



Short range distance sensors (displacement) OD Hi

OD100-40P850



Model Name > **OD100-40P850**
Part No. > **6025044**



At a glance

- Many measurement ranges from 26 mm ... 34 mm to 100 mm ... 400 mm
- CMOS receiving element for accurate measurement independent of surface
- High-visibility LC display on the device
- Laser technology for measurement of very small objects
- Tough and compact stand-alone device

Your benefits

- Reliably measure targets regardless of color or reflectivity, minimizing machine downtime
- Fast, cost-effective setup due to easy-to-read LC display
- Less wiring ensures low installation cost due to its compact, stand-alone design
- Tough, metal housing for reliable operation and reduced machine downtime
- Non-contact measurement enables quality inspection during production
- 100% inspection with optical distance sensors ensures consistent high product quality



Performance

Measuring frequency:	1 kHz
Light source:	Laser, red
Typ. light spot size (distance):	1 mm x 1.5 mm (100 mm)
Laser protection class:	2 (EN 60825-1) ¹⁾
Measuring range:	60 mm ... 140 mm, 6 % ... 90 % remission
Resolution:	≤35 μm ²⁾
Repeatability:	105 μm ³⁾
Additional function:	3 memory banks, automatic sensitivity adjustment, teach-in of analog output, teach-in of switching output, set hysteresis, Manual sensitivity adjustment, Averaging function 1 ... 1,024x, Switching mode: Distance to object (DtO)
Linearity:	± 800 μm ⁴⁾

Automatic sensitivity adjustment ≤ 15 ms;

¹⁾ Wavelength 650 nm, max. output 1 mW ²⁾ Averaging function set to: 64 ³⁾ Averaging function set to: 64; constant ambient conditions ⁴⁾ 6 % ... 90 % remission

Interfaces

Analog output:	4 mA ... 20 mA ($\leq 300 \Omega$)
Switching output:	1 x PNP (100 mA) ¹⁾
Teach input:	1 x ET
Trigger input:	1 x trigger

¹⁾ PNP: HIGH = $V_S - (< 2 V)$ /LOW = $< 2 V$; NPN: HIGH = $< 2 V$ /LOW = V_S

Mechanics/electronics

Supply voltage V_S :	DC 12 V ... 24 V ¹⁾
Power consumption:	$\leq 2.88 W$ ²⁾
Warm-up time:	$\leq 5 \text{ min}$
Housing material:	Zinc housing with glass lens
Connection type:	Connector M12, 8-pin
Indication:	LC display
Weight:	200 g ³⁾

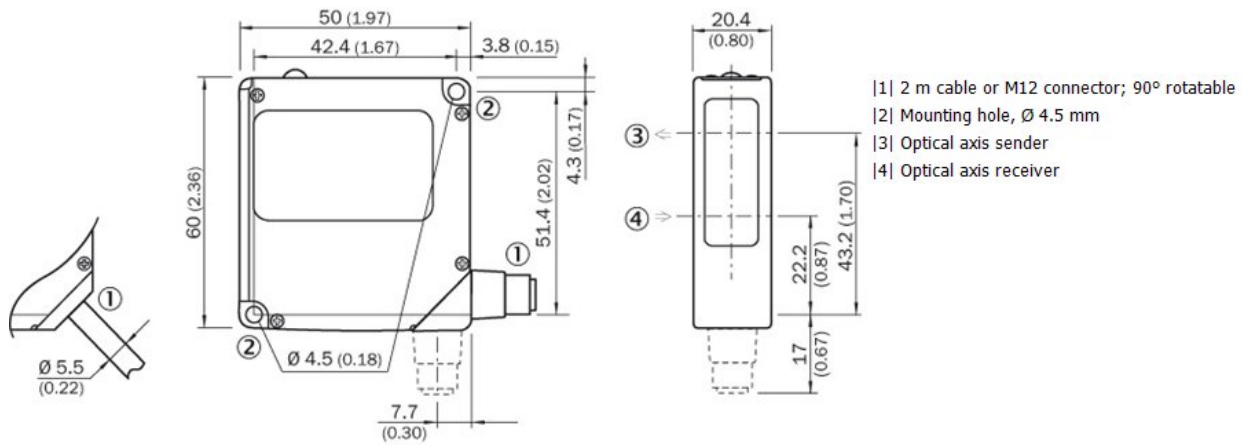
¹⁾ DC 12 V (-5 %) ... DC 24 V (+10 %) ²⁾ Exclusive load, inclusive current output ³⁾ 300 g with cable

Ambient data

Enclosure rating:	IP 67
Ambient temperature:	Operation: -10 ... 40 °C Storage: -20 ... 60 °C
Vibration resistance:	10 Hz ... 55 Hz, amplitude 1.5 mm, x-, y-, z-axis 2 hours each
Protection class:	III
Typ. ambient light safety:	Artificial light: $\leq 3,000 \text{ lx}$ Sunlight: $\leq 10,000 \text{ lx}$
Shock resistance:	50 G (x-, y-, z-axis 3 times each) ¹⁾
Temperature drift:	$\pm 0.08 \%$
Humidity (max. rel., not condensing):	35 % ... 85 %

¹⁾ FS/°C (FS = Full Scale = Measuring range of sensor)

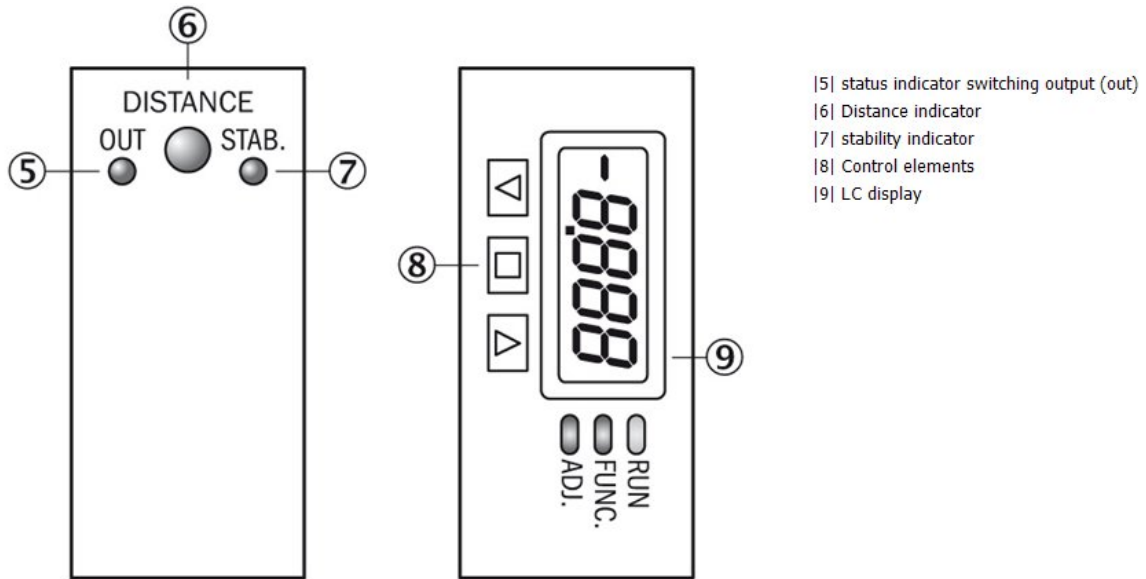
Dimensional drawing



- [1] 2 m cable or M12 connector; 90° rotatable
- [2] Mounting hole, Ø 4.5 mm
- [3] Optical axis sender
- [4] Optical axis receiver

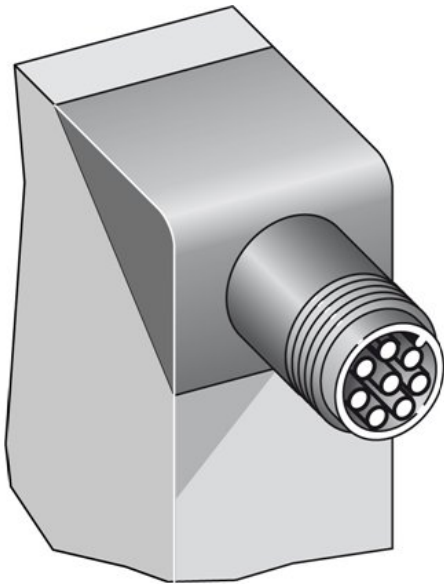
All dimensions in mm (inch)

Adjustment possible

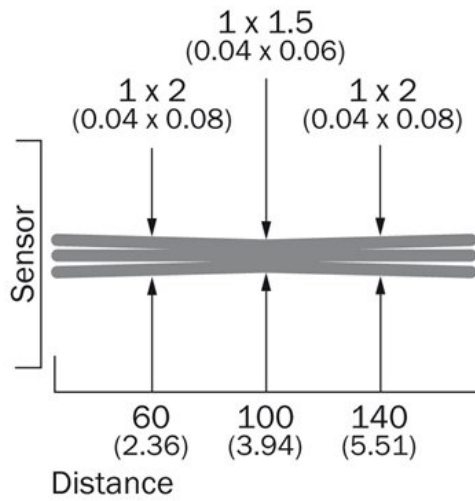


- [5] status indicator switching output (out)
- [6] Distance indicator
- [7] stability indicator
- [8] Control elements
- [9] LC display

Connection type



Light spot size



All dimensions in mm (inch)

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