

# OS-1 Optical position sensor

OS-1 is a high-performance optical position sensor determining position by tracking x-y dimensional movements.

## Features

OS-1 has built-in image recognition system allowing tracking from different kind of surfaces.

Supports incremental positioning without any markings on the surface (absolute positioning requires a reference mark on the tracked surface or an external position signal).

Repeated Error of 1%\*, automatic correction can be used to reduce the error.

Motion detection (for system wake-up).

LED indicator for service and maintenance.  
Firmware remotely upgradeable.

Interfacing via LIN bus with a propriety protocol, position data available in 16-bit integer format.

Programmable sensor addresses.  
Serial number and sensor version readable from permanent memory.

Fixing with 2 plastic screws. Fixing adapters available for 32, 40, 50 and 63 mm pneumatic cylinders. Others on request.

## Applications

Measuring 1D-, x-y movement, or tracking rotating surfaces (periphery). Can be used in pneumatic and hydraulic cylinders (piston rods), repetition/cycle counters, programmable movement controls etc.

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## Technical specification

Operating temperature	<b>0...40 °C</b>
Supply Voltage (VDD)	<b>4,75...25 VDC</b>
Current consumption	
@24V	<b>8 mA</b>
@12V	<b>12 mA</b>
@5V	<b>25 mA</b>
Resolution	
· Default:	<b>100 cpi (0,254mm)*</b>
· Configurable:	<b>Up to 8200 cpi (0,0031mm) with 100 cpi steps *</b>
Motion detection speed	<b>Max: 3,8 m/s (150 ips)*</b>
Max acceleration tracking	<b>30g*</b>
Distance from Case plane to Tracking Surface	<b>1,6 mm min 1,4... max 1,8 mm</b>
Interface	<b>LIN, VDD, GND TE AMPMODU 5-103634-2</b>
Casing classification	<b>IP40</b>
Dimensions (mm)	<b>57,7 x 15,6 x 12,5</b>
Weight (g)	<b>12</b>

\* Values are typical for white paper surface. Can differ slightly for other surfaces.

**PATENT PENDING**

