PEC11L Series - 11 mm Low Profile Encoder

**Features**
- Push switch option
- Compact, low profile
- High rotational life and switch life
- Metal bushing/shaft
- RoHS compliant

**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: 300 VAC minimum
- Sea Level: Continuous
- Contact Bounce (60 RPM): 10 ms maximum
- RPM (Operating): 60 maximum

**Environmental Characteristics**
- Operating Temperature Range: -25 °C to +80 °C (-13 °F to +176 °F)
- Storage Temperature Range: -40 °C to +85 °C (-40 °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

**Mechanical Characteristics**
- Mechanical Angle: 360 ° continuous
- Torque: 20-200 gf-cm (0.27 to 2.85 oz-in)
- Running: 10 to 150 gf-cm (0.14 to 2.1 oz-in)
- Shaft Side Load (Static): 2.04 kgf (4.5 lbs) minimum
- Shaft Strength (Push-Pull): 100 N (22.5 lbs)
- Weight: 5 gm (0.17 oz) maximum
- Terminals: Printed circuit board terminals
- Soldering Condition: Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux
- Wave Soldering: 260 °C ±5 °C max. for 3-5 seconds
- Not recommended for high soldering temperatures

**Switch Characteristics**
- Switch Type: Contact Push ON Momentary SPST
- Switch Life: 100,000 actuations minimum
- Power Rating (Resistive Load): 10 mA at 5 VDC
- Switch Travel: 0.5 ± 0.3 mm
- Switch Actuation Force: 610 ± 306 gf (8.47 ± 4.24 oz-in)

**How To Order**
PEC11L - 4 0 20 F - S 0015

**Terminal Configuration**
- 4 = PC Pin Horizontal/Rear Facing

**Detent Option**
- 0 = No Detents (15, 20 pulses)
- 1 = 20 Detents (20 pulses)
- 2 = 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**
- S = Push Momentary Switch
- N = No Switch

**Resolution**
- 0009 = 9 Pulses per 360 ° Rotation
- 0015 = 15 Pulses per 360 ° Rotation
- 0020 = 20 Pulses per 360 ° Rotation

**Additional Information**
Click these links for more information:

- Product
- Technical
- Inventory
- Samples
- Contact

**WARNING**
Cancer and Reproductive Harm

** Devices are tested using standard noise reduction filters. For optimum performance, designers should use design guidelines and filters. For optimum performance, designers should use noise reduction filters in their circuits.

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

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Product Dimensions

PEC11L-4xxxF-Nxxxx

PEC11L-4xxxF-Sxxxx

Quadrature Output Table

Switch Circuit

Suggested Filter Circuit

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