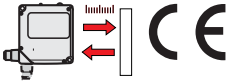


OD Hi

Displacement Sensor



1.2 ± 0.2 in (30 ± 4mm)
2 ± 0.4 in (50 ± 10 mm)

sensing range

OD Hi



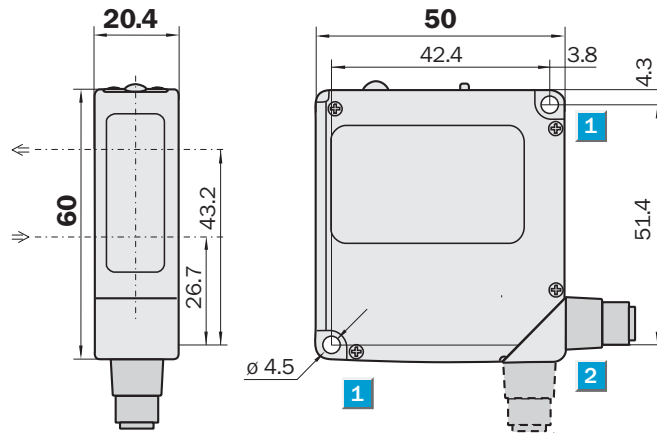
Highlights

- Laser technology
- CMOS technology:
 - object independent measuring: shiny, dark
- Stand-alone device:
 - no additional external controller necessary
- Setting and display on the device – quick, fast and easy setup

Dimensional drawing

OD 30

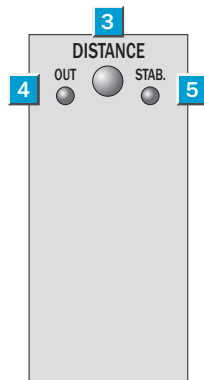
OD 50



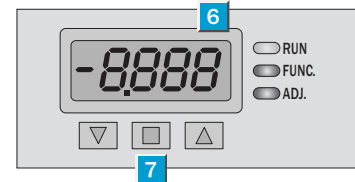
dimensions in mm

Adjustments

All types



- 1 Mounting hole, \varnothing 0.2 in (4.5 mm)
- 2 M12 plug: 90° rotatable
- 3 Distance indicator
- 4 Output indicator (OUT)
- 5 Stability indicator
- 6 Display
- 7 Mode buttons

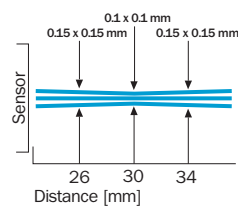


Stocked, Distributed, and Supported by

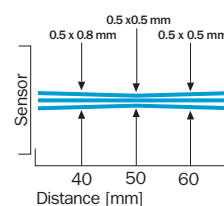
SENSORS
INCORPORATED

507 Kelsey Street • Delano, MN 55328
Phone 763-972-1040 Fax 763-972-1041
Toll Free 888-920-0939
Sensorsincorporated.com

OD 30-04: Light spot diameter



OD 50-10: Light spot diameter



Technical data		OD	30-04 P850	30-04 N850	50-10 P850	50-10 N850					
Light source	Red laser diode 2 (II) ¹⁾										
Measuring range	1.2 ± 0.2 in (30 ± 4 mm)										
	2 ± 0.4 in (50 ± 10 mm)										
Resolution²⁾	4 μm										
	10 μm										
Reproducibility³⁾	12 μm										
	30 μm										
Accuracy⁴⁾	± 80 μm										
	± 200 μm										
Temperature drift	± 0.08% FS ⁵⁾ /°C										
Response time⁶⁾	2 ms										
Measuring frequency/Output rate	1 kHz										
In- and outputs	PNP										
	NPN										
Outputs											
1 Analog current output	4...20 mA ⁷⁾										
1 Control output	Max. 100 mA/30 V DC										
Inputs											
1 Sample and Hold input	Synchronization of the sensor										
1 Teach input	To reference the measurement										
Display type	Alphanumeric display, 4-digit										
Additional features	Averaging functions										
	Autom./manual sensitivity setting										
	Timer functions										
	3 Memory banks										
Supply voltage V_S	12...24 V DC, -5%, 10%										
Current consumption⁸⁾	≤ 2.88 W										
Enclosure rating	IP 67										
VDE protection class	III										
Ambient temperature T_A	Operation: 14...104° F (-10...40° C) ⁹⁾										
	Storage: -4...140° F (-20...60° C)										
Ambient light limit	Max. 3,000 lx (artificial light)										
	Max. 10,000 lx (sunlight)										
Vibration resistance	10/s...55/s ¹⁰⁾										
Shock resistance	50 G (500 m/s ²)										
Weight	7 oz (200 g) plug, 10.5 oz (300 g) cable										
Housing material	Zinc										
Cable extension¹¹⁾	Plug M12 8-pin										

- 1) Wavelength 650 nm, max. output 1 mW
2) Averaging: 64 measurements
Object: 6...90% remission
3) With constant environmental conditions;
Averaging: 64 measurements

- 4) For 18...90% remission; equivalent ± 1% of full scale
5) Full scale = Measuring range:
OD30-04 = 0.3 in (8 mm)
OD50-10 = 0.8 in (20 mm)

- 6) Without averaging and manually selected sensitivity
7) Load impedance max. 300 Ω
8) Including analog current output
9) Non-condensing; do not bend below 0° C

- 10) Amplitude 0.1 in (1.5 mm)
2 h for axes XYZ
11) 2 m cable: 6020663
5 m cable: 6020664

Beam Attenuator

The OD sensors are equipped with an M12 style quick disconnect. The cable can be removed quickly and easily in the event that personnel require access to the area where the sensor is mounted.



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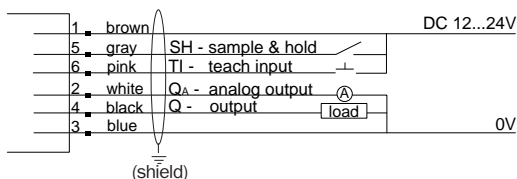


Order information

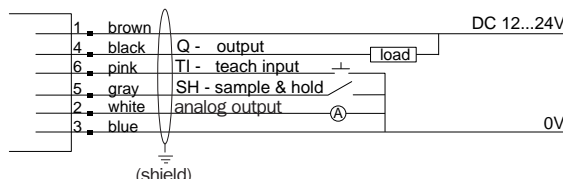
Type	Part no.
OD30-04N850	6025034
OD30-04P850	6025032
OD50-10N850	6025038
OD50-10P850	6025036

Connection diagram

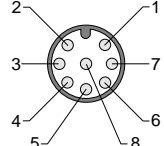
PNP Models



NPN Models



M12 Connector



wire colors refer to cable 6 020 663, not included with quick disconnect models

OD Hi

Displacement Sensor



3.1 ± 0.6 in (80 ± 15 mm)
3.9 ± 1.6 in (100 ± 40 mm)/9.8 ± 5.9 in (250 ± 150 mm)

sensing range

Highlights

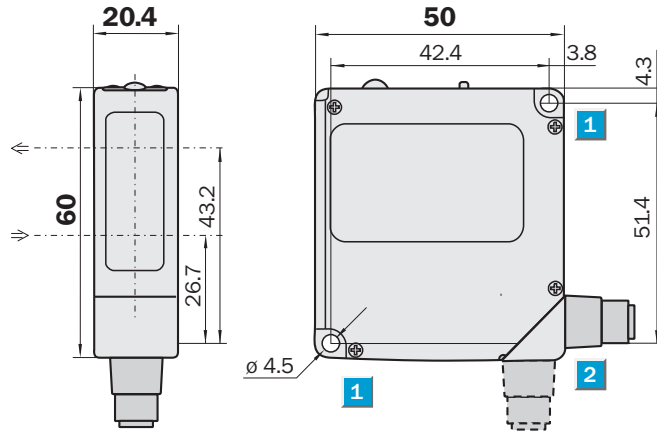
- Laser technology
- CMOS technology:
 - object independent measuring: shiny, dark
- Stand-alone device:
 - no additional external controller necessary
- Setting and display on the device – quick, fast and easy setup

OD Hi



Dimensional drawing

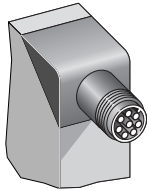
OD 80
OD 100
OD 250



dimensions in mm

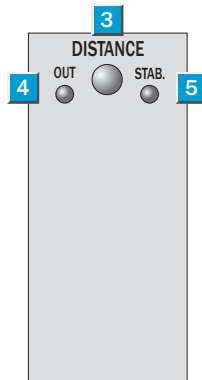
8-pin M12

OD80-15P850	OD250-150P850
OD80-15N850	OD250-150N850
OD100-40P850	
OD100-40N850	

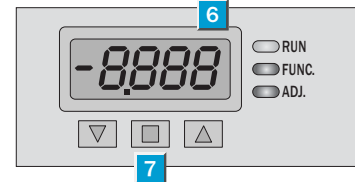


Adjustments

All types



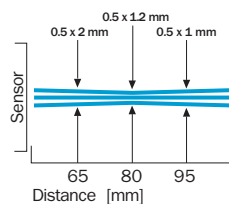
- 1 Mounting hole, \varnothing 0.2 in (4.5 mm)
- 2 M12 plug: 90° rotatable
- 3 Distance indicator
- 4 Output indicator (OUT)
- 5 Stability indicator
- 6 Display
- 7 Mode buttons



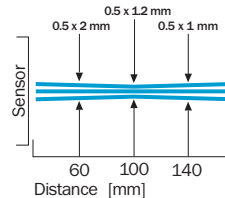
Order information

Type	Part no.
OD80-15N850	6025042
OD80-15P850	6025040
OD100-40N850	6025046
OD100-40P850	6025044
OD250-150N850	6028097
OD250-150P850	6028096

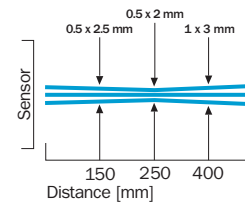
OD80-15: Light spot diameter



OD 100-40: Light spot diameter



OD 250-150: Light spot diameter



Technical data		OD	80-15 P850	80-15 N850	100-40 P850	100-40 N850	250-150 P850	250-150 N850				
Light source	Red laser diode 2 (II) ¹⁾											
Measuring range	3.1 ± 0.6 in (80 ± 15 mm)											
	3.9 ± 1.6 in (100 ± 40 mm)											
	9.8 ± 5.9 in (250 ± 150 mm)											
Resolution²⁾	15 µm											
	35 µm											
	75 µm											
Reproducibility³⁾	45 µm											
	105 µm											
	225 µm											
Accuracy⁴⁾	± 300 µm											
	± 800 µm											
	± 6 mm											
Temperature drift	± 0.08% FS ⁵⁾ /°C											
Response time⁶⁾	2 ms											
Measuring frequency/Output rate	1 kHz											
In- and outputs	PNP											
	NPN											
Outputs												
1 Analog current output	4...20 mA ⁷⁾											
1 Control output	Max. 100 mA/30 V DC											
Inputs												
1 Sample and Hold input	Synchronization of the sensor											
1 Teach input	To reference the measurement											
Display type	Alphanumeric display, 4-digit											
Additional features	Averaging functions											
	Autom./manual sensitivity setting											
	Timer functions											
	3 Memory banks											
Supply voltage V_S	12...24 V DC, -5%, 10%											
Current consumption⁸⁾	≤ 2.88 W											
Enclosure rating	IP 67											
VDE protection class	III											
Ambient temperature T_A	Operation: 14...104° F (-10...40° C) ⁹⁾											
	Storage: -4...140° F (-20...60° C)											
Ambient light limit	Max. 3,000 lx (artificial light)											
	Max. 10,000 lx (sunlight)											
Vibration resistance	10/s...55/s ¹⁰⁾											
Shock resistance	50 G (500 m/s ²)											
Weight	7 oz (200 g) plug, 10.5 oz (300 g) cable											
Housing material	Zinc											
Cable extension¹¹⁾	Plug M12 8-pin											

- 1) Wavelength 650 nm, max.output 1 mW
 2) Averaging: 64 measurements
 Object: 6...90% remission
 3) With constant environmental conditions;
 Averaging: 64 measurements

- 4) For 18...90% remission; equivalent ± 1% of full scale (for OD250-150 ± 2%)
 5) Full scale = Measuring range:
 OD80-15 = 1.2 in (30 mm)
 OD100-40 = 3.1 in (80 mm)
 OD250-150 = 11.8 in (300 mm)

- 6) Without averaging and manually selected sensitivity
 7) Load impedance max. 300 Ω
 8) Including analog current output
 9) Non-condensing: do not bend below 0° C

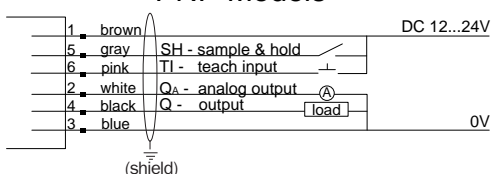
- 10) Amplitude 0.1 in (1.5 mm)
 2 h for axes XYZ
 11) 2 m cable: 6020663
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Beam Attenuator

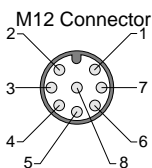
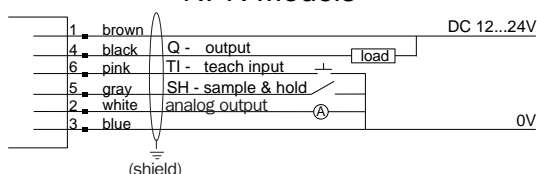
The OD sensors are equipped with an M12 style quick disconnect. The cable can be removed quickly and easily in the event that personnel require access to the area where the sensor is mounted.

Connection diagram

PNP Models



NPN Models



wire colors refer to cable 6 020 663, not included with quick disconnect models



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