

Features

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



PEL12T - 12 mm Encoder with Switch and Illuminated Shaft

Electrical Characteristics	
	2-bit quadrature cod
	100 megohms @ 250 VD
Pielectric Withstanding Voltage	200 VAC minimu
Pivi (Operating)	
Environmental Characteristics	
perating Temperature Range	10 °C to +70 °C (+14 °F to +158 °l
torage Temperature Range	40 °C to +85 °C (-40 °F to +185 °
witch Life	
P Rating	IP 4
Mechanical Characteristics	
Voight	
orminala	
enninais	Fillited Circuit board termina
Soldoring Condition	
Soldering Condition Ways Soldering	Sn05 5/Ag2 8/Cu0 7 solder with no-clean flux: 260 °C may, for 5 + 1 second
Wave Soldering	
Wave SolderingHand Soldering	
Wave Soldering Hand Solderinglardware	
Wave Soldering	Sn95.5/Ag2.8/Cu0.7 solder with no-clean flux: 260 °C max. for 5 ± 1 second Not recommende One flat washer and one mounting nut supplied with each encoder with bushin Contact Push ON Momentary SPS 10 mA at 5 V D 100 milliohm
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Wave Soldering Hand Solder Hand Hand Hand Hand Hand Hand Hand Hand	
Wave Soldering Hand Soldering Hand Soldering Bardware Switch Characteristics Witch Type Fower Rating (Resistive Load) Forminal Configuration Force Witch Actuation Force Witch Actuation Force Forminal Configuration 1 = Horizontal Mount/Rear Exit PC Pin Setent Option 0 = No Detents 1 = 12 Detents Standard Shaft Length Flatted: 16 = 16.0 mm 18 = 18.5 mm 19 = 21.0 mm Shaft Style F = Insulated Flatted Shaft G = Insulated Flatted Shaft G = Insulated Flatted Shaft w/Bushing*** Switch Configuration S = Push Momentary Switch	
Wave Soldering Hand Solder Hand Solder Hand Hand Hand Hand Hand Hand Hand Hand	

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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

**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. The products described herein and this document are subject to specific legal disclaimers

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Applications

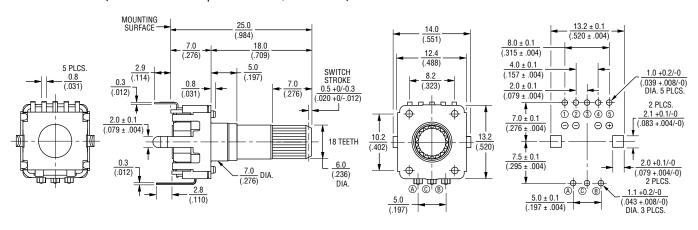
Level control, tuning and timer settings in:

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

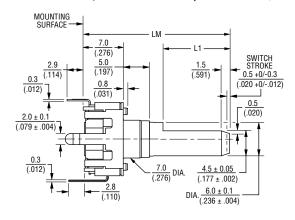
PEL12T - 12 mm Encoder with Switch and Illuminated Shaft **BOURNS**

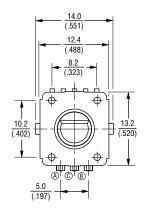
Product Dimensions

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)	<u>16</u> (.630)
<u>5</u> (.197)	18.5 (.728)
7 (.276)	<u>21</u> (.827)
<u>12</u> (.472)	<u>26</u> (1.024)
<u>12</u> (.472)	<u>31</u> (1.220)

DIMENSIONS: $\frac{MM}{(INCHES)}$

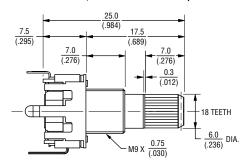
Triple LED Circuit

$$\begin{split} & \text{TOLERANCES:} \\ & \text{UNDER} \, \frac{10.0}{(.394)} = \frac{\pm 0.3}{(\pm .012)} \quad \frac{10.0 \sim 100}{(.394 \sim 3.937)} = \frac{\pm 0.5}{(\pm .020)} \end{split}$$

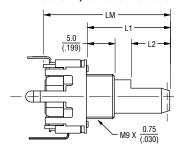
PEL12T - 12 mm Encoder with Switch and Illuminated Shaft **BOURNS***

Product Dimensions

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



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



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

DIMENSIONS: $\frac{MM}{(INCHES)}$

 $\label{eq:under} \begin{array}{c} \text{TOLERANCES:} \\ \text{UNDER} \, \frac{10.0}{(.394)} = \frac{\pm 0.3}{(\pm .012)} \quad \frac{10.0 \sim 100}{(.394 \sim 3.937)} = \frac{\pm 0.5}{(\pm .020)} \end{array}$

LED Characteristics (Triple)

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

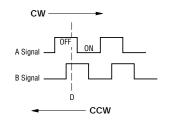
Notes:

 $\begin{array}{lll} \mbox{Reverse Current:} & 10 \ \mu\mbox{A} \\ \mbox{Reverse Voltage:} & 5 \ \mbox{VDC} \\ \mbox{Test Condition (IF):} & 20 \ \mbox{mA} \end{array}$

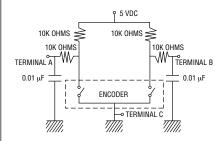
LED Terminal Decoder

Code	Color	Terminals
1	Red / Green / Blue	①⑤/②⑤/④⑤

Quadrature Output Table



Suggested Filter Circuit



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