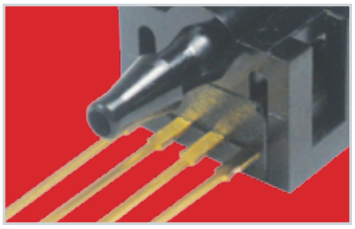
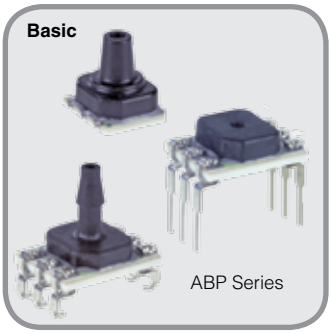
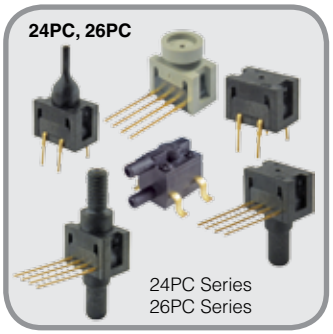
Selection Guide

Honeywell



Selecting Honeywell Board Mount Pressure Sensors
TruStability™, Basic, 24PC, 26PC





Introduction

There are many considerations when selecting Honeywell's Board Mount Pressure Sensors to determine the specific series for the application. This Selection Guide will provide an overview as to when to select:

- **TruStability™**
  - RSC Series (High Resolution, High Accuracy, Compensated/Amplified) **ultra-low, low**
  - HSC Series (Compensated/Amplified) **ultra-low, low**
  - SSC Series (Compensated/Amplified) **ultra-low, low**
  - TSC Series (Compensated/Unamplified) **low**
  - NSC Series (Uncompensated/Unamplified) **ultra-low, low**

- **Basic**
  - ABP Series (Compensated/Amplified) **low**
  - TBP Series (Compensated/Unamplified) **low**
  - NBP Series (Uncompensated/Unamplified) **low**

- **24PC** (Uncompensated/Unamplified)
  - 24PC Series **low**
  - 24PC Flow-Through Series **low**

- **26PC** (Compensated/Unamplified)
  - 26PC Series **low**
  - 26PC Flow-Through Series **low**

Ultra-Low Pressure Range (±1.6 mbar to ±40 mbar | ±160 Pa to ±4 kPa | ±0.5 inH_2O to ±30 inH_2O) Honeywell's TruStability™ RSC Series, HSC Series, and SSC Series are the best solutions for this pressure range. This product line offers the best Total Error Band (TEB) for applications which tend to require optimum accuracy. Depending on the exact TEB required, either the RSC Series, HSC Series, or SSC Series may be selected.

Low Pressure Range (±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi) The chart on page 2 can help guide the selection process.

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Selecting Honeywell Board Mount Pressure Sensors:

TruStability™, Basic, 24PC, 26PC

Low Pressure Selection Guide	Media: Water	Media: Other	Uncompensated	Temperature Compensated	Total Error Band	Amplified Analog	Output: Analog	Output: Digital	Housing and Port Styles	Absolute Pressure	Cost Effective	Flow-Through Package	Wet-Dry Differential	Wet-Wet Differential	High Resolution 24-bit
TruStability™															
RSC Series	✓	–	–	✓	✓	✓	✓	✓	✓	✓	–	–	✓	–	✓
HSC Series	✓	–	–	✓	✓	✓	✓	✓	✓	✓	–	–	✓	–	–
SSC Series	✓	–	–	✓	✓	✓	✓	✓	✓	✓	–	–	✓	–	–
TSC Series	✓	–	–	✓	–	–	✓	–	✓	–	–	–	✓	–	–
NSC Series	✓	–	✓	–	–	–	✓	–	✓	✓	–	–	✓	–	–
Basic															
ABP Series	✓	–	–	✓	✓	✓	✓	✓	–	–	✓	–	–	✓	–
TBP Series	✓	–	–	✓	–	–	✓	–	–	–	✓	–	–	–	–
NBP Series	✓	–	✓	–	–	–	✓	–	–	✓	✓	–	–	–	–
26PC															
26PC Series	✓	✓	–	✓	–	–	✓	–	–	–	–	✓	–	✓	–
24PC															
24PC Series	✓	✓	✓	–	–	–	✓	–	–	–	–	✓	–	✓	–

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Selecting Honeywell Board Mount Pressure Sensors:

TruStability™, Basic, 24PC, 26PC

Board Mount Pressure Sensors Portfolio Cross Reference

Characteristic	TruStability™					Basic			24PC		26PC	
	RSC Series	HSC Series	SSC Series	TSC Series	NSC Series	ABP Series	TBP Series	NBP Series	24PC Series	24PC Flow-Through Series	26PC Series	26PC Flow-Through Series
Signal conditioning	amplified			unamplified		amplified	unamplified		unamplified			
Calibrated	yes				no	yes		no	no		yes	
Temperature compensated	yes				no	yes		no	no		yes	
Pressure range	**ultra-low:** ±1.6 mbar to ±40 mbar | ±160 Pa to ±4 kPa | ±0.5 inH_2O to ±30 inH_2O			—	**ultra-low:** ±2.5 mbar to ±40 mbar | ±250 Pa to ±4 kPa | ±1 inH_2O to ±30 inH_2O	—			—			
	low: ±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi					**low:** ±60 mbar to ±10 bar | ±6 kPa to ±1 MPa | ±1 psi to ±150 psi			**low:** SIP, DIP: 0.5 psi to 250 psi SMT: 1 psi to 15 psi	**low:** 1 psi to 100 psi	**low:** SIP, DIP: 1 psi to 250 psi SMT: 1 psi to 15 psi	**low:** 1 psi to 100 psi
Device type	**ultra-low:** differential, gage **low:** absolute, differential, gage			differential, gage	absolute, differential, gage	gage		absolute, gage	absolute, differential, wet-wet differential, gage	flow-through gage	differential, wet-wet differential, gage	flow-through gage
Output	24-bit digital SPI	analog (Vdc), digital (I^2C or SPI)		mV		analog (Vdc), digital (I^2C or SPI)	mV		mV			
Total Error Band	**ultra-low and low:** as low as ±0.25 %FSS depending on pressure range (after auto zero)	**ultra-low:** ±1 %FSS to ±3 %FSS depending on pressure range **low:** ±1 %FSS	**ultra-low:** ±2 %FSS to ±4 %FSS depending on pressure range **low:** ±2 %FSS	—		**low:** ±1.5 %FSS BFSL	—		—			
Accuracy	±0.1 %FSS BFSL	±0.25 %FSS BFSL		±0.25 %FSS BFSL		±0.25 %FSS BFSL			linearity and hysteresis: 0.5% typ.	linearity and hysteresis: 0.75% typ.	linearity and hysteresis: 0.5% typ.	linearity and hysteresis: 0.35% typ.
Mounting	DIP, SMT	DIP, SIP, SMT		DIP, SIP, SMT		DIP, leadless SMT, SMT			DIP, SIP, SMT	SIP	DIP, SIP, SMT	SIP
Compensated temp. 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]	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]	
Operating temp. 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]			-40 °C to 85 °C [-40 °F to 185 °F]	-40 °C to 125 °C [-40 °F to 257 °F]		-40 °C to 85 °C [-40 °F to 185 °F]			
Approvals	REACH, RoHS	RoHS, WEEE		RoHS, WEEE		RoHS, WEEE			RoHS, WEEE			
Summary	• 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 • High 24-bit resolution	• 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 • 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			• Miniature package • Operable after exposure to frozen conditions • Choice of termination for gage sensors • SMT: pick-up feature; maximum peak reflow temperature of 260 °C [500 °F] • End-point calibration; elastomeric construction • Media flow-through port			

Selection Guide

Selecting Honeywell Board Mount Pressure Sensors:
TruStability™, Basic, 24PC, 26PC,

Key Features

TruStability™

RSC Series, HSC Series, SSC Series

- For use when:
  - Accuracy and low Total Error Band are required
  - Measuring gases or water (wet on one side)
  - Ultra-low or low pressure ranges are needed
  - Performance is the key driver
- Amplified analog
- Digital output
- Ease of installation
- Many housing/port styles

RSC Series, High Resolution

- High 24-bit resolution; analog-to-digital converter with integrated EEPROM
- Extremely tight Total Error Band, as low as ±0.25 %FSS depending on pressure range (after auto zero), due to Honeywell's patented sense die design, in-house compensation, calibration, and mechanical package design
- Extremely tight accuracy of ±0.1 %FSS BFSL (low power consumption, less than 10 mW, typ.)
- Virtually insensitive to mounting orientation (±0.1 %FSS or ±0.2 %FSS, depending on pressure range) due to Honeywell's patented sense die design
- Port 1 can be exposed to non-corrosive, non-ionic liquids when the liquid media option is selected

HSC Series, Ultra-Low Pressure

- Extremely tight Total Error Band due to Honeywell's patented sense die design, in-house compensation and calibration, and mechanical package design:
  - ±3 %FSS for 2 inH_2O span
  - ±1.5 %FSS for 3 inH_2O to 5 inH_2O span
  - ±1 %FSS above 5 inH_2O span
- Virtually insensitive to mounting orientation (<0.15 %FSS) and very low vibration sensitivity due to Honeywell's patented sense die design
- High resolution (min. 0.03 %FSS analog, 12-bits digital) due to the use of sensors specifically designed for ultra-low pressures, not just amplifying higher range sensors
- Port 1 can be exposed to non-corrosive, non-ionic liquids when the liquid media option is selected
- Extremely tight accuracy of ±0.25 %FSS BFSL: inherently a linear sense die design/diaphragm

TSC Series

- Compensated unamplified for those customers that require temperature compensation but want to do their own amplification
- Back-side sensing allows for wet capability on one port; port 1 can be exposed to non-corrosive, non-ionic liquids
- For use with water (wet on one side)
- Ease of installation
- Many housing/port styles

NSC Series

- Uncompensated uncalibrated for those customers who want to do their own compensation, calibration, and amplification
- Back-side sensing allows for wet capability on one port: port 1 can be exposed to non-corrosive, non-ionic liquids
- For use with water (wet on one side)
- Ease of installation
- Many housing and port styles

Basic

ABP Series

- Amplified and compensated, analog or digital output, single or dual ports, small package
- Cost: Select the ABP Series if cost is a major concern and some sensor performance can be de-rated. The ABP series has fewer porting and housing options than the HSC Series and SSC Series

TBP Series

- Unamplified and uncompensated, analog output
- Cost: Select the TBP Series if cost is a major concern and some sensor performance can be de-rated. The TBP series has fewer porting and housing options but does come in a smaller package.

NBP Series

- Unamplified and uncompensated, analog output
- Back-side sensing allows for wet capability on one port: port 1 can be exposed to non-corrosive, non-ionic liquids
- Cost: Select the NBP Series if, and only if, the application cannot be met with the other sensors noted above due to cost considerations; cost should be the primary consideration when selecting the Basic NBP Series.

24PC, 26PC

- 24PC: Unamplified and uncompensated
- 26PC: Unamplified, temperature compensated and calibrated
- Full liquid wet/wet differential sensing avoids having to use a media isolated sensor
- Absolute (24PC), differential, wet-wet differential, gage
- 0.5 psi to 250 psi (SIP, DIP); 1 psi to 15 psi (SMT)
- Very small SMT package
- Many port styles
- Fluorosilicone, EPDM, silicon and neoprene seals (DIP and SIP)
- Pick and place features (SMT)
- Rugged mounting features
- Proven quality and reliability
- Ease of installation

Selection Guide

Selecting Honeywell Board Mount Pressure Sensors:

TruStability™, Basic, 24PC, 26PC

Potential Medical Applications	Airflow Monitors	Anesthesia Machines	Blood Analysis Machines	Blood Pressure	Dental Chairs	Diagnostics: Blood Analyzers	Diagnostics: Chemistry Analyzers	Diagnostics: Flow Cytometry	Diagnostics: Gas Chromatography	Diagnostics: Gas Flow Instrumentation	Diagnostics: Lab Auto. Systems	Diagnostics: Lab Equipment	Diagnostics: Molecular Testing	Hospital Beds	Hospital Gas Supply	Hospital Room Air Pressure	Kidney Dialysis Machines	Nebulizers	Hospital Oxygen/Nitrogen Gas Distribution	Oxygen Concentrators	Patient Monitoring	Pneumatic Controls	Respitory Machines	Sleep Apnea Equipment	Spirometers	Ventilators	Water Flow Measurement	Wound Therapy
TruStability™																												
RSC Series	✓	✓	✓		–	–	–		✓	✓	–	–	–	–	–	✓	✓	✓	–	–	–	✓	✓	✓	✓	✓	–	–
HSC Series	–	✓	–	✓	–	✓	✓	✓	–	–	✓	✓	✓	–	–	✓	–	✓	–	–	–	–	–	–	✓	✓	–	–
SSC Series	–	–	–	✓	–	✓	✓	✓	–	–	✓	✓	✓	–	✓	✓	–	✓	–	–	–	–	–	–	✓	✓	–	–
TSC Series	–	–	–	✓	–	✓	✓	–	–	–	–	–	–	✓	✓	–	–	✓	–	–	–	–	–	–	✓	–	–	✓
NSC Series	–	–	–		–	✓	✓	–	–	–	–	–	–	–	✓	–	–	✓	–	–	✓	–	–	–	✓	–	–	–
Basic																												
ABP Series	–	–	–	✓	–	✓	✓	✓	–	–	✓	✓	✓	✓	✓	–	–	–	–	✓	✓	–	–	–	–	–	–	✓
TBP Series	–	–	–	✓	–	–	–	–	–	–	–	–	–	✓	–	–	–	–	–	✓	✓	–	–	–	–	–	–	✓
NBP Series	–	–	–	✓	–	–	–	–	–	–	–	–	–	✓	–	–	–	–	–	✓	–	–	–	–	–	–	–	✓
24PC																												
24PC Series	–	–	–	✓	✓	✓	✓	✓	–	–	✓	✓	✓	–	–	–	–	✓	✓	–	–	–	–	–	–	–	✓	–
26PC																												
26PC Series	–	–	–	✓	✓	✓	✓	✓	–	–	✓	✓	✓	–	–	–	–	✓	✓	–	–	–	–	–	–	–	✓	–

Selection Guide

Selecting Honeywell Board Mount Pressure Sensors:

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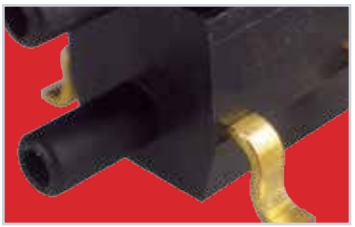

Potential Industrial Applications	Air Compressors	Air Movement Control	Barometry	Drones	Environmental Control	Filter Monitoring Equipment	Flow Calibrators	Gas Chromatography	Gas Flow Instrumentaion	Gas Collection/Delivery	HVAC Clogged Air Filter Detection	HVAC Systems	HVAC Transmitters	Indoor Air Quality	Industrial Controls	Irrigation Equipment	Instrumentation	Leak Detection	Level Indicators	Life Sciences	Other Commercial Equipment	Pneumatic Control	Pressure Valves	Robotics	Static Ducts	VAV (Variable Air Volume) Control	Water Control Valves	Weather Balloons
TruStability™																												
RSC Series	–	–	✓	✓	–	–	✓	✓	✓	–	✓	✓	✓	✓	–	–	–	–	–	✓	–	✓	–	–	–	✓	–	✓
HSC Series	–	–	–	–	–	–	–	–	–	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–	–	✓	✓	–	–
SSC Series	–	–	–	–	–	–	–	–	–	–	✓	–	✓	✓	–	–	–	–	–	–	–	–	–	–	✓	✓	–	–
TSC Series	–	–	–	–	–	–	–	✓	–	✓	–	–	✓	–	–	–	✓	–	–	–	–	✓	✓	✓	–	–	–	–
NSC Series	–	–	✓	–	–	–	–	✓	–	✓	–	–	✓	–	–	–	✓	–	–	–	–	✓	✓	–	–	–	–	–
Basic																												
ABP Series	–	✓	–	–	✓	✓	–	–	–	✓	–	–	✓	✓	✓	–	✓	✓	✓	–	✓	✓	✓	✓	–	–	–	–
TBP Series	–	✓	–	–	✓	–	–	–	–	–	–	–	✓	–	✓	–	–	✓	✓	–	✓	✓	✓	✓	–	–	–	–
NBP Series	–	✓	–	–	✓	–		–	–	–	–	–	✓	–	✓	–	–	✓	✓	–	✓	✓	–	–	–	–	–	–
24PC																												
24PC Series	✓	–	–	–	–	✓	–	✓	–	✓	–	–	–	–	✓	✓	✓	✓	–	–	–	–	✓	✓	–	–	✓	–
26PC																												
26PC Series	✓	–	–	–	–	✓	–	✓	–	✓	–	–	–	–	✓	✓	✓	✓	–	–	–	–	✓	✓	–	–	✓	–

Find Out More

To learn more about Honeywell board mount pressure solutions, contact a Honeywell representative today at **1-800-537-6945** or visit **sensing.honeywell.com**

Warranty. 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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