PEC11R Series - 12 mm Incremental Encoder

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

Electrical Characteristics
- Output: 2-bit quadrature code
- Contact Rating: 10 mA @ 5 VDC
- Insulation Resistance: 100 megohms @ 250 VDC
- Dielectric Withstanding Voltage: 300 VAC minimum
- Electrical Travel: Continuous
- Contact Bounce (15 RPM): 2.0 ms maximum**
- RPM (Operating): 0.60 maximum**

Environmental Characteristics
- Operating Temperature Range: -30 °C to +70 °C (-22 °F to +158 °F)
- Storage Temperature Range: -40 °C to +85 °C (-40 °F to +185 °F)
- Vibration: 10~55~10 Hz / 1 min. / Amplitude 1.5 mm
- Shock: 100 G
- Rotational Life: 30,000 cycles minimum
- Switch Life: 20,000 cycles minimum
- IP Rating: IP 40

Mechanical Characteristics
- Mechanical Angle: 360 ° continuous
- Detent: 30 to 90 gf-cm (0.41 to 1.25 oz-in)
- Running: 10 to 70 gf-cm (0.14 to 0.97 oz-in)
- Mounting: 10.2 kgf-cm (8.83 lb-in.) maximum
- Shaft Side Load (Static): 2.04 kgf (4.5 lbs.) minimum
- Weight: 5 g (0.17 oz.) maximum
- Terminals: Printed circuit board terminals
- Soldering Condition: Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux: 260 °C max. for 3 ±1 sec.
- Wave Soldering: One flat washer and one mounting nut supplied with each encoder

Switch Characteristics
- Switch Type: Contact Push ON Momentary SPST
- 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.)
- Contact Resistance: 400 millionths @ 5 V DC

How To Order

<table>
<thead>
<tr>
<th>Model</th>
<th>Terminal Configuration</th>
<th>Detent Option</th>
<th>Standard Shaft Length</th>
<th>Shaft Style</th>
<th>Switch Configuration</th>
<th>Resolution</th>
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Quadrate Output Table

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<tr>
<td>A Signal</td>
<td>OFF</td>
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<tr>
<td>B Signal</td>
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**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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### PEC11R Series - 12 mm Incremental Encoder

#### Applications
Level control, tuning and timer settings in:
- Audio-visual equipment
- Consumer electric appliances
- Radios
- Musical instrumentation
- Communications equipment

#### Product Dimensions

**PEC11R-4xxxxF-Nxxxx**

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**PEC11R-4xxxxF-Sxxxx**

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**Suggested Filter Circuit**

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PEC11R Series - 12 mm Incremental Encoder

Product Dimensions

PEC11R-4xxxK-Nxxxx

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