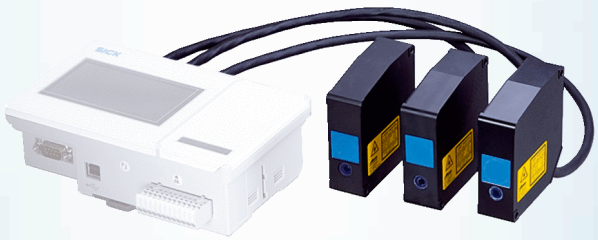
Online data sheet



OD5-25W01

OD Precision

DISPLACEMENT MEASUREMENT SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
OD5-25W01	6035976

Other models and accessories → www.sick.com/OD_Precision

Detailed technical data

Features

System part	Sensor head

Performance

Measuring range	24 mm ... 26 mm, 6 % ... 90 % remission; at default settings
Resolution	0.02 µm [1]
Repeatability	0.06 µm [1]
Linearity	± 1.6 µm [1]
Response time	0.1 ms [2] [3]
Measuring frequency	10 kHz [3]
Light source	Laser, red
Laser class	1 (EN 60825-1) [4]
Typ. light spot size (distance)	100 µm x 700 µm (25 mm)
Additional function	Mean-value setting 1 ... 4,096x, selectable measuring frequency (automatic / 0.1 ms ... 3.2 ms), automatic sensitivity adjustment, manual sensitivity adjustment, Mutual interference, Glass thickness measurement
Note	OD Precision sensor head can be used in combination with AOD5-P/N1 or stand-alone via RS-422

[1] Measurement at 90% remission (ceramic, white), or mirror for OD5-25x; averaging set to: 256 or 4096 for OD5-25x; constant ambient conditions.
[2] Time needed for automatic sensitivity adjustment is calculated as: sampling period x 20. At default setting 100 µs (10kHz) this is <= 2ms.
[3] Default setting for OD5-350x100 and OD5-500x200 = 0.8 ms, or 1.25 kHz, all others = 0.1 ms/10 kHz.
[4] Wavelength: 650 nm, max. output: 390 µW.

Interfaces

Laser-off input	1 x laser-off
Data interface	RS-422

Mechanics/electronics

Supply voltage V_S	DC 12 V ... 24 V [1]
Warm-up time	≤ 5 min
Housing material	Aluminum housing with glass lens
Connection type	0.5 m cable with connector [2]
Indication	LEDs, 4" color display on optional evaluation unit

[1] DC 12 V (–5 %) ... DC 24 V (+10 %)
[2] Can be extended to up to 50 m with extension cable.
[3] Includes 0.5 m cable.

Weight	250 g [3]

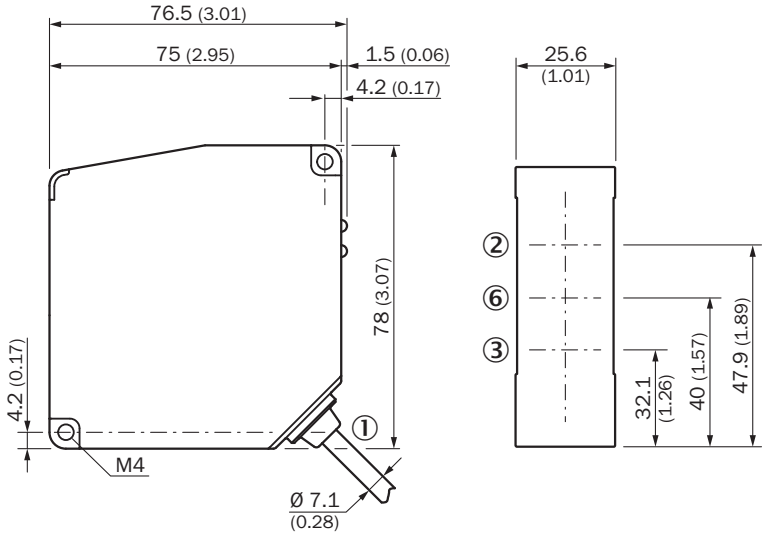
[1] DC 12 V (–5 %) ... DC 24 V (+10 %)
[2] Can be extended to up to 50 m with extension cable.
[3] Includes 0.5 m cable.

Ambient data

Enclosure rating	IP 67
Protection class	III
Ambient temperature	Operation: –10 °C ... +50 °C Storage: –20 °C ... +60 °C
Relative air humidity (non-condensing)	35 % ... 85 %
Temperature drift	± 0.01 % FS/K (FS = Full Scale = Measuring range of sensor)
Typ. Ambient light immunity	Artificial light: ≤ 3,000 lx Sunlight: ≤ 10,000 lx
Vibration resistance	10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each)
Shock resistance	50 G (x, y, z axis 3 times each)

Dimensional drawing (Dimensions in mm (inch))

OD5-25xxx



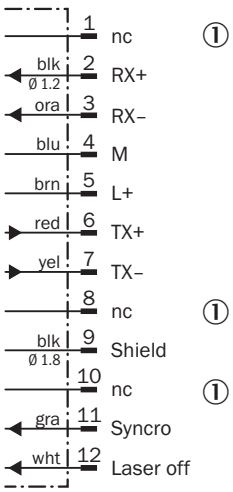
① Cable Ø 7.1 mm, 0.5 m with connector, 12-pin
② Optical axis receiver
③ Optical axis sender
⑥ Optical axis, light spot (at 25 mm due to V-Optics with 17.5°)

Connection type

Hirose 12-pin male connector for sensor head



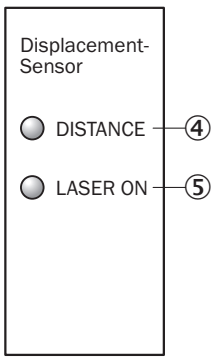
Connection diagram



① Not assigned

Adjustment possible

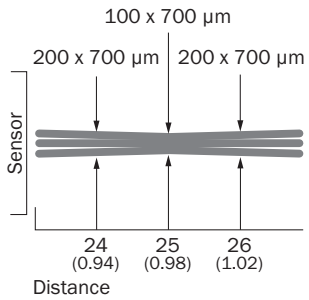
ODxx-xxxx



④ Distance indicator
⑤ Status indicator laser (laser on)

Light spot size

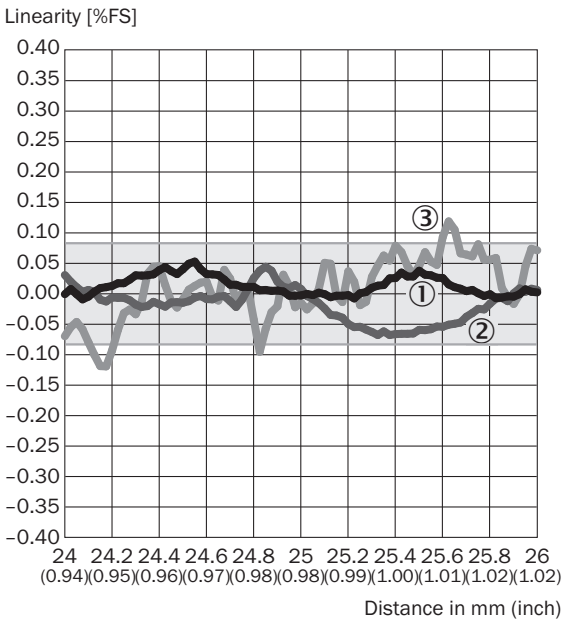
OD5-25W01



All dimensions in mm (inch)

Linearity

OD5-25W01



① Mirror
② Glass
③ Stainless steel

Recommended accessories

Other models and accessories ➜ www.sick.com/OD_Precision

	Brief description	Type	Part no.
Plug connectors and cables			

	Brief description	Type	Part no.
	Head A: female connector, M12, 12-pin, straight Head B: cable Cable: PVC, shielded, 5 m For stand-alone operation	DOL-1212-G05M	6035988
	Head A: male connector, 50-pin, straight Head B: cable Cable: PVC, shielded, 3 m In- and output expansion cable for AOD5-P/N1 (OD Precision)	IO-EXP-AOD5	6035990
	Head A: female connector, M12, 12-pin, straight Head B: male connector, M12, 12-pin, straight Cable: RS-422, PVC, shielded, 2 m OD Precision specific	DSL-1212-G02M	6035986
	Head A: female connector, M12, 12-pin, straight Head B: male connector, M12, 12-pin, straight Cable: RS-422, PVC, shielded, 5 m OD Precision specific	DSL-1212-G05M	6035987
	Head A: male connector, 12-pin Head B: terminal connector, 12-pin Cable: unshielded Terminal strip for AOD5-P/N1 (OD Precision)	TERM.-AOD5	6035989

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com