

# OS-2 Optical Position Sensor

## One sensor for many tasks

OS-2 can output speed, linear, or x-y movement incrementally for any stroke length. With help of markings in the tracked surface or with the sensors switch input absolute positioning is also possible.

## Easy to use

The sensors standard M12 housing allows easy fixing and movement direction is calculated inside the sensor. Standard 4-20mA current interface or IO-Link allows easy interfacing.

## Economical

The sensor is cost-effective compared to most other position sensor types. Additionally, one OS-2 sensor fits many tasks and lengths leading to low warehouse costs.

## Proven and patented technology

OS-2's predecessor OS-1 has been in production for several years with more than 6000 delivered sensors. The sensor technology is also patented.

## Applications

- Indicating hydraulic or pneumatic cylinder's position.
- Indicating whatever linear or x-y movement.
- Indicating transverse/rotational speed.
- Working as a standalone cycle counter or accumulated distance indicator for maintenance purposes.
- Automatic length measurement of bypassing objects in front of the sensor.



### Customized solutions:

- An ATEX-version of the sensor will be available in the near future.
- Alternative interfaces based on CAN or Ethernet are also planned.
- Custom casing or interface available on demand.



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## Technical specification

### FUNCTION

Linearity	<+-0,3mm
Repetition accuracy	< 3mm**
Jitter/Ripple	<+-0,15mm
Hysteresis	< 1mm*
Resolution	< 1mm*
Motion speed	Max: 2 m/s*
Measurement range	0,2 ~ 13m
Distance to tracked surface	3-50mm*

### ENVIROMENT

Operating temperature	-40...60°C
Intrusion protection	IP68 (1,5m deep water for 1h)
Shock rating	50g IEC68-2-27
Vibration rating	25g / 10 to 2000Hz IEC 68-2-6
Resolution	< 1mm*
Motion speed	Max: 2 m/s*
Distance to tracked surface	3-50mm*

### ELECTRICAL

Voltage	8-32 VDC
Current	30mA (excluding interfaces)
Interface	4-20mA current loop, IOLink (or 50mA NPN, PNP), digital active high input, LED indicator
EMC	IEC 61000 Industrial environments  ISO 7637, ISO 11452, ISO 16750, ISO 10605 Road vehicles  ISO EN 14982 Agricultural and forestry machines  ISO 13766 Earth-moving and building construction machinery

### MECHANICAL

Diameter	M12x1
Length	55mm
Weight	~20g
Connector	5 pin male M12A
Housing material	Stainless steel (AISI 304)

\*Values are typical for shiny metal surfaces.

\*\*Without any correction moving 400mm 20 times back and forth.



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