

Features

- Compensated analog output
- Ultra-low pressure sensing
- Gauge and differential types
- For use in clean, dry air and non-corrosive gas environments
- Tape and reel packaging
- RoHS compliant*

Applications

Industrial:

- HVAC systems
- Process monitoring
- Packaging automation
- **Medical Devices (low/medium risk):
- Diagnostic equipment
- Analysis equipment

Electrical Characteristics

Supply Voltage (V _S)	2.7 V minimum, 5 V typical, 5.5 V maximum
Supply Current @ 5 V	1.25 mA minimum, 2 mA typical, 2.4 mA maximum
Output Current	1.9 mA
Minimum Output Load Resistance	5 kΩ minimum
Performance Characteristics	
Operating Temperature	-40 °C to +85 °C (-40 °F to +185 °F)
Storage Temperature	55 °C to +100 °C (-67 °C to +212 °F)
Pressure Range	0.15 to 1.0 psi (10.3 to 68.9 mbar; 1.03 to 6.89 KPa; 4.2 to 27.7 in H2O)
Output	Amplified analog
DAC Resolution	
Ratiometric Output Range (Vout)***	
Accuracy @ 25 °C	±0.25 % FS
Total Error Band over 0 °C to 60 °C (+32 °F to +140 °F)	± 1.5 % FS
Lifetime Drift	±0.5 % FS
Startup Time	
Analog Update Time	
Sampling Range	
Proof Pressure	
Burst Pressure	10 psi

Product Characteristics

Media Compatibility	
Moisture Sensitivity Level	
ESD Classification (HBM)	2 kV
Marking	Partial model number, media compatibility, pressure type, pressure rating, lot code
Standard Packaging	250 pcs./ree
Weight	1.307 grams (0.046 oz)

Transfer Function Formula

$$P_{psi} = (P_{max} - P_{min}) \cdot \left(\frac{V_{out} - V_{minComp}}{V_{maxComp} - V_{minComp}} \right) + P_{min}$$

Where

Ppsi= Measured Pressure in PSIPmax= Maximum PressurePmin= Minimum PressureVminComp= Minimum Voltage (Usually 0.5 V)VmaxComp= Maximum Voltage (Usually 4.5 V)Vout= Output Voltage (Pin 6)

Basic Circuit Schematic

BPS110 Series - 12 mm Analog Low Pressure Sensor



Note: Power supply decoupling and output filtering included.

* RoHS3 Directive 2015/863 Amendments of Annex II on March 31, 2015

Consult factory for custom options such as supply voltage, temperature calibration range, output range accuracy

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*** 5 V input voltage.

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specification, and update rate.

Users should verify actual device performance in their specific applications.

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BPS110 Series - 12 mm Analog Low Pressure Sensor



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Terminal Assignment		
DEVICE PINOUT		
P1	Vs	
P2	N/C	
P3	N/C	
P4	Ground	
P5	N/C	
P6	V _{out}	
P7	N/C	
P8	N/C	



 $\frac{2.5}{(0.098)}$



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2.5 (0.098)

2.5 (0.098)

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BPS110 Series - 12 mm Analog Low Pressure Sensor

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How To Order



Solder Profile



Processing Method: Reflow soldering with infrared heat or forced air convection (only once).

Notes:

- 1. No clean solder paste is recommended.
- 2. Aqueous wash is not recommended.
- Use of water soluble soldering flux should be avoided due to possible corrosion.
- 4. Multiple passes through the soldering process is not recommended.
- 5. Other SMD processes and profiles should be verified by the customer.

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Packaging Specification

REV. 04/19

250 pieces per 13-inch reel.

Meets specifications of EIA-481-1 or EIA-481-2.



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Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com www.bourns.com

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