PEC09 Series - 9 mm Incremental Encoder

Features
- Push switch option
- Compact, rugged design
- High reliability
- Metal bushing/shaft

Electrical Characteristics
- Output: 2-bit quadrature code
- Insulation Resistance: 100 megohms @ 250 VDC
- Contact Resistance: 3 ohms maximum
- Power Rating (Resistive Load): 10 mA @ 5 V DC
- Contact Life: 20,000 cycles minimum
- Shaft Push-Pull Strength: 10 kgf (22 lbf)
- Terminal Bend Strength: 300 gf (10.6 ozf)
- Depression/Closure: Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux: 260 °C max. for 3-5 seconds
- Hardware: One flat washer and one mounting nut supplied with each encoder

Environmental Characteristics
- Operating Temperature Range: -10 °C to +70 °C (+14 °F to +158 °F)
- Storage Temperature Range: -40 °C to +85 °C (-40 °F to +185 °F)
- Rotational Life: 30,000 cycles minimum
- IP Rating: IP 40

Mechanical Characteristics
- Mechanical Angle: 360 ° continuous
- Running/Detent: 30 to 200 gf.cm (0.42 to 2.7 oz.-in.)
- Mounting: 10.0 kgf.cm (8.67 lb-in.) maximum
- Terminal Bend Strength: 300 gf (10.6 ozf)
- Shaft Push-Pull Strength: 10 kgf (22 lbf)
- Weight: 5 gm (0.17 oz.) maximum
- Terminals: Printed circuit board terminals

Switch Characteristics
- Switch Type: Contact Push ON Momentary SPST
- Switch Life: 20,000 cycles minimum
- Power Rating (Resistive Load): 10 mA at 5 V DC
- Switch Actuation Force: See How to Order (300 ± 200 gf (10.6 ± 7.0 ozf))

How To Order

Model: PEC09 - 2 0 20 F - S 0012

Terminal Configuration
2 = PC Pin Vertical/Side Exit

Detent Option
0 = No Detents (12, 15 pulses)
2 = 24 Detents (12 pulses)
3 = 30 Detents (15 pulses)

Standard Shaft Length
15 = 15.0 mm
20 = 20.0 mm
25 = 25.0 mm

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

Switch Configuration
N = No Switch
S = Push Momentary (0.5 mm stroke)
T = Push Momentary (1.5 mm stroke)

Resolution
0012 = 12 Pulses per 360 ° Rotation
0015 = 15 Pulses per 360 ° Rotation

Quadrature Output Table

Suggested Filter Circuit

Switch Circuit
**Applications**

Level control, tuning and timer settings in:
- Audio-visual equipment
- Consumer electric appliances
- Environmental controls
- Musical instrumentation
- Communications equipment

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**PEC09 Series - 9 mm Incremental Encoder**

**Product Dimensions**

PEC09-2xxxx-Nxxxx

PEC09-2xxxx-Sxxxx

PEC09-2xxxx-Txxxx

**Locating Lug Detail**

**Hardware**

Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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PEC09 Series - 9 mm Incremental Encoder

Shaft Options

PEC09-2xxxx-Nxxxx  
Knurled Type

PEC09-2xxxx-Sxxxx  
(0.5 mm Switch Stroke)  
Knurled Type

PEC09-2xxxx-Txxxx  
(1.5 mm Switch Stroke)  
Knurled Type

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DIMENSIONS: MM (INCHES)

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