

OD Hi Displacement Sensor



	Measurement range $30 \pm 4 / 50 \pm 10 / 80 \pm 15 /$ $100 \pm 40 / 250 \pm 150 \text{ mm}$
Displacement sensors	

■ CMOS Technology:

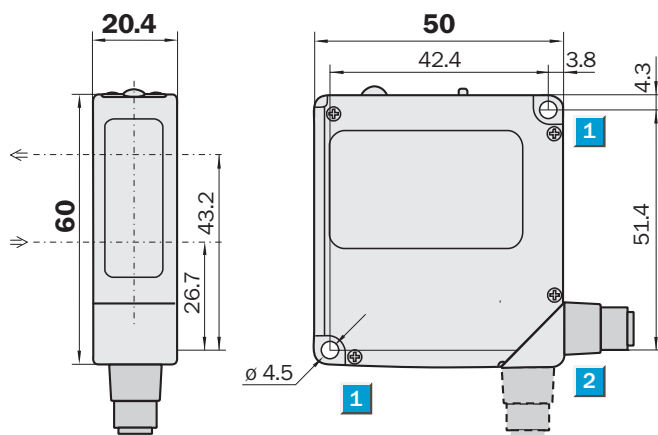
- object independent measuring: shiny, dark;
- highly precise measurement for quality improvement;
- better in handling of multiple reflections from the surface.

■ Stand-alone Device:

- No additional outlay caused by external controller necessary

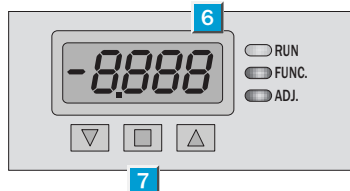
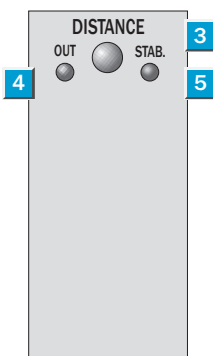
■ Setting and display on the device – quick, fast and easy set up

Dimensional drawing				
OD 30	OD 50	OD 80	OD 100	OD 250



Adjustments possible

All types



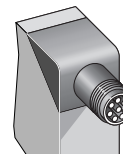
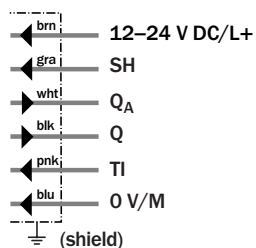
- 1 Mounting hole, $\varnothing 4.5 \text{ mm}$
- 2 2 m cable (5 m option) or M12 plug; 90° rotatable
- 3 Distance indicator
- 4 Output indicator (OUT)
- 5 Stability indicator
- 6 Display
- 7 Mode buttons

Connecting types

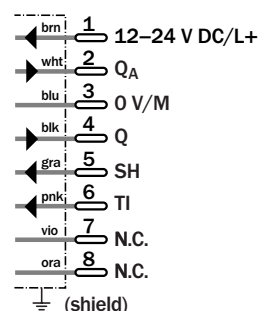
OD 30-04P152	OD 30-04N152	OD 30-04P850	OD 30-04N850
OD 50-10P152	OD 50-10N152	OD 50-10P850	OD 50-10N850
OD 80-15P152	OD 80-15N152	OD 80-15P850	OD 80-15N850
OD 100-40P152	OD 100-40N152	OD 100-40P850	OD 100-40N850
OD 250-150P152	OD 250-150N152	OD 250-150P850	OD 250-150N850



6 x 0.2 mm²



8-pin, M12



OD Hi Series Displacement sensors

Technical data		OD	30-04	30-04	50-10	50-10	80-15	80-15	100-40	100-40	250-150	250-150
			P152 ¹⁾	N152 ¹⁾	P152 ¹⁾	N152 ¹⁾	P152 ¹⁾	N152 ¹⁾	P152 ¹⁾	N152 ¹⁾	P152 ¹⁾	N152 ¹⁾
			P850 ²⁾	N850 ²⁾	P850 ²⁾	N850 ²⁾	P850 ²⁾	N850 ²⁾	P850 ²⁾	N850 ²⁾	P850 ²⁾	N850 ²⁾
Measurement range	30 ± 4 mm											
	50 ± 10 mm											
	80 ± 15 mm											
	100 ± 40 mm											
	250 ± 150 mm ³⁾											
Light source	Laser category II, EN 60825: 1998											
Analogue output	4 ... 20 mA, 0 ... 300 Ω											
Switching outputs	PNP; 30 V/100 mA open collector											
	NPN; 30 V/100 mA open collector											
Accuracy	± 1%/6% ... 90 % rem. (FS ⁴⁾), ± 2% ⁵⁾											
Linearity	± 1%/6% ... 90 % rem. (FS ⁴⁾), ± 2% ⁵⁾											
Drift	± 0.08%/°C (FS ⁴⁾)											
Resolution of analogue output ⁶⁾	10/6/5/4/2/2 μm ⁷⁾											
	20/15/10/10/8/8 μm ⁷⁾											
	30/20/15/15/8/8 μm ⁷⁾											
	60/50/35/35/20/10 μm ⁷⁾											
Analogue output freq. response – 3 dB	1000/s; 344/s; 85,6/s; 21,7/s; 5,47/s; 1,37/s ⁷⁾											
Teach-in-Input (TI)	NPN LOW = active, PNP HIGH = active											
Hold input (SH)	NPN LOW = active, PNP HIGH = active											
Timer	0 ... 10 s off/on delay, one shot, none											
VDE protection glass	III											
Sensitivity to ambient light	10,000 lx (sun), 3000 lx (artificial light)											
Supply voltage U _V	DC 12 ... 24 V, –5 %/+10 %											
Current consumption ⁸⁾	120 mA (bei 24 V)											
Warm-up time ⁹⁾	5 min. max.											
EMV, EMC ⁵⁾	EN 50081-2, EN 50082-2, EN 60947-5-2 ⁵⁾											
Enclosure rating	IP 67											
Circuit protection ¹⁰⁾	A, B, D											
Ambient temperature T _U ¹¹⁾	Operating: –10 ... +40 °C											
	Storage: –20 ... +60 °C											
Housing	Zinc											

¹⁾ Connection types: 2 m cable

²⁾ Connection: plug
part no.: 6 020 663

³⁾ Light spot diameter OD 250:
1 x 2 mm at 250 mm distance

⁴⁾ FS = Full Scale = 8 mm/OD 30,
20 mm/OD 50, 30 mm/OD 80,
80 mm/OD 100, 300 mm/OD 250

⁵⁾ OD 250 only

⁶⁾ 90 % remission

⁷⁾ 1/4/16/64/256/1024 avg.

⁸⁾ Without load

⁹⁾ For applications with max. resolution and
accuracy

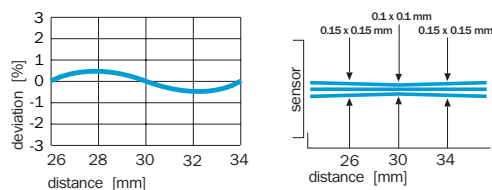
¹⁰⁾ A = Inputs and outputs reverse-polarity
protected

B = Outputs short-circuit protected

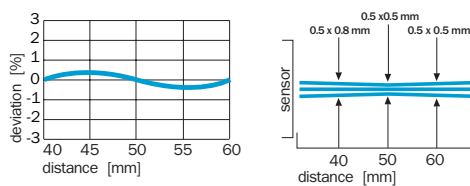
D = Interference pulse suppression

¹¹⁾ Do not bend below 0 °C

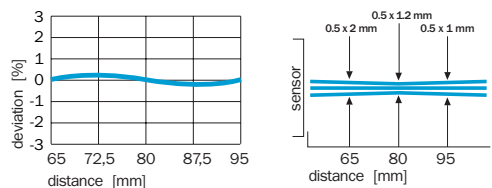
Deviation/Light spot diameter OD 30-04



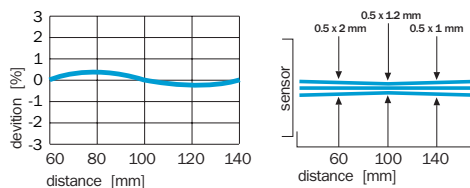
Deviation/Light spot diameter OD 50-10



Deviation/Light spot diameter OD 80-15



Deviation/Light spot diameter OD 100-40



Order information

Type	Part no.
OD 30-04N152	6 025 033
OD 30-04P152	6 025 031
OD 30-04N850	6 025 034
OD 30-04P850	6 025 032
OD 50-10N152	6 025 037
OD 50-10P152	6 025 035
OD 50-10N850	6 025 038
OD 50-10P850	6 025 036
OD 80-15N152	6 025 041
OD 80-15P152	6 025 039
OD 80-15N850	6 025 042
OD 80-15P850	6 025 040
OD 100-40N152	6 025 045
OD 100-40P152	6 025 043
OD 100-40N850	6 025 046
OD 100-40P850	6 025 044
OD 250-150N152	6 028 095
OD 250-150P152	6 028 094
OD 250-150N850	6 028 097
OD 250-150P850	6 028 096

SICK

Great Britain
Erwin Sick Ltd.
Waldkirch House
39 Hedley Road, St. Albans
Hertfordshire AL 1 5BN
☎ +44 17 27-83 11 21
Fax +44 17 27-85 67 67
info@sick.co.uk

USA
SICK, Inc.
6900 West 110th Street
Bloomington, MN 55438
☎ +1 (952) 9 41-67 80
Fax +1 (952) 9 41-92 87
WATS: 1-800-325-7425
info@sickusa.com

Australia
SICK PTY LTD
P.O. Box 214
899 Heidelberg Road
Ivanhoe, Vic. 3079, Australia
☎ +61 39 49 74 10 0
1800 33 48 02 - toll free
Fax +61 39 49 71 18 7
sales@sick.com.au