



WL11-2N1130

W11-2

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
WL11-2N1130	1041388

Other models and accessories → www.sick.com/W11-2

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	15.6 mm x 48.5 mm x 42 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.15 m ... 10 m ¹⁾
Sensing range	0.15 m ... 8 m ¹⁾
Focus	Approx. 2.2°
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 50 mm (3 m)
Angle of dispersion	Approx. 2.2°
Wave length	640 nm
Adjustment	None

¹⁾ Reflector PL80A.

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	40 mA ³⁾
Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage NPN HIGH/LOW	Approx. V_S / < 2.5 V
Output current I_{max}	≤ 100 mA
Response time	≤ 2.5 ms ⁴⁾
Switching frequency	200 Hz ⁵⁾
Connection type	Cable, 4-wire, 2 m ⁶⁾
Cable material	Plastic, PVC
Conductor cross section	0.25 mm ²
Circuit protection	A ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	II ¹⁰⁾
Weight	200 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67 IP69K
Ambient operating temperature	-30 °C ... +60 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_Y 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.

¹⁰⁾ Reference voltage DC 50 V.

Safety-related parameters

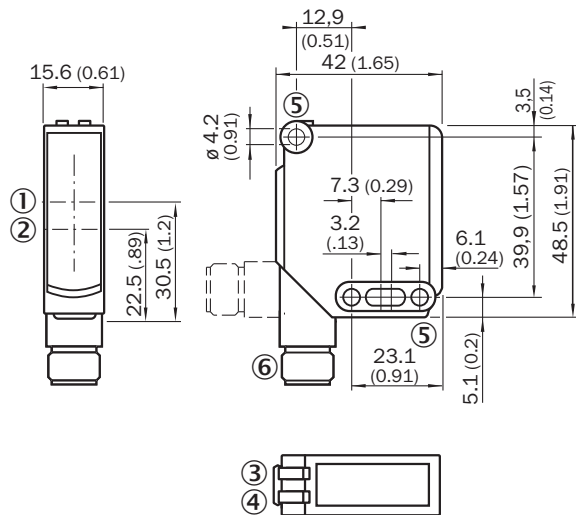
MTTF_D	2,741 years
DC_{avg}	0 %
T_M (mission time)	20 years

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))

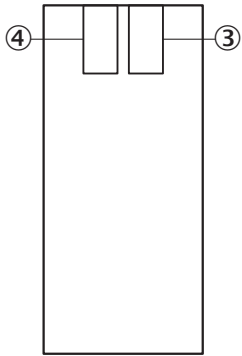
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- ① Optical axis, sender
- ② Optical axis, receiver
- ③ LED indicator green: Supply voltage active
- ④ LED indicator yellow: Status of received light beam
- ⑤ Mounting hole \varnothing 4.2 mm
- ⑥ M12 connector, 4-pin or cable

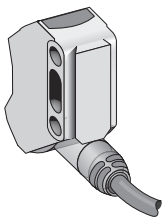
Adjustments

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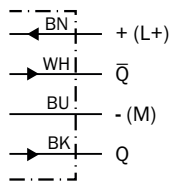
- ③ LED indicator green: Supply voltage active
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Connection type

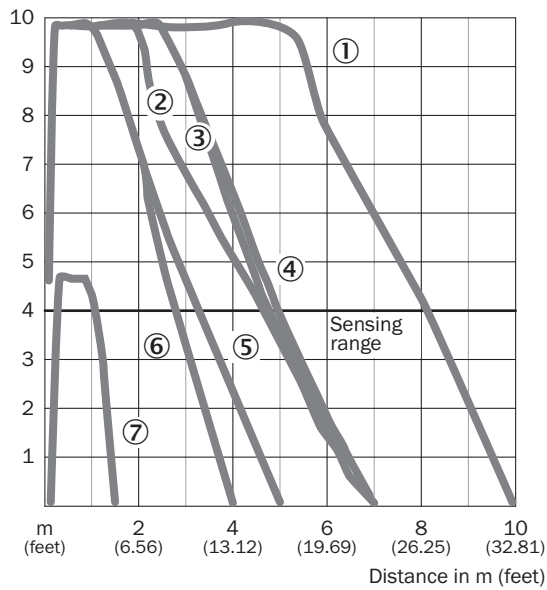


Connection diagram

Cd-094

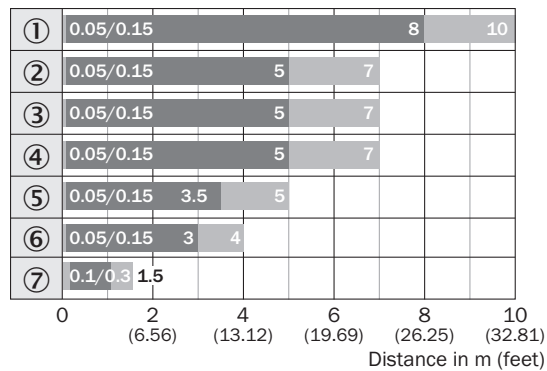


Characteristic curve



- ① Reflector PL80A
- ② Reflector C110A
- ③ Reflector PL50A
- ④ Reflector PL40A
- ⑤ Reflector PL30A
- ⑥ Reflector PL20A
- ⑦ Reflective tape Diamond Grade

Sensing range diagram







■ Sensing range ■ Sensing range typ. max.

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Recommended accessories

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	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket, large, stainless steel, mounting hardware included	BEF-WG-W12	2013942
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors			
	Rectangular, screw connection, 40 mm x 60 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL40A	1012720
Others			
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, A-coded • Description: Unshielded • Connection systems: Screw-type terminals • Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932

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