



# Potentiometer Linear Position Sensors LSR-33P Series

## Overview

The ProSense LSR-33P series offers easy installation with fixing brackets. This series is available in 30 to 1,000mm stroke measurement with an infinite resolution and IP65 protection rating. The LSR-33P series linear position sensors offer similar form factors as competitors and are available at a less expensive cost.

## Features

- Fixed slide
- 30 to 1,000mm stroke measurement
- IP65 protection rating
- Easy installation with fixing brackets
- Mounting hardware and connectors (LSR33-ACC-KIT) included



**LSR-33P-0030-A5-C1**

## Potentiometer Linear Position Sensors LSR-33P Series Selection Chart

Part Number	Price	Action	Resistance	Useful Stroke (US) mm [in]	Mechanical Stroke (MS) mm [in]	Linearity	Housing Size	Drawing Link	Weight kg [lb]
<a href="#">LSR-33P-0030-A5-C1</a>	\$06db0:	Fixed slide	5kΩ	30 [1.18]	34 [1.33]	+/- 0.5%	33 x 33 x 110mm body	<a href="#">PDF</a>	0.22 [0.48]
<a href="#">LSR-33P-0050-A5-C1</a>	\$06db1:			50 [1.97]	54 [2.12]	+/- 0.5%	33 x 33 x 130mm body	<a href="#">PDF</a>	0.25 [0.55]
<a href="#">LSR-33P-0100-B5-C1</a>	\$06db7:			100 [3.94]	104 [4.09]	+/- 0.2%	33 x 33 x 180mm body	<a href="#">PDF</a>	0.35 [0.77]
<a href="#">LSR-33P-0130-C5-C1</a>	\$06db8:			130 [5.12]	134 [5.27]	+/- 0.1%	33 x 33 x 210mm body	<a href="#">PDF</a>	0.45 [0.99]
<a href="#">LSR-33P-0150-C5-C1</a>	\$06dbe:			150 [5.91]	154 [6.06]	+/- 0.1%	33 x 33 x 230mm body	<a href="#">PDF</a>	0.5 [1.1]
<a href="#">LSR-33P-0200-C5-C1</a>	\$06da :			200 [7.87]	204 [8.03]	+/- 0.1%	33 x 33 x 280mm body	<a href="#">PDF</a>	0.6 [1.32]
<a href="#">LSR-33P-0250-D5-C1</a>	\$06da#:			250 [9.84]	254 [10.00]	+/- 0.05%	33 x 33 x 330mm body	<a href="#">PDF</a>	0.7 [1.54]
<a href="#">LSR-33P-0300-D5-C1</a>	\$;06da!:			300 [11.81]	304 [11.97]	+/- 0.05%	33 x 33 x 380mm body	<a href="#">PDF</a>	0.8 [1.76]
<a href="#">LSR-33P-0350-D5-C1</a>	\$06da?:			350 [13.77]	354 [13.93]	+/- 0.05%	33 x 33 x 430mm body	<a href="#">PDF</a>	0.9 [1.98]
<a href="#">LSR-33P-0400-D5-C1</a>	\$;06da,:			400 [15.75]	404 [15.90]	+/- 0.05%	33 x 33 x 480mm body	<a href="#">PDF</a>	1.0 [2.2]
<a href="#">LSR-33P-0450-D5-C1</a>	\$06db2:			450 [17.71]	454 [17.87]	+/- 0.05%	33 x 33 x 530mm body	<a href="#">PDF</a>	1.1 [2.42]
<a href="#">LSR-33P-0500-D5-C1</a>	\$06db3:			500 [19.69]	504 [19.84]	+/- 0.05%	33 x 33 x 580mm body	<a href="#">PDF</a>	1.2 [2.64]
<a href="#">LSR-33P-0550-D5-C1</a>	\$06db4:			550 [21.65]	554 [21.81]	+/- 0.05%	33 x 33 x 630mm body	<a href="#">PDF</a>	1.3 [2.86]
<a href="#">LSR-33P-0600-D5-C1</a>	\$06db5:			600 [23.62]	604 [23.77]	+/- 0.05%	33 x 33 x 680mm body	<a href="#">PDF</a>	1.4 [3.08]
<a href="#">LSR-33P-0650-D10-C1</a>	\$06db6:		10kΩ	650 [25.59]	654 [25.74]	+/- 0.05%	33 x 33 x 730mm body	<a href="#">PDF</a>	1.5 [3.3]
<a href="#">LSR-33P-0700-D10-C1</a>	\$06db9:			700 [27.56]	704 [27.71]	+/- 0.05%	33 x 33 x 780mm body	<a href="#">PDF</a>	1.6 [3.52]
<a href="#">LSR-33P-0750-D10-C1</a>	\$06dba:			750 [29.53]	754 [29.68]	+/- 0.05%	33 x 33 x 830mm body	<a href="#">PDF</a>	1.7 [3.74]
<a href="#">LSR-33P-0800-D10-C1</a>	\$06dbb:			800 [31.50]	804 [31.65]	+/- 0.05%	33 x 33 x 880mm body	<a href="#">PDF</a>	1.8 [3.96]
<a href="#">LSR-33P-0850-D10-C1</a>	\$06dbc:			850 [33.46]	854 [33.62]	+/- 0.05%	33 x 33 x 930mm body	<a href="#">PDF</a>	1.9 [4.18]
<a href="#">LSR-33P-0900-D10-C1</a>	\$06dbd:			900 [35.43]	904 [35.59]	+/- 0.05%	33 x 33 x 980mm body	<a href="#">PDF</a>	2.0 [4.4]
<a href="#">LSR-33P-1000-D10-C1</a>	\$;06dbf:			1000 [39.37]	1004 [39.52]	+/- 0.05%	33 x 33 x 1080mm body	<a href="#">PDF</a>	2.1 [4.84]

## Potentiometer Linear Position Sensors Accessory Kit

Part Number	Price	Drawing Link	Description
<a href="#">LSR33-ACC-KIT</a>	\$6gdc:	<a href="#">PDF</a>	ProSense mounting hardware, replacement. For use with ProSense LSR-33P Linear Potentiometers.



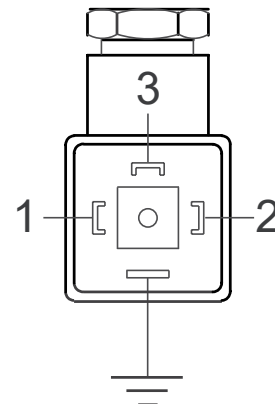
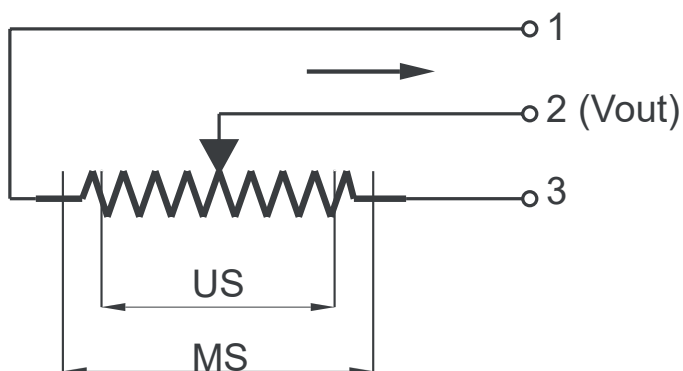
**LSR33-ACC-KIT**



# Potentiometer Linear Position Sensors LSR-33P Series

Potentiometer Linear Position Sensors LSR-33P Series Specifications	
Repeatability	0.01 mm [0.0004 in]
Resolution	Infinite
Permissible Applied Voltage	28VDC max.
Resistance Tolerance	±20%
Load Resistance	100kΩ min.
Displacement Speed	< 5m/s
Mechanical Life	100 million movement
Displacement Force	3.5N (typical) IP60 version, 15N (typical) IP65 version
Vibration (According to EN 60068-2-6)	5-2000 Hz, 200m/s <sup>2</sup> (20g) 2h 30min each axis (x,y,z)
Shock (According to EN 60068-2-2:2007)	11ms. (x,y,z axis) 500 m/s <sup>2</sup> (50g)
Recommended Wiper Current	< 1μA
Operating Temperature	-20 to 80°C [-4 to 176°F]
Storage Temperature	-30 to 90°C [-22 to 194°F]
Case Material	Anodized aluminum
Rod Material	Stainless steel AISI 303
Rod Diameter	Ø6 mm
Cap Material	ABS plastic
Head Type	M6
Connection	18mm DIN 43650 Form A
Mounting	Brackets with adjustable distance between centers, or with M5 screw ISO4017-DIN933
Agency Approval	CE

## Electrical Connections



**When choosing a transducer, it is important to remember that different strokes exist:**

- Mechanical Stroke (MS): The actual shift that the transducer's cursor (wiper) is able to make.
- Useful Electrical Stroke (US): The part of the mechanical stroke in which transducer linearity is guaranteed.
- Therefore, when designing an application, you should choose a transducer with a useful electrical stroke that is equal to or greater than the maximum displacement carried out by the moving part.