Features

- Push switch option
- High detent torque
- High rotational life and switch life
- Metal bushing/shaft
- RoHS compliant*

BOURNS® PRO AUDIO

PEC11H Series - 11 mm Encoder w/High Detent Force

Electrical Characteristics

Output	2-bit quadrature code
Closed Circuit Resistance	100 milliohms maximum
Contact Rating	10 mA @ 5 VDC
Insulation Resistance	100 megohms @ 250 VDC
Dielectric Withstanding Voltage - Sea Level	300 VAC minimum
Electrical Travel	Continuous
Contact Bounce (60 RPM)	3.0 ms maximum**
RPM (Operating)	60 maximum**

Environmental Characteristics

Operating Temperature Range	-20 °C to +70 °C (-4 °F to +158 °F)
Storage Temperature Range	-35 °C to +85 °C (-31 °F to +185 °F)
Humidity	MIL-STD-202, Method 103B, Condition A
Vibration	10~55~10 Hz / 1 min. / Amplitude 1.5 mm
Shock	100 G
Rotational Life	100,000 cycles minimum
IP Rating	IP 40
Moisture Sensitivity Level	1

Mechanical Characteristics

Mechanical Angle	360 ° continuous
Torque	
Detent	210 ±70 gf-cm (2.0 ± 0.1 oz-in)
Mounting	70 N-cm (6.2 lb-in) maximum
Shaft Strength (Push-Pull)	50 N (11.2 lbs)
Weight	5 gm (0.17 oz) maximum
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 3 ± 1 seconds
Hand Soldering	Not recommended
Hardware	One flat washer and one mounting nut supplied with each encoder

Switch Characteristics

Switch Type	Contact Push ON Momentary SPST
Switch Life	30,000 actuations minimum
Power Rating (Resistive Load)	10 mA at 5 V DC
Switch Travel	0.5 ± 0.3 mm
Switch Actuation Force	610 ± 306 gf (8.47 ± 4.24 oz.-in.)

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

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. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

CAUTION
Do not store product in high temperature and humidity, direct sunlight and/or places where corrosive gases may be generated. Please use product within 6 months from the date of delivery and promptly after unpacking.

BOURNS®

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Applications

Level control, tuning and timer settings in:

- Audio-visual equipment
- Consumer electric appliances
- Environmental controls
- Musical instrumentation
- Communications equipment

PEC11H Series - 11 mm Encoder w/High Detent Force

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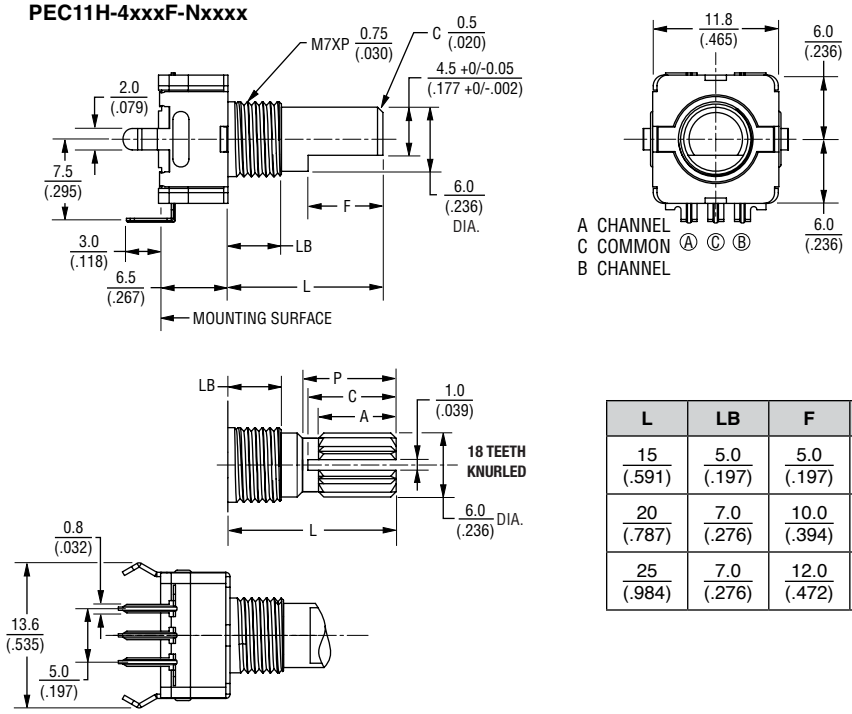
Product Dimensions

PEC11H-4xxxF-Nxxxx

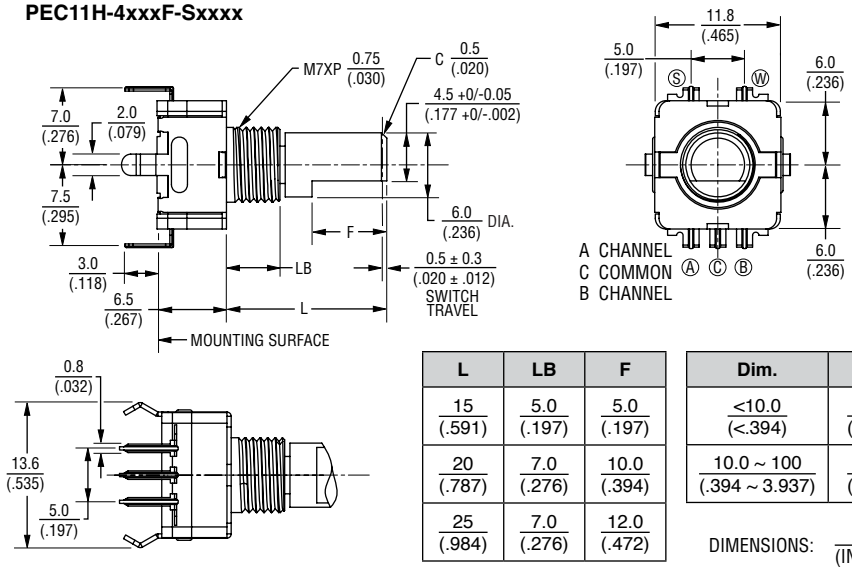


L	LB	F	P	A	C
15 (.591)	5.0 (.197)	5.0 (.197)	7.0 (.276)	6.0 (.236)	6.0 (.236)
20 (.787)	7.0 (.276)	10.0 (.394)	7.0 (.276)	6.0 (.236)	7.0 (.276)
25 (.984)	7.0 (.276)	12.0 (.472)	12.0 (.472)	10.0 (.394)	11.0 (.433)

Dim.	Tol.
<10.0 (<.394)	±0.3 (±.012)
10.0 ~ 100 (.394 ~ 3.937)	±0.5 (±.020)

DIMENSIONS: MM (INCHES)

PEC11H-4xxxF-Sxxxx



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How To Order

PEC11H - 4 0 20 F - S 0020

Model

Terminal Configuration
- 4 = PC Pin Horizontal/Rear Facing

Detent Option
- 0 = 16 Detents (8, 16 pulses)
- 1 = 20 Detents (20 pulses)
- 2 = 24 Detents (24 pulses)
- 3 = 30 Detents (15 pulses)

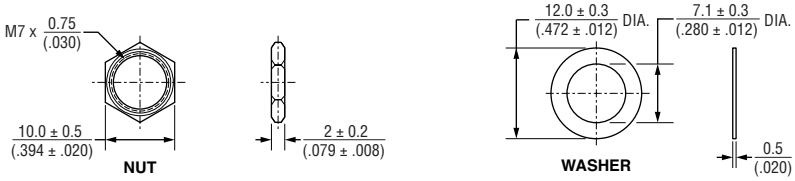
Standard Shaft Length
- 15 = 15.0 mm
- 20 = 20.0 mm
- 25 = 25.0 mm
- 30 = 30.0 mm

Shaft Style
- F = Metal Flatted Shaft
- K = Metal Knurled Shaft

Switch Configuration
- S = Push Momentary Switch
- N = No Switch

Resolution
- 0008 = 8 Pulses per 360 ° Rotation
- 0015 = 15 Pulses per 360 ° Rotation
- 0016 = 16 Pulses per 360 ° Rotation
- 0020 = 20 Pulses per 360 ° Rotation
- 0024 = 24 Pulses per 360 ° Rotation

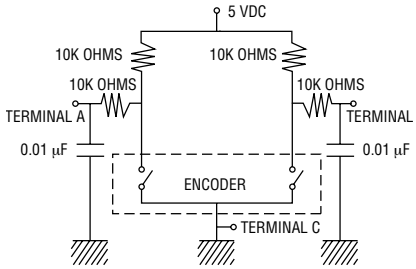
Hardware



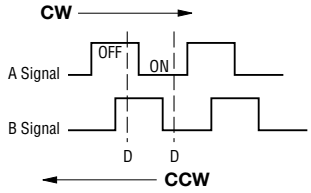
DIMENSIONS: MM / (INCHES)

Switch Circuit

Suggested Filter Circuit



Quadrature Output Table



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