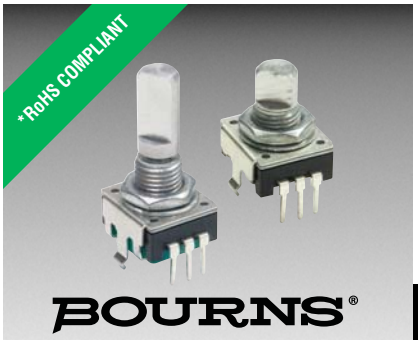


Features

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

BOURNS® PRO AUDIO

PEC11R Series - 12 mm Incremental Encoder

Electrical Characteristics

Output	2-bit quadrature code
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 (15 RPM)	2.0 ms maximum**
RPM (Operating)	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)
Humidity	MIL-STD-202, Method 103B, Condition B
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
Torque	
Running	50 to 200 gf.cm (0.68 to 2.7 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 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 max. for 3 ±1 sec.
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 ± 0.3 mm
Switch Actuation Force	610 ± 306 gf (8.47 ± 4.24 oz.-in.)
Contact Resistance	100 milliohms @ 5 VDC

How To Order

PEC11R - 4 0 20 F - S 0012

Model

Terminal Configuration
- 4 = PC Pin Horizontal/Rear Facing

Detent Option
- 0 = No Detents (12, 18, 24 pulses)
- 1 = 18 Detents (18 pulses)
- 2 = 24 Detents (12, 24 pulses)
- 3 = 12 Detents (12, 24 pulses)

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

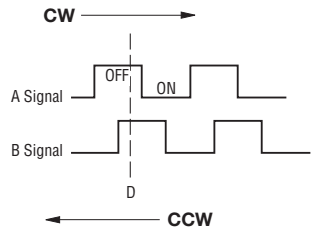
Shaft Style
- F = Metal Flatted Shaft
- K = Metal Knurled Shaft[1]

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

Resolution
- 0012 = 12 Pulses per 360 ° Rotation
- 0018 = 18 Pulses per 360 ° Rotation
- 0024 = 24 Pulses per 360 ° Rotation

[1] Metal knurled shaft without switch is available in 15, 20 and 30 mm shaft lengths.
Metal knurled shaft with push momentary switch is available in 15 and 20 mm shaft lengths.

Quadrature Output Table



*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
**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.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.

Applications

Level control, tuning and timer settings in:

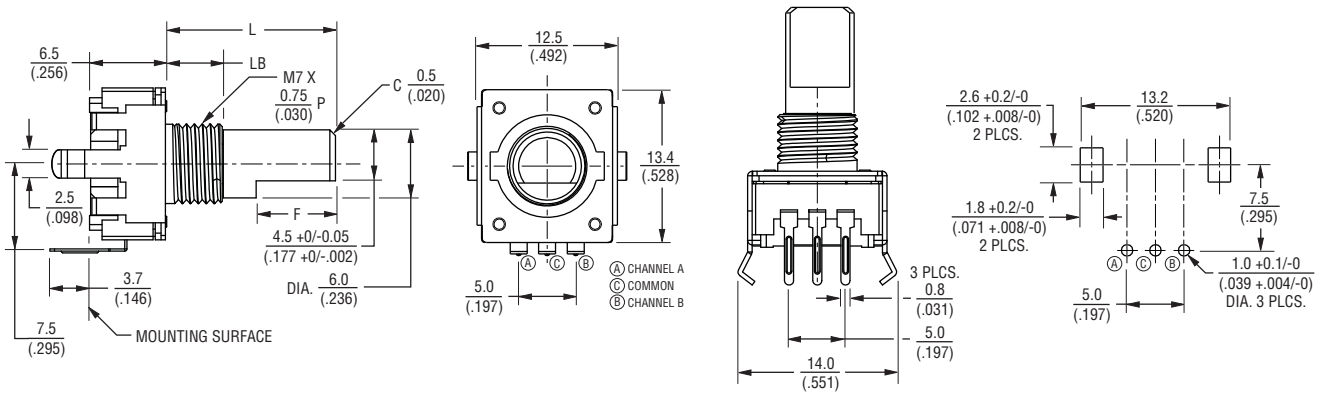
- Audio-visual equipment
- Consumer electric appliances
- Radios
- Musical instrumentation
- Communications equipment

PEC11R Series - 12 mm Incremental Encoder

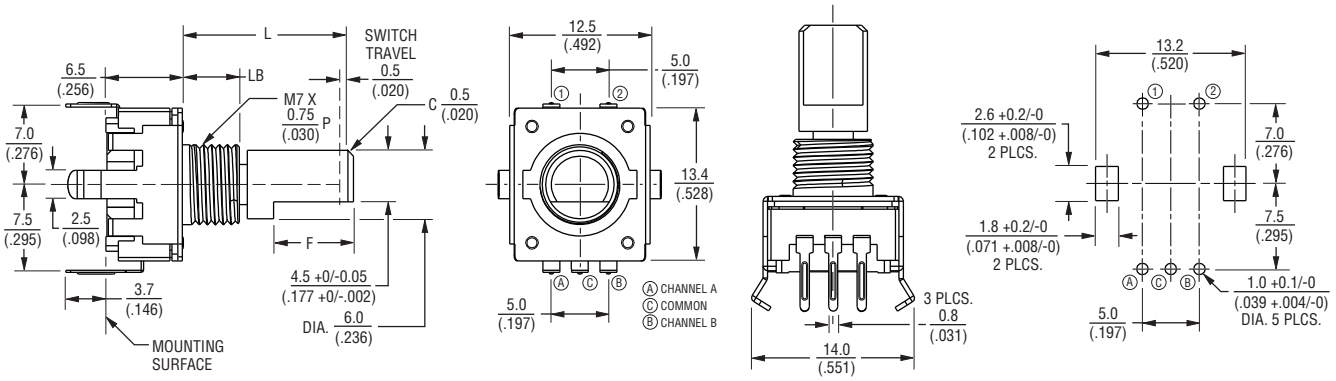
BOURNS®

Product Dimensions

PEC11R-4xxxF-Nxxxx



PEC11R-4xxxF-Sxxxx



L	LB	F
15 (.591)	5.0 (.197)	7.0 (.276)
20 (.787)	7.0 (.276)	10.0 (.394)
25 (.984)	7.0 (.276)	12.0 (.472)
30 (1.181)	7.0 (.276)	12.0 (.472)

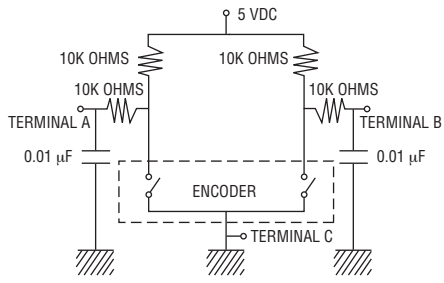
DIMENSIONS: MM (INCHES)

TOLERANCES: < 10 (.394) = ± 0.3 (.012)

≥ 10 (.394) = ± 0.5 (.020)

Switch Circuit

Suggested Filter Circuit



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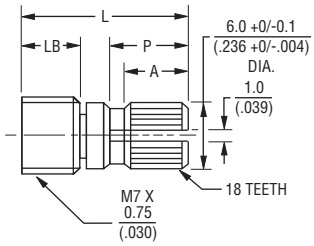
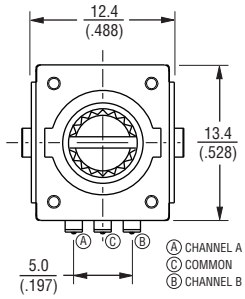
Product Dimensions

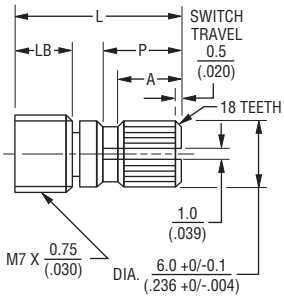
PEC11R-4xxxK-Nxxxx

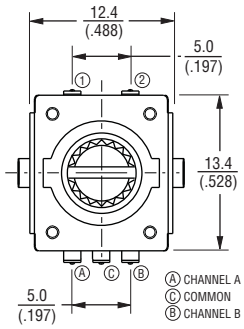




L	LB	P	A
15 (.591)	5.0 (.197)	7.0 (.276)	6.0 (.236)
20 (.787)	7.0 (.276)	7.0 (.276)	6.0 (.236)
30 (1.181)	7.0 (.276)	16.0 (.630)	12.0 (.472)

PEC11R-4xxxK-Sxxxx





L	LB	P	A
15 (.591)	5.0 (.197)	7.0 (.276)	6.0 (.236)
20 (.787)	7.0 (.276)	7.0 (.276)	6.0 (.236)

DIMENSIONS: MM (INCHES)

TOLERANCES: < 10 (.394) = ± 0.3 (.012)

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Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116
EMEA: Tel: +36 88 520 390 • Fax: +36 88 520 211
The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700
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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.