Product data sheet

OD30-05T1

OD Max

DISPLACEMENT MEASUREMENT SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	Part no.
OD30-05T1	6028959

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

Detailed technical data

Features

System part	Sensor head
Measuring range	25 mm ... 35 mm [1]
Target	Natural objects
Repeatability	1 µm [2]
Linearity	± 10 µm [2]
Response time	≥ 0.5 ms [3]
Output time	≥ 0.1 ms
Light source	Laser, red visible red light
Type of light	Visible red light
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014) [4]
Typ. light spot size (distance)	30 µm x 100 µm (30 mm)
General notes	
Note on use	OD Max sensor head OD25-x is only to be used with AODG-P/N1; All other types (OD350-x, OD85-x, OD30-x) are to be used with AOD-P/N1

[1] 6% ... 90% remission factor.
[2] Measurement on 90 % remission (ceramic, white), for OD25-x measurement on mirror; averaging set to: 256; constant ambient conditions.
[3] Dependent on the set average or sensitivity.
[4] Wavelength: 650 nm, max. output: 390 µW (laser class 1) / 1 mW (laser class 2).

Interfaces

Serial	✓, RS-232
Type of fieldbus integration	Optional, over external evaluation unit AOD
Digital output	
Number	5 [1]
Type	PNP/NPN, selectable
Maximum output current I_A	≤ 100 mA
Analog output	
Number	2 [1]
Type	Current output

[1] Optional over evaluation unit AOD.

Current	4 mA ... 20 mA, ≤ 300 Ω

[1] Optional over evaluation unit AOD.

Electronics

Warm-up time	≤ 5 min
Indication	LEDs, 1.4" color display on evaluation unit
Enclosure rating	IP67
Protection class	III

Mechanics

Dimensions (W x H x D)	25.9 mm x 71.5 mm x 53.2 mm
Housing material	Metal (Aluminum)
Window material	Glass
Weight	250 g [1]
Connection type	0.5 m cable with connector [2] [3]

[1] Includes 0.5 m cable.
[2] Can be extended to up to 10 m with extension cable.
[3] Sensor must be connected to controller unit.

Ambient data

Ambient temperature, operation	–10 °C ... +45 °C
Ambient temperature, 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)

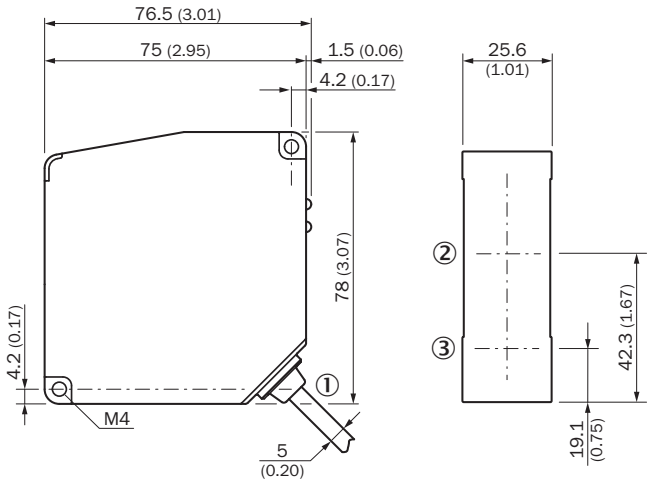
Classifications

ECLASS 5.0	27270801
ECLASS 5.1.4	27270801
ECLASS 6.0	27270801
ECLASS 6.2	27270801
ECLASS 7.0	27270801
ECLASS 8.0	27270801
ECLASS 8.1	27270801
ECLASS 9.0	27270801
ECLASS 10.0	27270801
ECLASS 11.0	27270801
ECLASS 12.0	27270916
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825

UNSPSC 16.0901	41111613

Dimensional drawing (Dimensions in mm (inch))

OD30-05T1, OD85-20T1



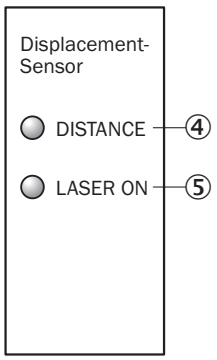
① Cable Ø 5 mm, 0.5 m with connector, 10-pin
② Optical axis, receiver
③ Optical axis, sender

Connection type

Sensor head hirose connector 10-pin

Connection diagram

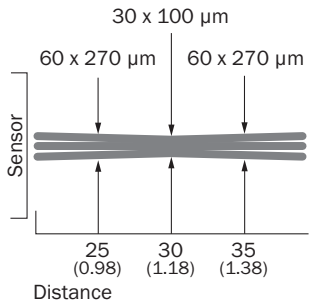
Adjustment possible



④ Distance indicator
⑤ Status indicator laser (laser on)

Light spot size

OD30-05T1

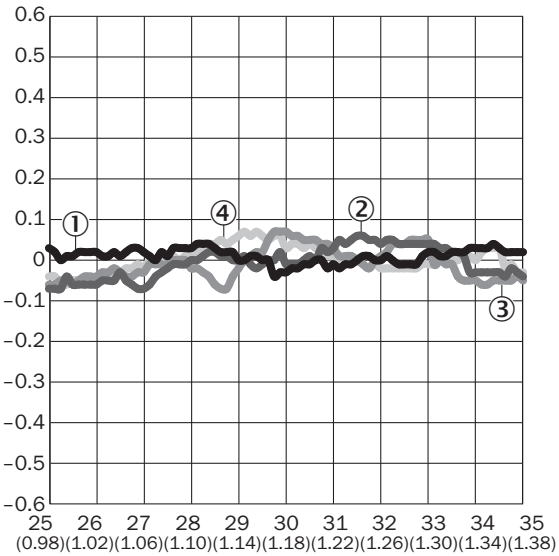


All dimensions in mm (inch)

Linearity

Linearity

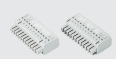
Linearity [% FS]



① White ceramic
② Gray ceramic
③ Aluminum
④ Black rubber

Recommended accessories

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

	Brief description	Type	Part no.
Other adapters			
	Terminal block for AOD (1x R-coded & 1x L-coded)	TERM.-AOD/AODG	6033129
	• **Connection type head A:** Female connector, M12, 10-pin, straight • **Connection type head B:** Male connector, M12, 10-pin, straight • **Cable:** 2 m, 10-wire • **Description:** Unshielded • **Application:** Zones with chemicals, Drag chain operation	YFHRSA-020XXXMHRSA	6028943

Recommended services

Additional services ➜ www.sick.com/OD_Max

	Type	Part no.
Commissioning		
• **Product area:** Displacement measurement sensors • **Range of services:** Inspection of connection and mounting, optimization of parameters of SICK product as well as tests, set-up of previously defined functions of the scaling of the analog measuring range, switching point position, hysteresis, measuring frequency, measured value filter, signal quality, evaluation function, or communication interface • **Travel expenses:** The prices do not include travel costs such as hotel, flight, travel time and expenses. • **Duration:** Additional work will be invoiced separately	DT20 Hi/OD/OL commissioning	1612241

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