PEC16 - 16 mm Incremental Encoder

**Features**
- Compact design, long life and high reliability
- Low cost compared to optical type encoders
- Available in a wide variety of configurations to meet many user requirements

**Electrical Characteristics**
- Output: 2-bit quadrature code
- Closed Circuit Resistance: 3 ohms maximum
- Contact Rating: 1 mA @ 5 VDC
- Insulation Resistance: 10 MΩ @ 50 VDC
- Dielectric Withstanding Voltage
  - Sea Level: 50 VAC minimum
  - Continuous
- Contact Bounce (15 RPM): 5.0 ms, maximum**
  - RPM (Operating): 100 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: 100,000 cycles minimum
- Switch Life: 20,000 cycles minimum
- IP Rating: IP 40
- Moisture Sensitivity Level: 1
- ESD Classification (HBM): N/A

**Mechanical Characteristics**
- Mechanical Angle: 360 ° continuous
- Torque
  - Detent: 30 to 90 gf·cm (0.41 to 1.24 oz·in)
  - Running: 10 to 70 gf·cm (0.13 to 0.97 oz·in)
  - Mounting: 10.2 kgf·cm (88.3 lb·in) maximum
- Shaft Side Load (Static): 3.06 kgf (6.7 lbs) minimum
- Weight: 8 gm (0.28 oz) maximum
- Terminals: Printed circuit board terminals
- Soldering Condition: Wave Soldering Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux; 260 °C max. for 3-5 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
- Power Rating (Resistive Load): 10 mA at 5 V DC
- Switch Travel: 0.5 ±0.4-0.3 mm
- Switch Actuation Force: 360 +153/-102 gf (5 +2.1/-1.4 oz·in.)

**How To Order**
- Model: PEC16
- Terminal Configuration: 4
- F: 20
- S: 0
- Resolution: 0012 = 12 Pulses per 360 ° Rotation 0024 = 24 Pulses per 360 ° Rotation

**Additional Information**

**Quadrature Output Table**

<table>
<thead>
<tr>
<th>CW</th>
<th>ON</th>
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<tr>
<td>B</td>
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<tr>
<td>CCW</td>
<td>S</td>
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**Switch Circuit**

1. Not available with switch.
Applications
Level control, tuning and timer settings in:
- Audio-visual equipment
- Consumer electric appliances
- Radios
- Musical instrumentation
- Communications equipment

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Product Dimensions

PEC16-2xxxxF-Sxxxx

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<tr>
<th>L1</th>
<th>15.0 ( 0.591)</th>
<th>20.0 ( 0.787)</th>
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PEC16-4xxxxF-Sxxxx

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Users should verify actual device performance in their specific applications.
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Panel Hole Detail

Hardware

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