



# Potentiometer Linear Position Sensors LCR-18P Series

## Overview

The ProSense LCR-18P series offers pivoting slide action. This series is available in 10 to 400mm stroke measurement with an infinite resolution and IP65 protection rating. The LCR-18P series linear position sensors offer similar form factors as competitors and are available at a less expensive cost.

## Features

- Pivoting slide
- 10 to 400mm stroke measurement
- Pigtail connection
- IP65 protection rating



**LCR-18P-0010-A2-1A**

**Potentiometer Linear Position Sensors LCR-18P Series Selection Chart**

| Part Number                        | Price    | Action         | Resistance | Useful Stroke (US)<br>mm [in] | Mechanical Stroke (MS)<br>mm [in] | Linearity | Housing Size               | Drawing Link        | Weight<br>kg [lb] |
|------------------------------------|----------|----------------|------------|-------------------------------|-----------------------------------|-----------|----------------------------|---------------------|-------------------|
| <a href="#">LCR-18P-0010-A2-1A</a> | \$111.00 | Pivoting slide | 2kΩ        | 10 [0.39]                     | 13 [0.51]                         | +/- 0.5%  | 18mm diameter x 58mm body  | <a href="#">PDF</a> | 0.17 [0.37]       |
| <a href="#">LCR-18P-0025-A2-1A</a> | \$113.00 |                |            | 25 [0.98]                     | 28 [1.10]                         | +/- 0.5%  | 18mm diameter x 73mm body  | <a href="#">PDF</a> | 0.19 [0.41]       |
| <a href="#">LCR-18P-0050-A2-1A</a> | \$117.00 |                |            | 50 [1.97]                     | 53 [2.08]                         | +/- 0.5%  | 18mm diameter x 98mm body  | <a href="#">PDF</a> | 0.21 [0.46]       |
| <a href="#">LCR-18P-0075-B5-1A</a> | \$118.00 |                | 5kΩ        | 75 [2.95]                     | 78 [3.07]                         | +/- 0.2%  | 18mm diameter x 123mm body | <a href="#">PDF</a> | 0.23 [0.50]       |
| <a href="#">LCR-18P-0100-B5-1A</a> | \$121.00 |                |            | 100 [3.94]                    | 103 [4.05]                        | +/- 0.2%  | 18mm diameter x 148mm body | <a href="#">PDF</a> | 0.25 [0.55]       |
| <a href="#">LCR-18P-0125-B5-1A</a> | \$124.00 |                |            | 125 [4.92]                    | 128 [5.03]                        | +/- 0.2%  | 18mm diameter x 173mm body | <a href="#">PDF</a> | 0.27 [0.59]       |
| <a href="#">LCR-18P-0150-C5-1A</a> | \$126.00 |                |            | 150 [5.91]                    | 153 [6.02]                        | +/- 0.1%  | 18mm diameter x 198mm body | <a href="#">PDF</a> | 0.29 [0.63]       |
| <a href="#">LCR-18P-0175-C5-1A</a> | \$127.00 |                |            | 175 [6.88]                    | 178 [7.00]                        | +/- 0.1%  | 18mm diameter x 223mm body | <a href="#">PDF</a> | 0.31 [0.68]       |
| <a href="#">LCR-18P-0200-C5-1A</a> | \$128.00 |                |            | 200 [7.87]                    | 203 [7.99]                        | +/- 0.1%  | 18mm diameter x 248mm body | <a href="#">PDF</a> | 0.33 [0.72]       |
| <a href="#">LCR-18P-0250-D5-1A</a> | \$130.00 |                |            | 250 [9.84]                    | 253 [9.97]                        | +/- 0.05% | 18mm diameter x 298mm body | <a href="#">PDF</a> | 0.37 [0.81]       |
| <a href="#">LCR-18P-0300-D5-1A</a> | \$133.00 |                |            | 300 [11.81]                   | 303 [11.92]                       | +/- 0.05% | 18mm diameter x 348mm body | <a href="#">PDF</a> | 0.41 [0.90]       |
| <a href="#">LCR-18P-0350-D5-1A</a> | \$139.00 |                |            | 350 [13.77]                   | 353 [13.90]                       | +/- 0.05% | 18mm diameter x 398mm body | <a href="#">PDF</a> | 0.45 [0.99]       |
| <a href="#">LCR-18P-0400-D5-1A</a> | \$145.00 |                |            | 400 [15.75]                   | 403 [15.87]                       | +/- 0.05% | 18mm diameter x 448mm body | <a href="#">PDF</a> | 0.49 [1.07]       |

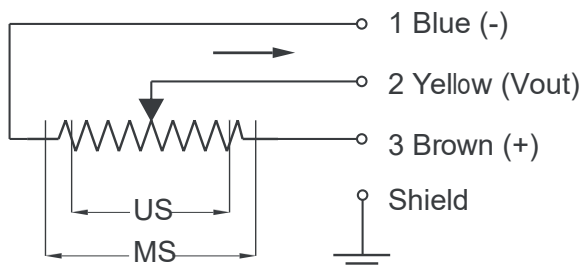


# Potentiometer Linear Position Sensors LCR-18P Series

## Potentiometer Linear Position Sensors LCR-18P Series Specifications

|                                        |                                                                 |
|----------------------------------------|-----------------------------------------------------------------|
| Repeatability                          | 0.01 mm [0.0004 in]                                             |
| Permissible Applied Voltage            | 28VDC max.                                                      |
| Displacement Speed                     | < 5m/s                                                          |
| Mechanical Life                        | 100 million movement                                            |
| Vibration (According to EN 60068-2-6)  | 3.5N (typical) IP60 version, 15N (typical) IP65 version         |
| Shock (According to EN 60068-2-2:2007) | 5-2000 Hz, 200m/s <sup>2</sup> (20g) 2h 30min each axis (x,y,z) |
| Resistance Tolerance                   | ±20%                                                            |
| Load Resistance                        | 100KΩ min.                                                      |
| Recommended Wiper Current              | <1 μA                                                           |
| 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                                                 |
| Rod Diameter                           | Ø5 mm                                                           |
| Mechanical Fixing                      | Ball joints on both sides                                       |
| Electrical Connections                 | 3.2ft/1m, pigtail                                               |
| 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.