WL4-3N1330
W4-3

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WL4-3N1330	1028148

Other models and accessories ➜ www.sick.com/W4-3

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.01 m ... 4.5 m [1]
Sensing range	0.02 m ... 3.5 m [1]
Type of light	Visible red light
Light source	PinPoint LED [2]
Light spot size (distance)	Ø 75 mm (1.5 m)
Wave length	650 nm
Adjustment	None

[1] Reflector PL80A.
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	< 5 V_{pp} [2]
Power consumption	20 mA [3]
Switching output	NPN
Switching mode	Light switching
Output current $I_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Cable, 3-wire, 2 m [6]
Cable material	PVC
Conductor cross-section	0.14 mm²
Cable diameter	Ø 3.4 mm
Circuit protection	A [7] C [8] D [9]
Protection class	III
Weight	30 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] Limit values.

[2] May not exceed or fall below U_v tolerances.

[3] Without load.

[4] Signal transit time with resistive load.

[5] With light/dark ratio 1:1.

[6] Do not bend below 0 °C.

[7] A = V_S connections reverse-polarity protected.

[8] C = interference suppression.

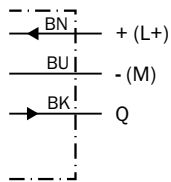[9] D = outputs overcurrent and short-circuit protected.

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902

ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram

Cd-043
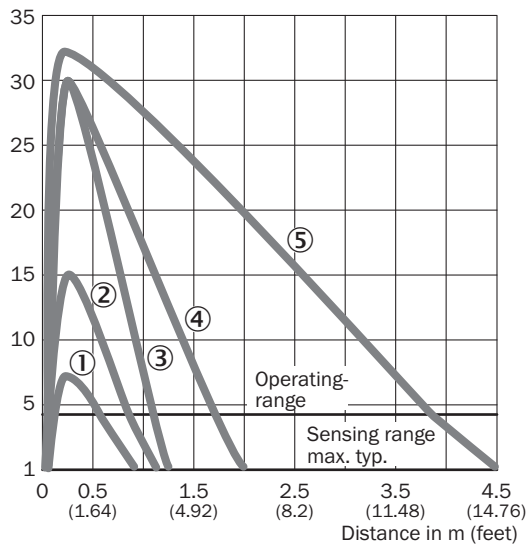
```
    BN      + (L+)
    BU      - (M)
    BK      Q
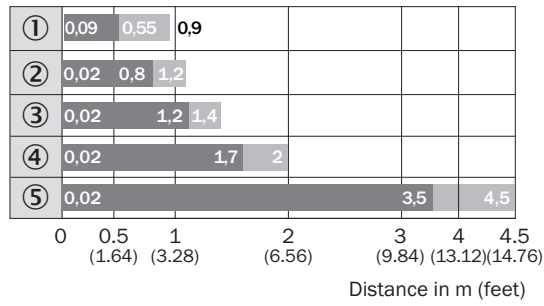```

## Characteristic curve

WLG4-3 with polarisation filter

Operating reserve in %



① Reflective tape REF-IRF-56
② PL10F reflector
③ Reflector PL20A
④ Reflector PL40A
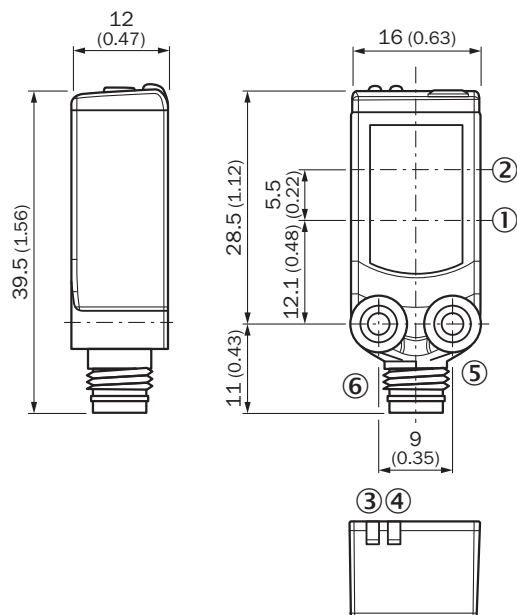⑤ Reflector PL80A

## Sensing range diagram

WLG4-3 with polarisation filter

| | | | | |
|---|---|---|---|---|
| ① | 0,09 | 0,55 | 0,9 | |
| ② | 0,02 | 0,8 | 1,2 | |
| ③ | 0,02 | 1,2 | 1,4 | |
| ④ | 0,02 | 1,7 | 2 | |
| ⑤ | 0,02 | | 3,5 | 4,5 |

0    0.5    1    2    3    4    4.5
(1.64) (3.28) (6.56) (9.84)(13.12)(14.76)

Distance in m (feet)

■ Sensing range          ■ Sensing range max.
① Reflective tape REF-IRF-56
② PL10F reflector
③ Reflector PL20A
④ Reflector PL40A
⑤ Reflector PL80A

## Dimensional drawing (Dimensions in mm (inch))

WL4-3



① Center of optical axis, sender
② Center of optical axis, receiver
③ Orange LED indicator: status of received light beam
④ LED indicator green: Supply voltage active
⑤ Threaded mounting hole M3
⑥ Connection

## Recommended accessories

Other models and accessories ➜ www.sick.com/W4-3

| | Brief description | Type | Part no. |
|---|---|---|---|
| **Universal bar clamp systems** | | | |
| | Plate N08 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware | BEF-KHS-N08 | 2051607 |
| **Mounting brackets and plates** | | | |
| | Mounting bracket for wall mounting, Stainless steel 1.4571, mounting hardware included | BEF-W4-A | 2051628 |
| | Mounting bracket for floor mounting, Stainless steel 1.4571, mounting hardware included | BEF-W4-B | 2051630 |
| **Reflectors** | | | |
| | Rectangular, screw connection, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250 | 5304812 |
| | Rectangular, screw connection, 38 mm x 15 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL20A | 1012719 |
| | Rectangular, screw connection, 56 mm x 28 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL30A | 1002314 |
| | Rectangular, screw connection, 37 mm x 56 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL40A | 1012720 |
| | Rectangular, screw connection, 80 mm x 80 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL80A | 1003865 |
| | Fine triple reflector, screw connection, suitable for laser sensors, 18 mm x 18 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL10F | 5311210 |
| | Self-adhesive | REF-IRF-56 | 5314244 |
| | Round, plugable for metal plates, PMMA/ABS, Plug-in for sheets | PL22-3 | 1004488 |

## 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."**

## WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG   |   Waldkirch   |   Germany   |   www.sick.com