

# Bourns Sensors & Controls

Environmental Sensors

*Product Overview*

*2018*



**CBC**

CARLTON-BATES COMPANY®  
A SUBSIDIARY OF WESCO DISTRIBUTION, INC.

**BOURNS®**

# Introduction

## Bourns® Precision Sensors (BPS) – Highly Accurate Pressure and Humidity Sensors **designed for demanding applications**

- **Model BPS110 / BPS120** – Extremely Accurate, Ultra-low Pressure Sensing Capability
  - Low **TEB (Total Error Band)** of **1.5 % FS** over the calibrated temperature range (0 °C to +60 °C) for calibrated pressure ranges all the way down to **1 " H2O**
- **Model BPS130** – Highly Accurate, Medium to High Pressure Sensing with Extended Temperature Ranges and Harsh Media Compatibility
  - Low **TEB (Total Error Band)** of **2.5 % FS** over the entire operating temperature range (-40 °C to +150 °C) for calibrated pressure ranges **up to 500 PSI**. Designed to be **compatible with certain harsh media** (liquids, oils, gases)
- **Model BPS230** - Precision Relative Humidity Sensing in an Ultra-small Surface Mount Package
  - Accurate sensing (**±3 % RH**) in a **2.0 x 2.0 x 0.75 mm package** with low power consumption and a wide range of operating voltages

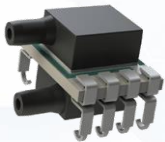
# Model BPS110 & BPS120 Portfolio

*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 " H<sub>2</sub>O
- Gauge and differential calibration
- Digital (I<sup>2</sup>C) 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*

**Compatible with Harsh  
Environments**

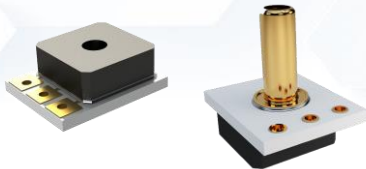
## Benefits

- ***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***

## 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

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



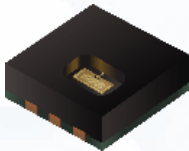
# Model BPS230 Portfolio

*Precision Relative Humidity Sensing in an Ultra-small Surface Mount Package*

**Accurate Humidity Sensing  
in an Extremely Small  
Package**

## Benefits

- ***High reliability over the life of the sensor***
- ***Low voltage operation capability***
- ***Extremely small size (2.0 x 2.0 x 0.75 mm)***
- ***Low current consumption for battery supported applications***



***Primary Industries –  
Medical\*, HVAC, and  
Consumer Appliances***

## Features

- Accuracy:  $\pm 3.0$  % RH
- Operating range: 0 to 100 % RH
- Temperature range:  
-30 °C to +100 °C
- Supply voltage range: 1.62 – 5.5 VDC
- Size: 2.0 x 2.0 x 0.75 mm
- Output: Digital – I<sup>2</sup>C – Temperature and relative humidity

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

# Summary

## Highly Reliable Precision Environmental Sensors for Demanding Applications

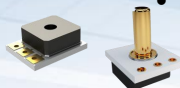
### Pressure Sensors

- *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 (I<sup>2</sup>C) 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

### Humidity Sensor

- *Model BPS230*



- **Accurate and Reliable Humidity Sensing in a Compact Package**
- Accuracy: ±3.0 % RH
- Extremely small size (2.0 x 2.0 x 0.75 mm)



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# Thank you!

*Bourns Sensors and Controls is committed to providing customers with precision environmental sensors for applications requiring **highly stable** output in most **harsh** environments*



**BOURNS®**