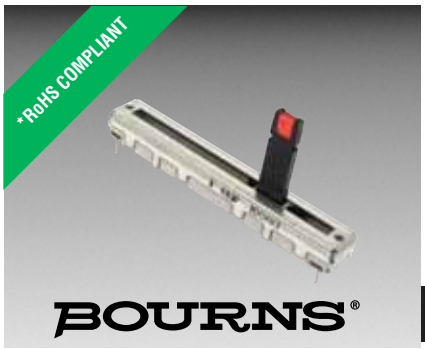


Features

- Carbon element
- Red, orange, green, amber and white LED colors
- Center detent option
- Assortment of resistance tapers
- Various travel lengths
- Various lever sizes

BOURNS® PRO AUDIO

PTL Series Slide Potentiometer w/LED

Electrical Characteristics

Standard Resistance Range
.....1K ohms to 1 megohm
Standard Resistance Tolerance....±20 %
End Resistance
20 mm Travel ..... 10 ohms max.
30 mm Travel ..... 20 ohms max.
45 mm Travel ..... 20 ohms max.
60 mm Travel ..... 30 ohms max.
100 mm Travel ..... 30 ohms max.
Insulation Resistance @ 250 VDC
..... 100 megohms min.
Dielectric Withstanding Voltage
.....300 VAC
Standard Taper..... Linear, Audio
Power Rating - Linear
20 mm Travel ..... 0.05 watt
30 mm Travel ..... 0.1 watt
45 mm Travel ..... 0.125 watt
60 mm Travel ..... 0.2 watt
100 mm Travel ..... 0.2 watt
Power Rating - Audio
20 mm Travel ..... 0.025 watt
30 mm Travel ..... 0.05 watt
45 mm Travel ..... 0.06 watt
60 mm Travel ..... 0.1 watt
100 mm Travel ..... 0.1 watt
Slider Noise .....200 mV max.

Environmental Characteristics

Operational Life .....15,000 cycles
TR Shift .....±15 %
Operating Temperature Range
.....-10 °C to +55 °C
Resistance to Solder Heat.....±5 %
Moisture Sensitivity Level.....1
ESD Classification (HBM)..... N/A

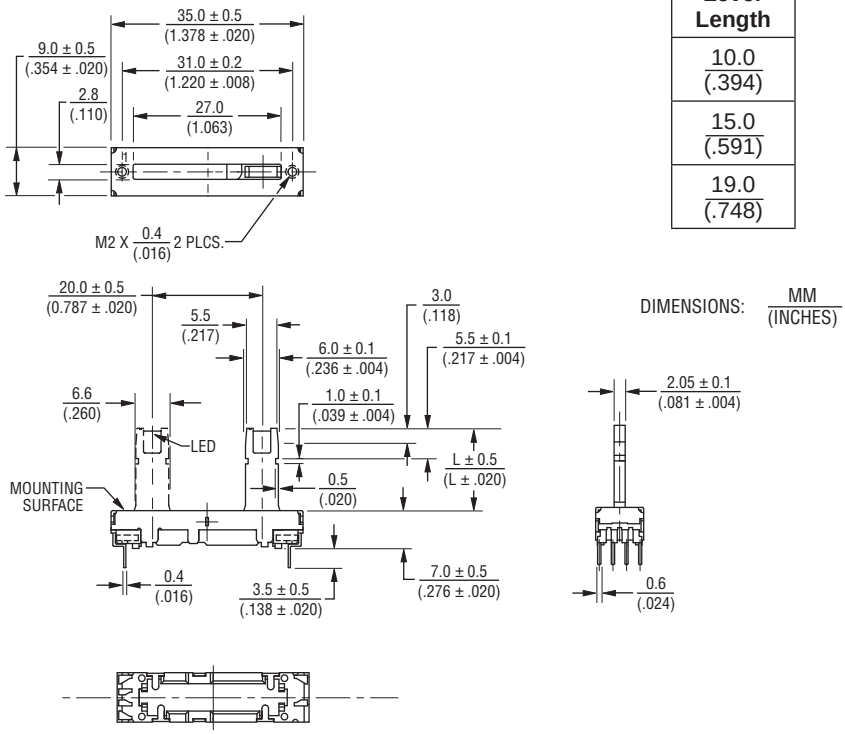
Mechanical Characteristics

Mechanical Travel.....Length ±0.5 mm
Operating Force.....30 gf to 250 gf
Center Detent Force.....20 gf to 200 gf
Stop Strength..... 5 kgf min.
Shaft Axial Force ..... 5 kgf min.
Shaft Wobble...2(2 x L/20) mm p-p max.
Soldering Condition
Manual .....300 °C ±5 °C for 3 sec.
Wave .....260 °C ±5 °C for 5 sec.
Wash ..... Not recommended

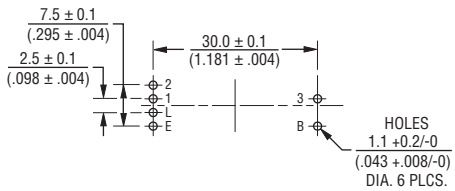
Product Dimensions

20 mm Length of Travel

Lever Length
10.0 (.394)
15.0 (.591)
19.0 (.748)



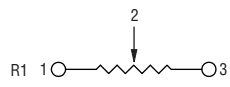
Mounting Hole Detail



Standard Resistance Table

Resistance (Ohms)	Resistance Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105

Schematic



WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

- Mixing consoles
- Drum machines
- Keyboards and synthesizers
- Equalizers

PTL Series Slide Potentiometer w/LED

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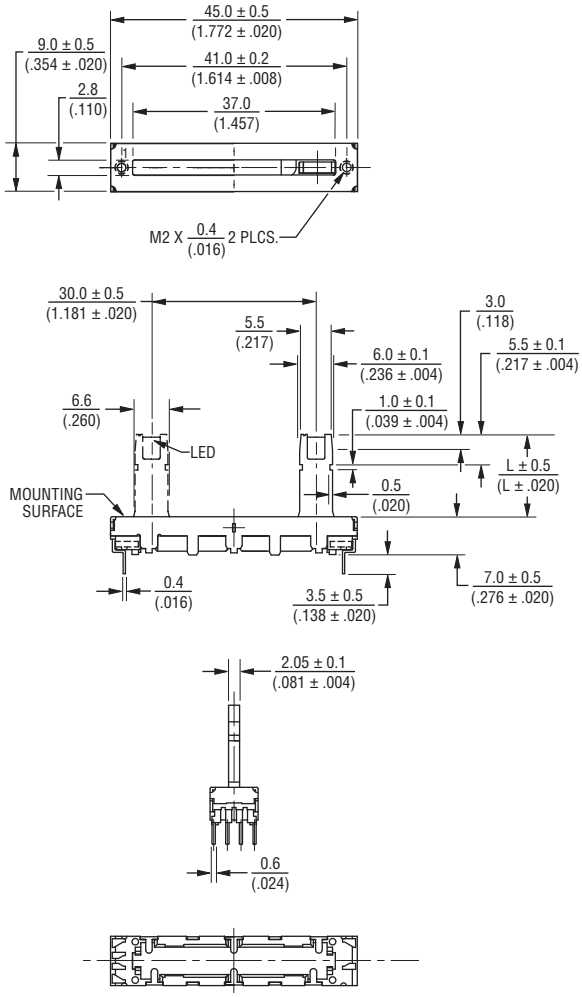
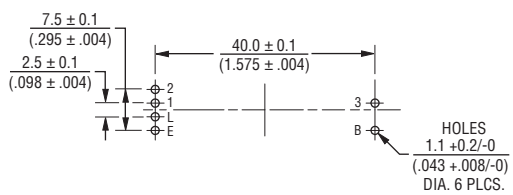
Product Dimensions

30 mm Length of Travel

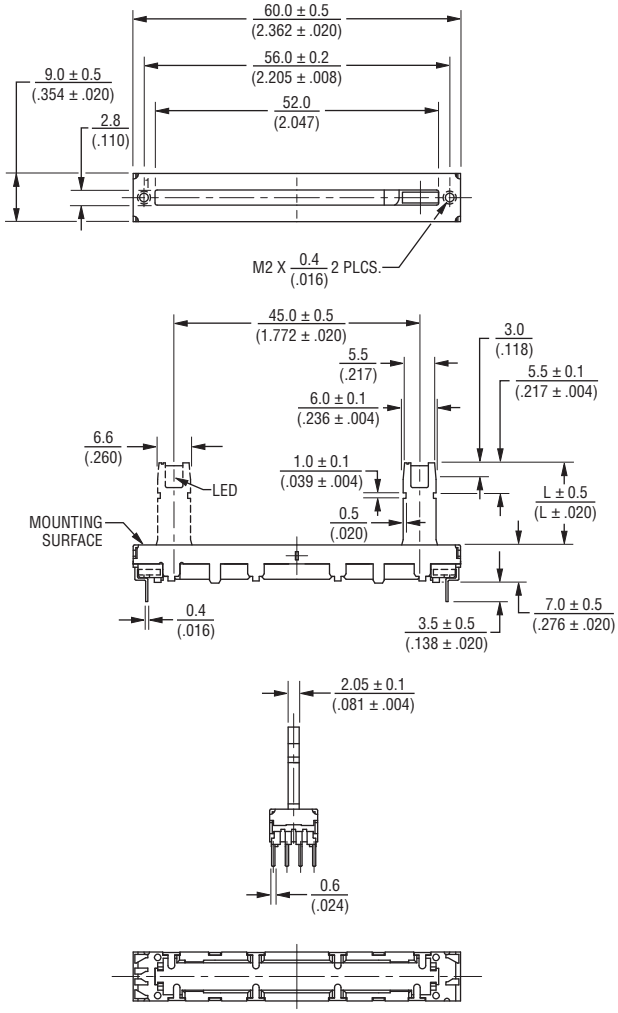


Mounting Hole Detail

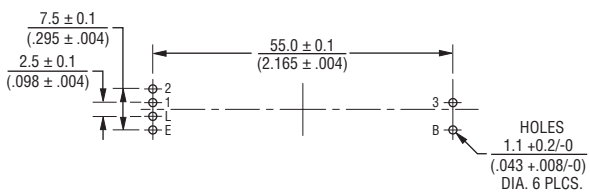


DIMENSIONS: MM / (INCHES)

45 mm Length of Travel



Mounting Hole Detail



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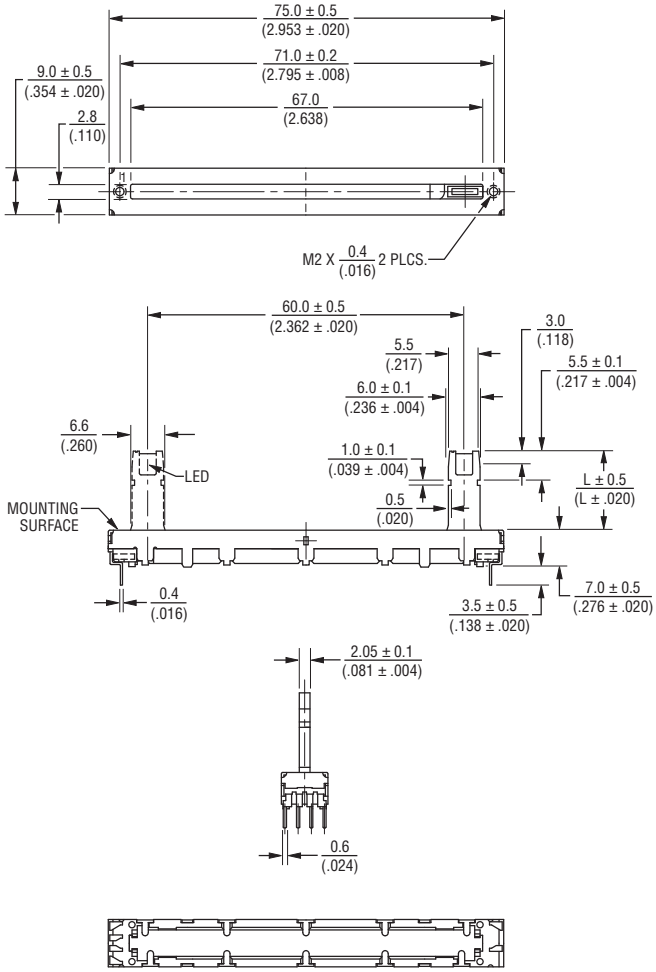
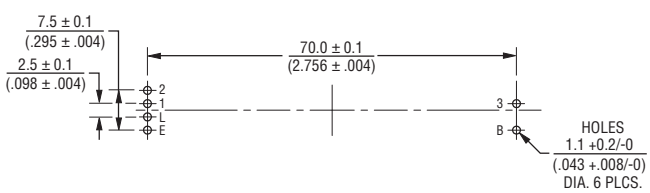
Product Dimensions

60 mm Length of Travel

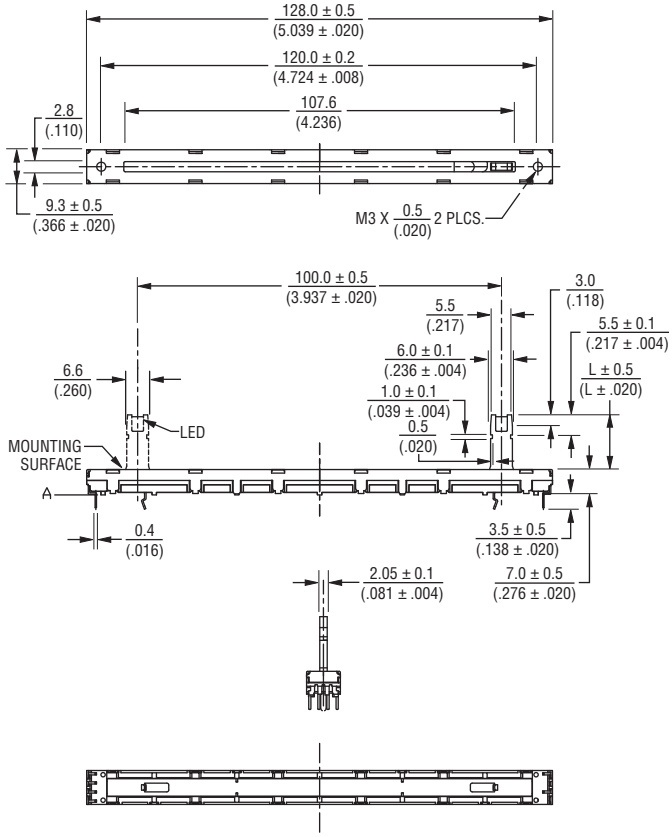


Mounting Hole Detail

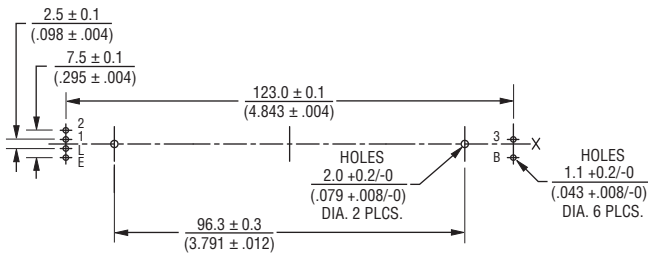


DIMENSIONS: MM / (INCHES)

100 mm Length of Travel



Mounting Hole Detail



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PTL Series Slide Potentiometer w/LED

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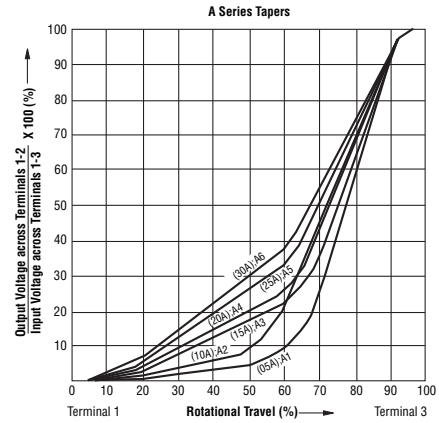
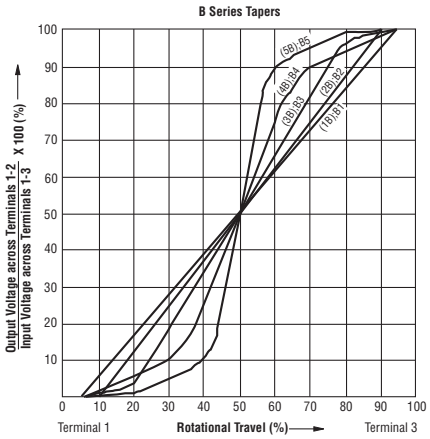
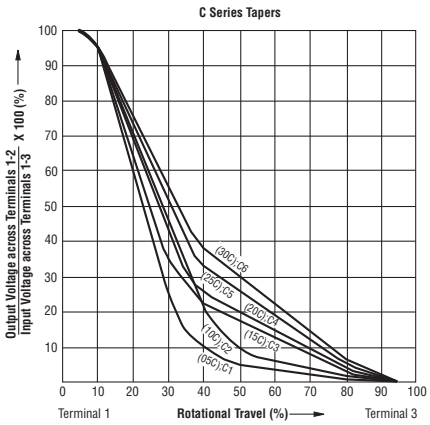
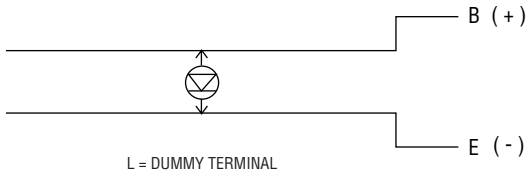
Tapers







Circuit



How To Order

PTL 30 - 10 R 0 - 103 B2

Model Number Designator
- PTL = Slide Potentiometer w/LED

Length of Travel
- 20 = 20 mm
- 30 = 30 mm
- 45 = 45 mm
- 60 = 60 mm
- 01 = 100 mm

Lever Length
- 10 = 10 mm
- 15 = 15 mm
- 19 = 19 mm

LED Color
- R = Red
- O = Orange
- G = Green
- A = Amber
- W = White

Detent Option
- 0 = No Detent
- 1 = Center Detent

Resistance Code
(See Standard Resistance Table)

Resistance Taper (See Taper Charts)
- Taper Series followed by Curve Number

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LED Characteristics

Emitter Color	Item	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Red	Forward Voltage	V_F	I_F = 20 mA		1.8	2.0	V
	Luminous Intensity	I_V		12	20		mcd
	Peak Emission Wavelength	λ_p			660		nm
	Dominant Wavelength	λ_d			643		nm
	Spectral Line Half Width	$\Delta\lambda$			20		nm
Orange	Forward Voltage	V_F	I_F = 20 mA		2.0	2.7	V
	Luminous Intensity	I_V		9	15		mcd
	Peak Emission Wavelength	λ_p			610		nm
	Dominant Wavelength	λ_d			605		nm
	Spectral Line Half Width	$\Delta\lambda$			35		nm
Green	Forward Voltage	V_F	I_F = 20 mA		3.3	4.0	V
	Luminous Intensity	I_V		105	175		mcd
	Peak Emission Wavelength	λ_p			530		nm
	Dominant Wavelength	λ_d			35		nm
	Spectral Line Half Width	$\Delta\lambda$			160		nm
Amber	Forward Voltage	V_F	I_F = 20 mA		2.1	2.6	V
	Luminous Intensity	I_V			5.0		mcd
	Peak Emission Wavelength	λ_p			585		nm
	Dominant Wavelength	λ_d		582	–	595	nm
	Spectral Line Half Width	$\Delta\lambda$			35		nm
White	Forward Voltage	V_F	I_F = 20 mA		3.2	3.6	V
	Luminous Intensity	I_V			1000		mcd
	Peak Emission Wavelength	λ_p			–		nm
	Dominant Wavelength	λ_d		460	–	470	nm
	Spectral Line Half Width	$\Delta\lambda$			35		nm

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