

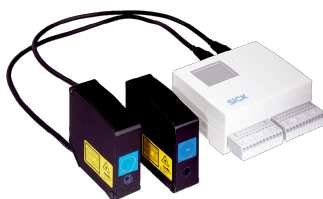


OD85-20T1

OD Max

DISPLACEMENT SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
OD85-20T1	6028958

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



Detailed technical data

Features

System part	Sensor head
Measuring range	65 mm ... 105 mm ¹⁾
Repeatability	5 µm ²⁾
Linearity	± 40 µm ²⁾
Response time	≥ 0.5 ms ³⁾
Measuring frequency	≤ 10 kHz
Output time	≥ 0.1 ms
Emitted beam	
Light source	Laser, red
Typ. light spot size (distance)	70 µm x 290 µm (85 mm)
Key laser figures	
Normative reference	IEC 60825-1:2014, EN 60825-1:2014
Laser class	2 ⁴⁾
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⁾

¹⁾ Optional over evaluation unit AOD.

Type	Current output
Current	4 mA ... 20 mA, $\leq 300 \Omega$

¹⁾ Optional over evaluation unit AOD.

Electronics

Warm-up time	≤ 5 min
Display	LEDs, 1.4" color display on evaluation unit
Enclosure rating	IP67
Protection class	III
Connection type	0.5 m cable with connector

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⁾

¹⁾ Includes 0.5 m cable.

Ambient data

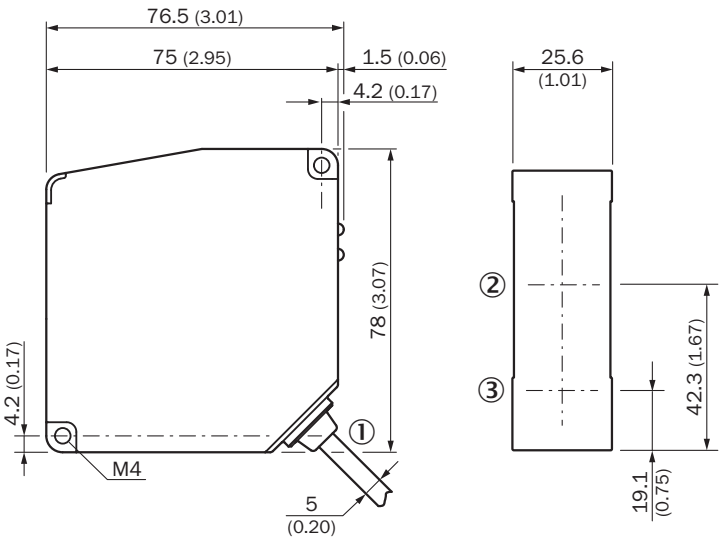
Ambient temperature, operation	-10 °C ... +45 °C
Ambient temperature, storage	-20 °C ... +60 °C
Relative air humidity (non-condensing)	35 % ... 85 %
Temperature drift	± 0.01 % FS/K (FS = Full Scale = Measuring range of sensor)
Typ. Ambient light immunity	Artificial light: $\leq 3,000$ lx Sunlight: $\leq 10,000$ 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 OD30-05T1, OD85-20T1

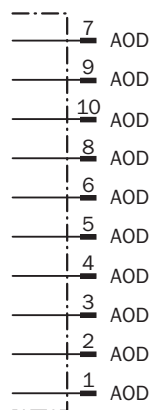


- Dimensions in mm (inch)
- ① Cable Ø 5 mm, 0.5 m with connector, 10-pin
 - ② optical axis, receiver
 - ③ optical axis, sender

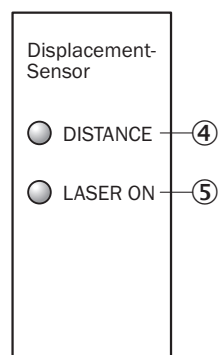
Connection type Sensor head Hirose connector 10-pin



Connection diagram

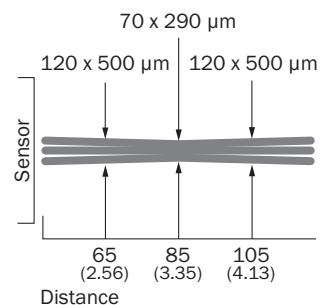


Adjustment possible



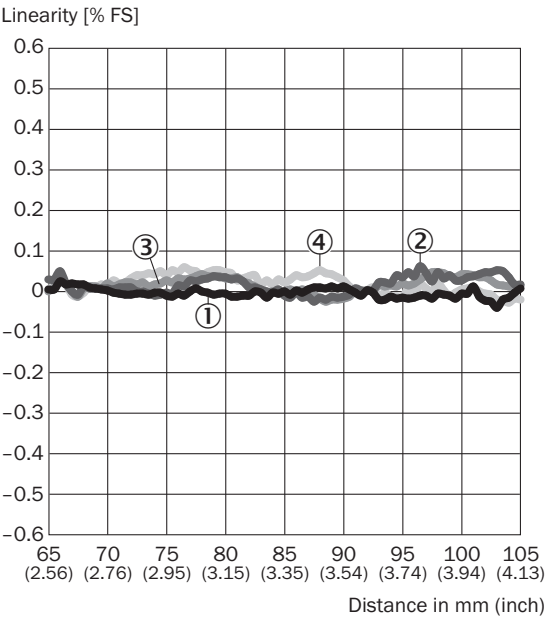
- ④ Distance indicator
- ⑤ Status indicator laser (laser on)

Light spot size OD85-20T1



All dimensions in mm (inch)

Linearity



- 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.
connectors and cables			
	Strich		On request
	Strich		On request

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.”

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