Operable after exposure to frozen conditions • Choice of termination for gage sensors

Benefits: Gage pressure sensing performance in miniature package with enhanced reliability. Sensing technology designed to use specialized piezoresistive micro-machined sensing element. Low power, non-amplified, non-compensated Wheatstone bridge circuit design often provides inherently stable mV outputs. 2 mA constant current excitation significantly reduces sensitivity shift over temperature. May be used to measure vacuum or positive pressure in potential medical and environmental applications.

26PC Flow-Through Series.

Features: Calibrated and temperature compensated • Miniature package • Media flow-through port • 1,78 mm [0.070 in] diameter or 5,0 mm [0.200 in] diameter flow path with minimal dead space • Operable after exposure to frozen conditions • Choice of termination for gage sensors

Benefits: Gage pressure sensing performance in miniature package with enhanced reliability. Sensing technology designed to use specialized piezoresistive micro-machined sensing element. Low power, non-amplified, non-compensated Wheatstone bridge circuit design often provides inherently stable mV outputs. 2 mA constant current excitation significantly reduces sensitivity shift over temperature. May be used to measure vacuum or positive pressure in potential medical and environmental applications.

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 it 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.**

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