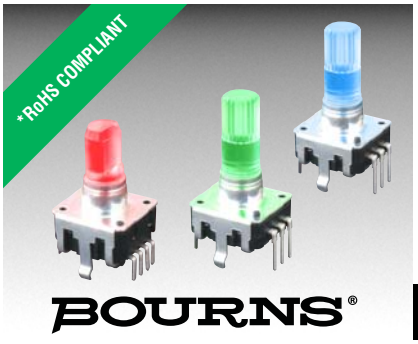


Features

- Compact design, long life and high reliability
- Momentary switch
- Triple LED design
- Flatted and knurled shaft styles
- Bushing and bushingless options

BOURNS® PRO AUDIO

PEL12T - 12 mm Encoder with Switch and Illuminated Shaft

Electrical Characteristics

Output	2-bit quadrature code
Closed Circuit Resistance	3 ohms maximum
Contact Rating	0.5 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)	100 maximum**

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)
Operating Humidity	25 % to 85 % R.H.
Rotational Life	30,000 cycles minimum
Switch Life	20,000 cycles minimum
IP Rating	IP 40

Mechanical Characteristics

Mechanical Angle	360 ° continuous
Detent Torque	30 to 200 g-cm (0.42 to 2.77 oz.-in.)
Running Torque	50 g-cm (0.69 oz.-in.) maximum
Shaft Strength (Push)	5 kgf (11.0 lbs.)
Shaft Strength (Pull)	10 kgf (22.0 lbs.)
Weight	3 gm (0.1 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 5 ± 1 seconds
Hand Soldering	Not recommended
Hardware	No hardware supplied

Switch Characteristics

Switch Type	Contact Push ON Momentary SPST
Power Rating (Resistive Load)	10 mA at 5 V DC
Contact Resistance	100 milliohms
Switch Travel	0.5 +0.0/-0.3 mm
Switch Actuation Force	450 ± 200 gf (15.9 ±7.0 oz.)

How To Order

PEL12T - 4 0 21 F - S 1 024

Model

Terminal Configuration
- 4 = Horizontal Mount/Rear Exit PC Pin

Detent Option
- 0 = No Detents
- 2 = 24 Detents

Standard Shaft Length

Flatted:
- 16 = 16.0 mm
- 18 = 18.5 mm
- 21 = 21.0 mm
- 26 = 26.0 mm
- 31 = 31.0 mm

Knurled:
- 25 = 25.0 mm

Shaft Style
- F = Insulated Flatted Shaft
- G = Insulated Flatted Shaft w/Bushing***
- S = Insulated Knurled Shaft (18 Teeth)
- T = Insulated Knurled Shaft (18 Teeth) w/Bushing

Switch Configuration
- S = Push Momentary Switch

LED Color

Triple:
- 1 = Red/Green/Blue

Resolution
- 024 = 24 Pulses per 360 ° Rotation

*** Available in 18.5, 21 and 26 mm shaft lengths.

*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.

Applications

Level control, tuning and timer settings in:

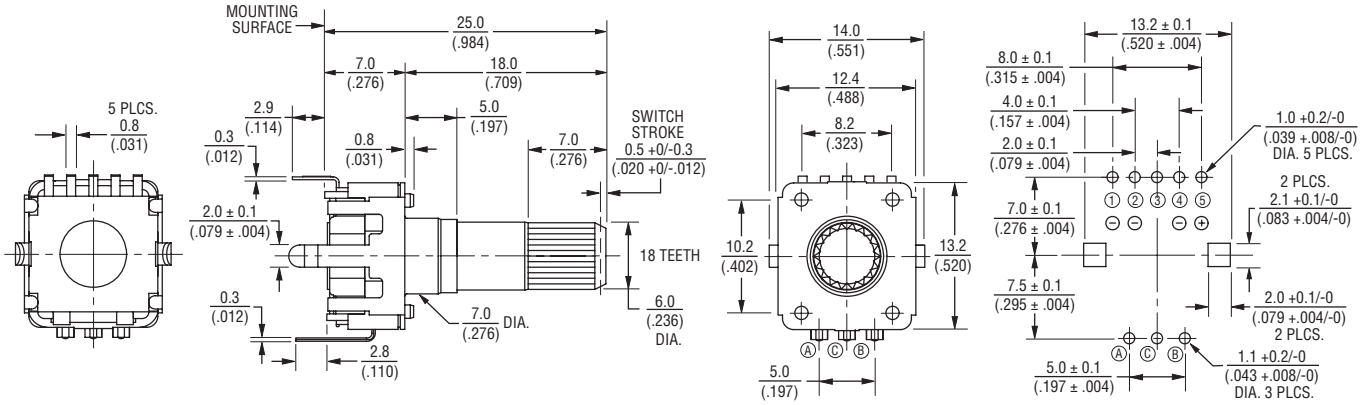
- Audio-visual equipment
- Consumer electric appliances
- Musical instrumentation
- Communications equipment

PEL12T - 12 mm Encoder with Switch and Illuminated Shaft

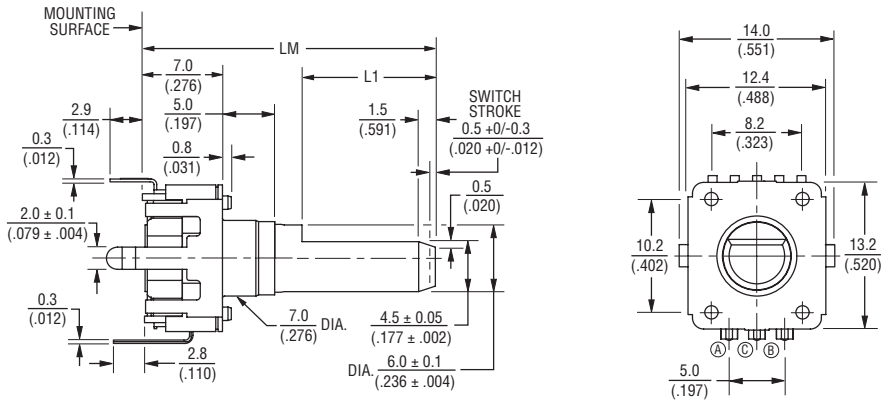
BOURNS®

Product Dimensions

PEL12T-4xxxS-S1024 (Horizontal Mount w/Triple LED & Switch, Knurled Shaft)



PEL12T-4xxxF-S1024 (Horizontal Mount w/Triple LED & Switch, Flatted Shaft)



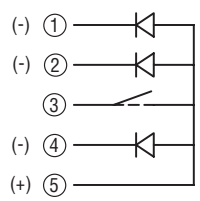
L1	LM
3 (.118)	16 (.630)
5 (.197)	18.5 (.728)
7 (.276)	21 (.827)
12 (.472)	26 (1.024)
12 (.472)	31 (1.220)

DIMENSIONS: MM (INCHES)

TOLERANCES:

UNDER 10.0 (.394) = ±0.3 (±.012) 10.0 ~ 100 (.394 ~ 3.937) = ±0.5 (±.020)

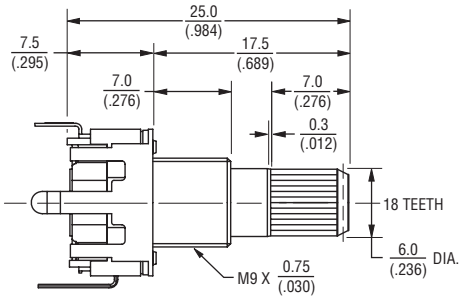
Triple LED Circuit



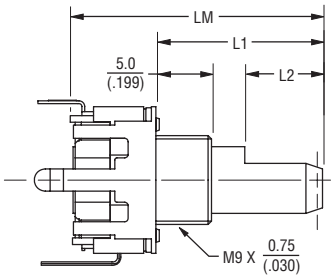
PEL12T - 12 mm Encoder with Switch and Illuminated Shaft

Product Dimensions

PEL12T-4xxxS-S1024 (Horizontal Mount w/Triple LED & Switch, Knurled Shaft w/Bushing)



PEL12T-4xxxF-S1024 (Horizontal Mount w/Triple LED & Switch, Flatted Shaft w/Bushing)

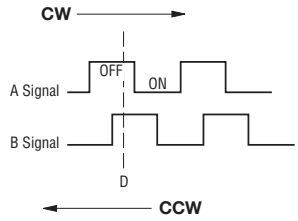


L2	L1	LM
5 (.197)	11 (.433)	18.5 (.728)
7 (.276)	13.5 (.532)	21 (.827)
12 (.472)	18.5 (.728)	26 (1.024)

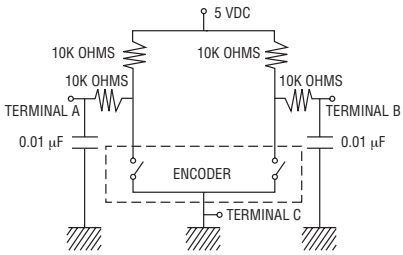
DIMENSIONS: MM (INCHES)

TOLERANCES:
UNDER 10.0 (.394) = ±0.3 (±.012) 10.0 ~ 100 (.394 ~ 3.937) = ±0.5 (±.020)

Quadrature Output Table



Suggested Filter Circuit



LED Characteristics (Triple)

LED Color		Power Dissipation (mW)	DC Forward Current (mA)	Forward Voltage (V)	
				Typ.	Max.
Red/Green/ Blue	Red	60	25	2.0	2.4
	Green	110	25	3.3	3.7
	Blue	110	25	3.3	3.7

Notes:
Reverse Current: 10 μA
Reverse Voltage: 5 VDC
Test Condition (IF): 20 mA

LED Terminal Decoder

Code	Color	Terminals
1	Red / Green / Blue	① ⑤ / ② ⑤ / ④ ⑤

Asia-Pacific:
Tel: +886-2 2562-4117
Fax: +886-2 2562-4116
Europe:
Tel: +41-41 768 5555
Fax: +41-41 768 5510
The Americas:
Tel: +1-951 781-5500
Fax: +1-951 781-5700
www.bourns.com

REV. 05/22/12

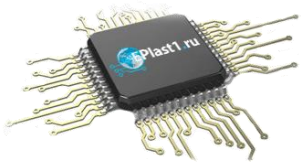
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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

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