

Bourns® Training Module

Pressure Sensors

BPS110, BPS120, BPS130

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Bourns® Precision Sensor Overview

Pressure Sensors

- The Bourns® Precision Sensor (BPS) portfolio has dependable sensors for every type of pressure, from precision, ultra low pressure to high temperatures, harsh environments. Quality, Performance and Reliability are the core values of this family of environmental condition sensors.

Highlights

- **High Sensitivity** for Ultra low pressure ranges
- **Stable performance** over life time of product
- **Low TEB** (total error band) over the calibrated temperature range
- **Extended Temperature Range** available (-40°C to 150°C)
- **Models with Harsh media compatibility** (air, liquid, and gases)

Focus Applications

- Medical – Patient monitoring equipment, Respiration monitoring and control
- Industrial – Process Control
- HVAC – Commercial & Industrial
- Consumer – White Goods, Appliances
- Heavy Equipment – Transmission fluid, fuel systems, EGR systems

Initial Product Portfolio – Pressure Sensor

Series	Photo	Pressure Range	Calibrated Temperature Range	Output	Accuracy	TEB (Total Error Band)	Measurement Type	Features
BPS110		0.15 PSI 0.30 PSI 1.0 PSI	0°C to 60°C	Amplified Analog, 5% to 95% V _s	0.25% FS	±1.5%	• Differential • Gauge	• Ultra low pressure • Surface mount package
BPS120		0.15 PSI 0.30 PSI 1.0 PSI	0°C to 60°C	I ² C, 13 bit	0.25% FS	±1.5%	• Differential • Gauge	• Ultra low pressure • Surface mount package
BPS130		15 PSI 30 PSI 100 PSI 300 PSI 500 PSI	-40°C to 150°C	Amplified Analog, 10% to 90% V _s	0.25% FS	±2.5%	• Gauge • Absolute	• High Temperature • Liquid / Gas, Harsh media compatible

Model BPS110 & BPS120 Portfolio

Extremely Accurate, Ultra-low Pressure Sensing Capability

High Precision for Ultra-low Pressure Ranges

Benefits

- **Ability to measure ultra-low pressures in sensitive applications**
- **Fully calibrated and compensated output for more efficient processes**
- **Long-term stability for improved repeatability**



**Primary Industries –
Medical*, HVAC**

Features

- 1.5 % FS TEB (total error band) over a temperature range of 0 to +60 °C
- Operating temperature range: -40 °C to +85 °C
- Calibrated pressure ranges down to 1 " H2O
- Gauge and differential calibration
- Digital (I²C) or amplified analog output
- Custom port configuration and custom calibration available

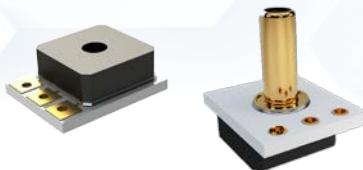
*Excluding lifesaving, life-critical and life-sustaining applications.

Model BPS130 Portfolio

*High Temperature, High Pressure, Harsh Media
Compatibility with High Accuracy*

Benefits

- *Capable of operating in high temperature environments with highly accurate output*
- *No need for intermediate diaphragm when working with certain harsh media**
- *Ability to work with a wide range of pressures*
- *Stable, repeatable performance over the lifetime of the sensor*



*Primary Industries –
HVAC, Light to Medium Industrial,
Heavy Equipment*

*Compatible with Harsh
Environments*

Features

- Operating temperature range: -40 °C to +150 °C
- Pressure range: 15 PSI to 500 PSI
- Gauge and absolute calibration
- Amplified analog output
- Wetted materials: ceramic, glass, silicon, Au/Sn
- Custom enclosure configuration and custom calibration available

** Check with factory for details*

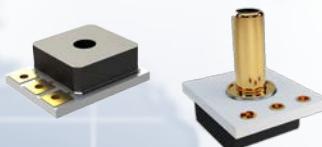
Pressure Sensing – Focus Applications



BPS110, BPS120

High Precision for Ultra low pressure ranges

- **Medical – Patient monitoring equipment, Respiration monitoring and control**
 - Low differential and gauge pressure sensors for CPAP respiratory, ventilation, and general gases applications
- **HVAC – Commercial & Industrial**
 - Low pressure differential pressure sensors for filter monitoring and VAV controller



BPS130

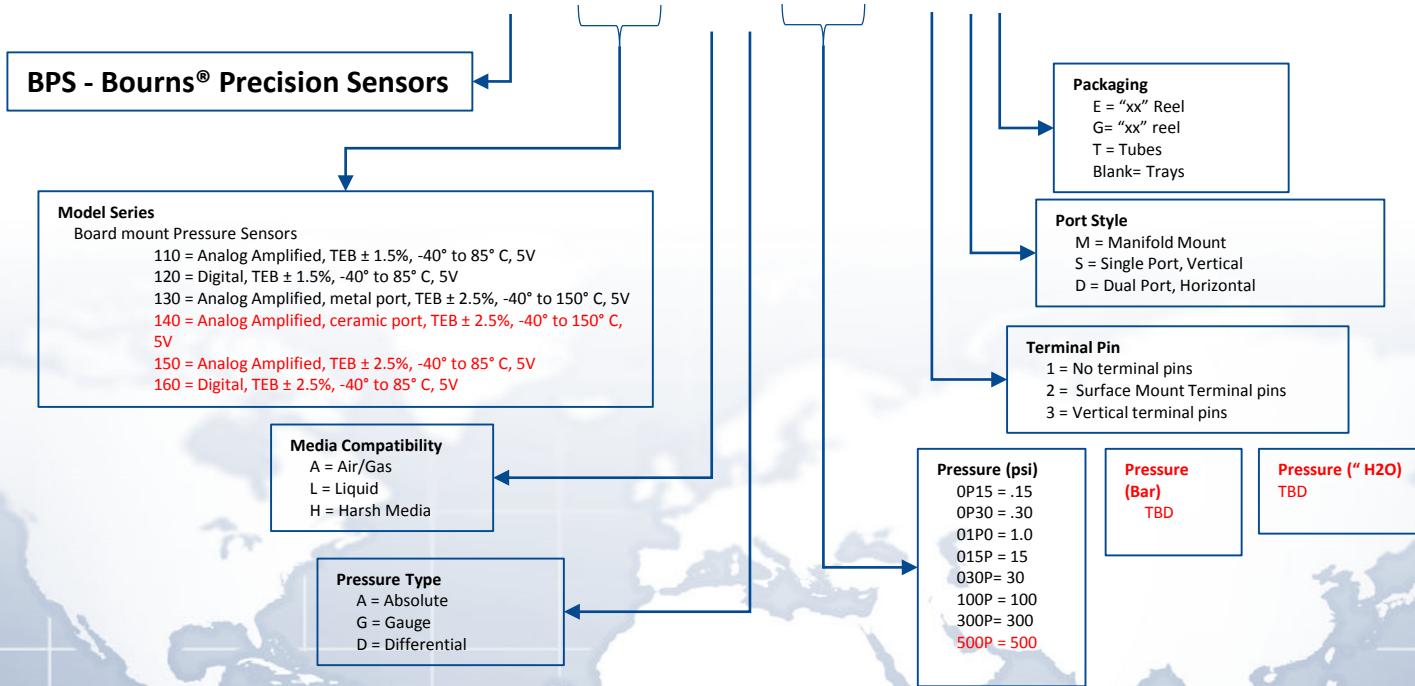
High Temperature, High pressure, and Harsh Media compatible

- **HVAC – Commercial & Industrial**
 - High pressure, absolute and gauge pressure, sensors for harsh environments, resistant against moisture, dust and particles
- **Industrial – Process Control**
 - Harsh environment pressure sensors for high temperatures, resistant against moisture, dust, particles, and chemicals
- **Heavy Equipment – Gases and Fluid pressure**
 - Custom Engineered Pressure Sensors
 - High temperature capability (up to 150°C)
 - Compatible with transportation fluids and gases*
 - High working and burst pressure ranges

* Check with Factory for details

How to order

BPS1XX-AA0P15-2DG



Red = indicates future expansions of portfolio

Reference Materials

New Product Briefs
Data Sheets
Sample Kits
Training Modules
Application Notes
Website




PRELIMINARY



BOURNS

BPS110 Series – 12 mm Analog Low Pressure Sensor

Features

- Compressed analog output
- Low pressure range
- Dage and differential types
- For use in clean, dry air and non-corrosive gases
- Tape and reel packaging
- RoHS compliant*

Applications

- Industrial
- HVAC systems
- Process monitoring
- Packaging Automation
- Medical
- Diagnostic equipment
- Analytics equipment

PRELIMINARY



BOURNS

BPS120 Series – 12 mm Digital Low Pressure Sensor

Features

- Compressed digital output
- Low pressure range
- IC Output
- Dage and differential types
- For use in clean, dry air and non-corrosive gases
- RoHS compliant*

Applications

- Industrial
- HVAC systems
- Process monitoring
- Packaging Automation
- Medical
- Diagnostic equipment
- Analytics equipment

PRELIMINARY



BOURNS

BPS130 Series – 10 mm Analog High Pressure Sensor

Features

- Ultra-low pressure output
- Ultra-low pressure sensing
- Direct media monitoring
- For use in clean, dry air and non-corrosive gases
- Isolated onboard electronics
- Gold-plated Kynar® port option
- RoHS compliant*

Applications

- Industrial
- Refrigerant systems
- Water level & pressure monitor
- Medical
- Diagnostic/analytic equipment
- Automotive
- Oil & fuel systems
- Exhaust gas pressure

Value Proposition

Highly Reliable Precision Environmental Sensors for demanding applications

Pressure Sensors

- *Model BPS110 & BPS120*



- **High Precision for Ultra-low Pressure Ranges**

- 1.5 % FS TEB (total error band) over a temperature range of 0 to +60 °C
 - Digital (I²C) or analog output
 - Custom port configuration and custom calibration available



- *Model BPS130*

- **High Temperature, Medium Pressure Range and Harsh Media Compatible***

- Operating temperature range -40 °C to +150 °C
 - 2.5 % TEB (total error band) over the entire operating temperature range
 - Custom enclosure configuration and custom calibration available



* Check with Factory for details



Thank you!

BOURNS®