

# DATASHEET



## CLINEAR DISPLACEMENT SENSOR POTENTIOMETRIC

For Structural Health Monitoring

*Model EDE-PXX*

### INTRODUCTION

The Encardio-rite model EDE-PXX linear potentiometric displacement sensor is used in geotechnical and structural applications where it is difficult to take direct mechanical readings due to inaccessibility. Some uses are:

- Monitoring surface cracks in structures and rock mass.
- Monitoring rock mass or concrete displacement in single or multipoint borehole extensometers.
- Monitoring soil displacement in soil extensometers.

### FEATURES

- Rugged, stainless steel body.
- Long term reliability and stability.
- Quick and easy to read, adaptable to data loggers or data acquisition system.
- 'O'rings protection against ingress of moisture.
- Unaffected by changes in atmospheric pressure.



The retractable shaft of the displacement sensor has a 12 mm long M6 x 1 male thread. Following optional adaptors to fit to the end of the shaft are available for different applications:

- M6 x 1 - through female thread
- M8 x 1.25 x 12 mm long - female thread

For use as a crack meter, the EDE-PXX transducer is provided with spherical bearing joints at the two ends and anchors for fixing the joint rods to brick, concrete or rock surfaces.

When used in borehole extensometer the displacement sensor is positioned with respect to the reference plate to set the zero reading in following ways:

- If extension is expected, the zero reading of the sensor is set by extending it by around 10 mm.
- In case only compression is expected, the zero reading is set by extending it by around 10 mm less than the range.
- If required, the zero reading of the sensor can also be set at any intermediate position.

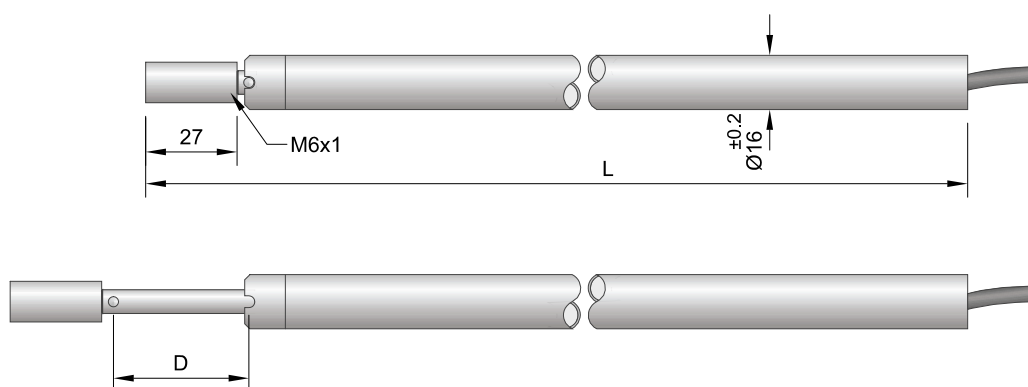
The displacement sensor converts the mechanical displacement to an electrical frequency output. The frequency output can be accurately measured by any vibrating wire readout unit. The data can also be automatically collected at a desired frequency, stored and transmitted to remote server by a suitable datalogger.

## SPECIFICATIONS

Model	EDE-PXX
Transducer type	Potentiometric
Range	50, 100, 150 mm
Input	5 ~ 13 V DC
Output	0 - 2 V DC (nominal)
Sensitivity	0.02 mm
Linearity	
Standard	0.2 % fs
Optional	0.1 % fs
Temperature drift	
Zero	0.0005 % fs/°C
Span	0.002 % fs/°C
Temperature limit	-10 to 80°C (operational)

## DIMENSIONS

Model no.	Displacement (D) mm	Length (L) mm
EDE-P05	50	342



EDE-P15	150	542
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\*All specifications are subject to change without prior notice

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