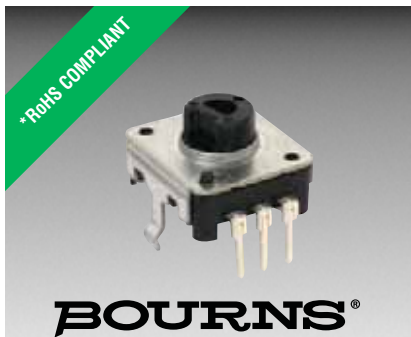




Features

- Compact design, long life and high reliability
- Low cost compared to optical type encoders
- Incremental type
- Detent option



PES12 - 12 mm Shaftless Encoder

Electrical Characteristics

Output.....	Quadrature
Contact Rating.....	1 mA @ 5 VDC
Insulation Resistance	10 megohms @ 50 VDC
Dielectric Withstanding Voltage	
Sea Level	50 VAC minimum
Contact Bounce (60 RPM).....	2.0 ms. maximum**

Environmental Characteristics

Operating Temperature Range	-10 °C to +65 °C (-14 °F to +149 °F)
Rotational Life.....	30,000 cycles minimum
IP Rating.....	IP 40

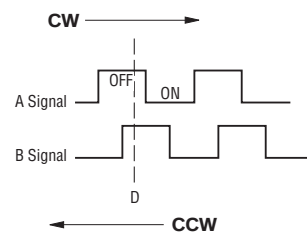
Mechanical Characteristics

Mechanical Angle	360 ° continuous
Running Torque	30 to 200 g-cm (0.41 to 2.78 oz.-in.)
Shaft Side Load (Static).....	2.04 kgf (4.5 lbs.) minimum
Weight	1.5 gm (0.05 oz.)
Terminals	Printed circuit board terminals
Soldering Condition	
Wave Soldering	Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux: 260 °C ±5 °C max. for 1-3 seconds
Hand Soldering	300 °C max. for 3 seconds max.
Hardware	No hardware supplied

How To Order

Model	PES12 - 4 0 S - N 0024
Terminal Configuration	4 = PC Horizontal/Rear Facing
Detent Option	0 = No Detents 2 = 24 Detents
Shaft Style	S = Shaftless
Switch Configuration	N = No Switch
Resolution	0024 = 24 Pulses per 360 ° Rotation

Quadrature Output Table



WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

**Devices are tested using standard noise reduction filters.

For optimum performance, designers should use noise reduction filters in their circuits.

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications.

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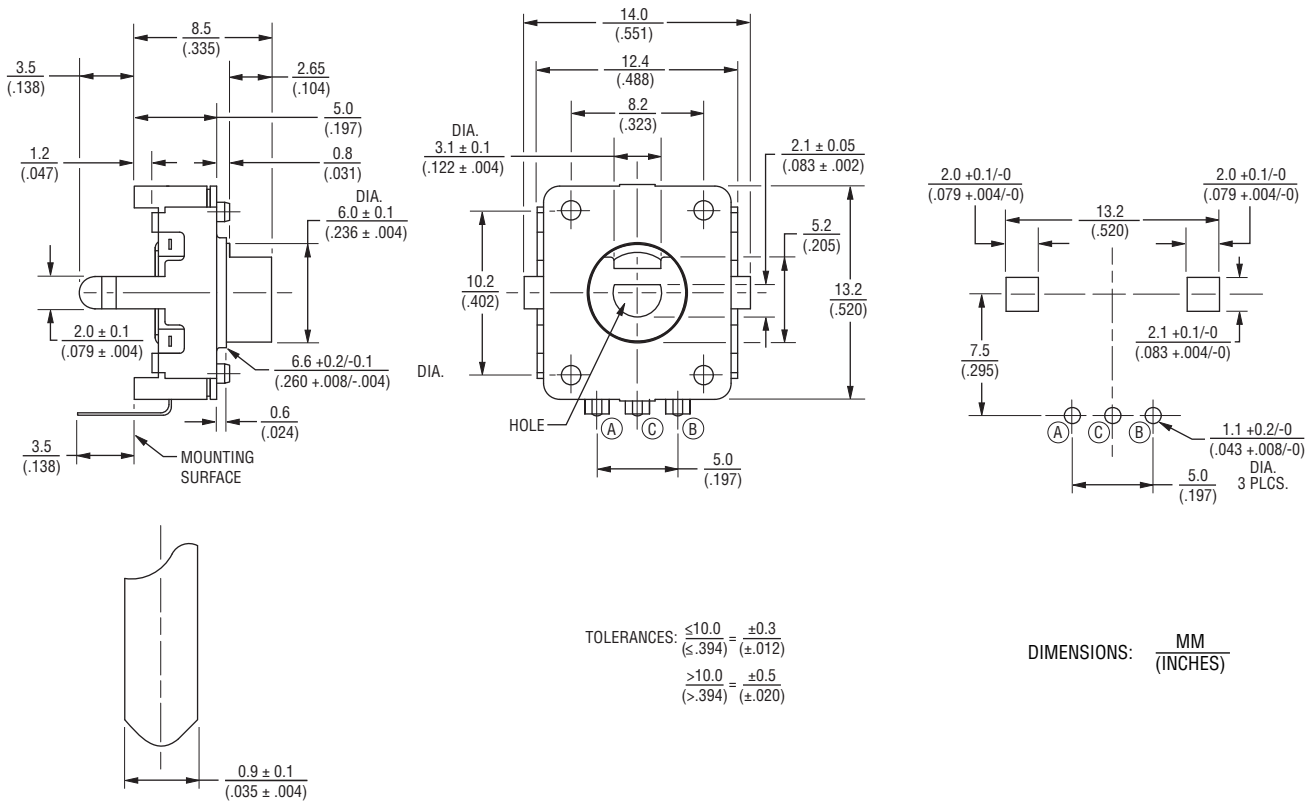
Applications

- Audio-visual equipment
- Consumer electric appliances
- Radios
- Musical instrumentation
- Communications equipment
- Home appliances

PES12 - 12 mm Shaftless Encoder

BOURNS®

Product Dimensions



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