



Short range distance sensors (displacement) OD Max

OD85-20T1



Model Name > [OD85-20T1](#)
Part No. > [6028958](#)

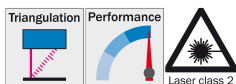


At a glance

- Several measurement ranges from 24 ... 26 mm up to 250 mm ... 450 mm
- CMOS receiving element for measurement independent of surface
- High measurement frequency and high linearity
- Variety of selectable integrated calculations based on values from two sensors
- Laser technology for precise measurement or detection of very small objects
- Several output options

Your benefits

- Minimum machine downtime due to its reliability on any surface, regardless of brightness or color
- Highly accurate measurement, even during the production process, ensures high product quality
- High measuring frequency of 10 kHz increases processing speeds and reduces cycle times
- Reduce the cost to change your process by making a reference measurement using two sensors
- Comparatively low investment costs for challenging measuring tasks
- An easy-to-read LC display and simple push-button keypad programming ensures simple setup and servicing
- Reduced material costs, when using the distance sensors to control costrelevant production processes



Features

System part:	Sensor head
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Performance

Measuring range:	65 mm ... 105 mm, 6 % ... 90 % remission
Resolution:	5 μm ¹⁾
Repeatability:	15 μm ²⁾
Linearity:	$\pm 40 \mu\text{m}$ ³⁾
Response time ⁴⁾ :	0.5 ms
Measuring frequency:	10 kHz
Light source:	Laser, red
Laser protection class:	2 (EN 60825-1) ⁵⁾
Typ. light spot size (distance):	70 μm x 290 μm (85 mm)
Note:	Requires AOD-x

- 1) Measurement on 90 % remission (ceramic, white), for OD25-x measurement on mirror; averaging set to: 256 2) Measurement on 90 % remission (ceramic, white), for OD25-x measurement on mirror; averaging set to: 256; constant ambient conditions 3) Measurement on 90 % remission (ceramic, white), for OD5-25x measurement on mirror 4) Automatic sensitivity adjustment ≤ 2 ms 5) Wavelength 650 nm, max. output 1 mW

Mechanics/electronics

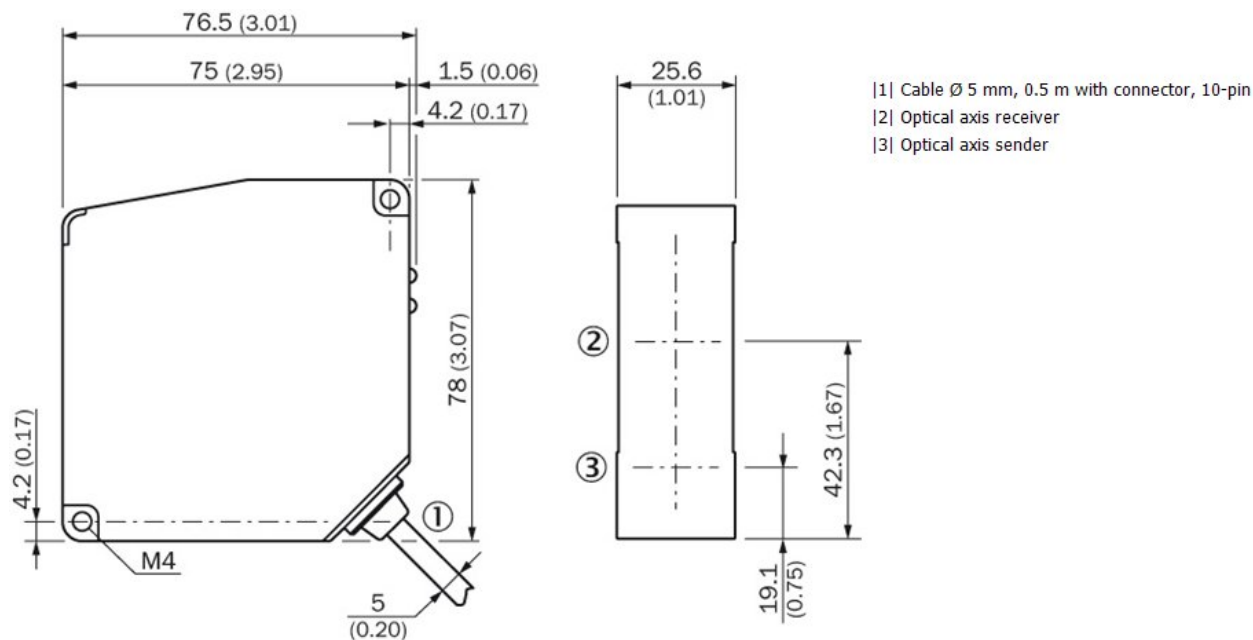
Connection type::	0.5 m cable with connector ^{1) 2)}
Warm-up time:	≤ 5 min
Indication:	LEDs, 1.4" color-display on controller unit
Weight:	250 g ³⁾
Housing material:	Aluminum housing with glass lens

- 1) Extendable by cable to max. 10 m 2) Sensor must be connected to controller unit 3) Inclusive 0.5 m cable

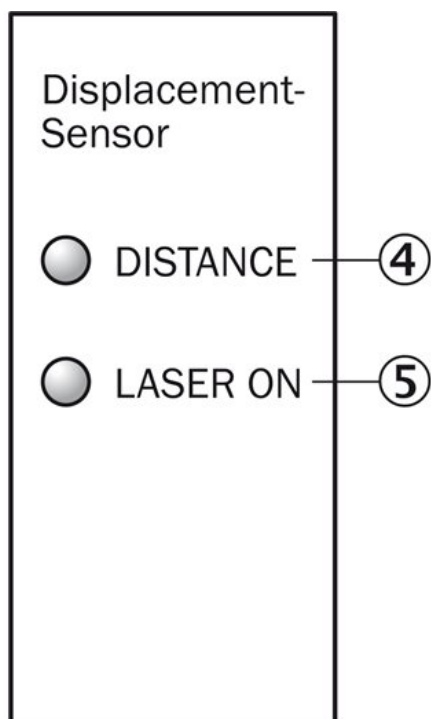
Ambient data

Enclosure rating:	IP 67
Protection class:	III
Ambient temperature:	Operation: -10 ... 45 °C, Storage: -20 ... 60 °C
Temperature drift:	± 0.01 % FS/K (FS = Full Scale = Measuring range of sensor)
Typ. ambient light safety:	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)
Relative humidity (not condensing):	35 % ... 85 %

Dimensional drawing



Adjustment possible

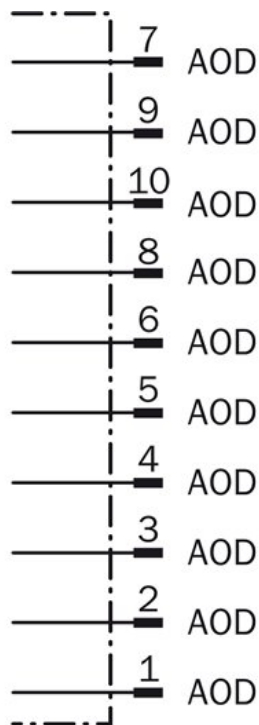


- |4| Distance indicator
- |5| Status indicator laser (laser on)

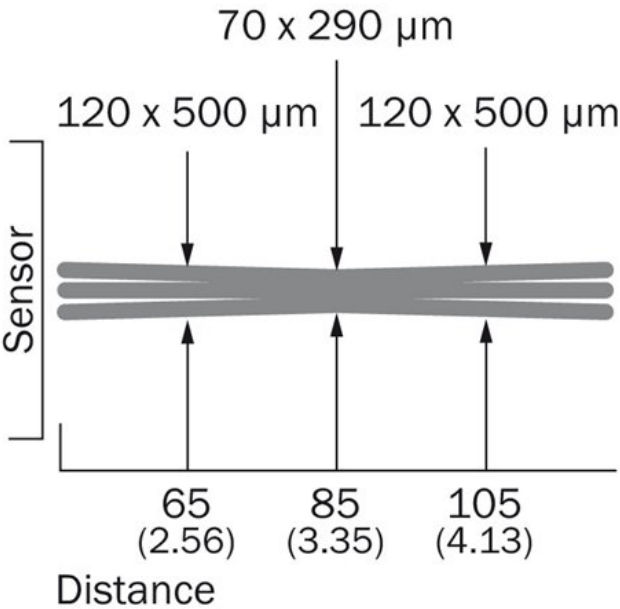
Connection type



Connection diagram

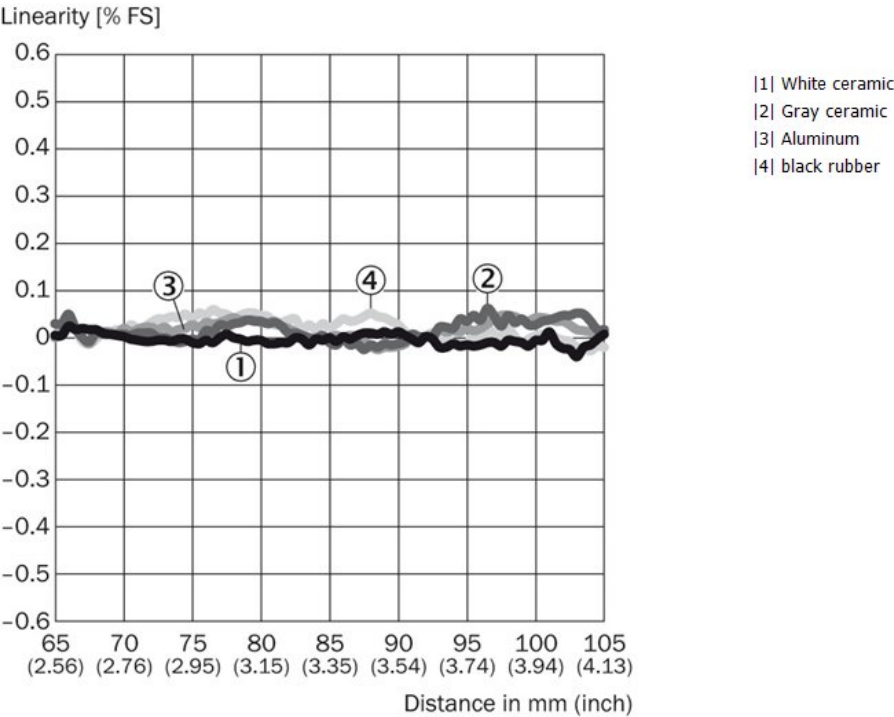


Light spot size



All dimensions in mm (inch)

Linearity



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