



WL150-P122

W150

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
WL150-P122	6020686

Included in delivery: BEF-W150-A (1), PL20A (1)

Other models and accessories → www.sick.com/W150

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)	10 mm x 28 mm x 17.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.01 m ... 0.7 m ¹⁾
Sensing range	0.01 m ... 0.6 m ¹⁾
Focus	Approx. 7.5°
Type of light	Visible red light
Light source	LED ²⁾
Angle of dispersion	Approx. 7.5°
Adjustment	Potentiometer, 270°
Special feature	Detecting transparent objects
Special applications	Detecting transparent objects

¹⁾ Reflector PL80A.

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

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Output current I_{max}	≤ 100 mA
Response time	≤ 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Attenuation along light beam	$> 20\%$
Connection type	Cable, 4-wire, 2 m ⁶⁾
Cable material	Plastic, PVC
Conductor cross section	0.18 mm ²
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	II
Weight	44 g
Polarizing filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PC
Enclosure rating	IP67
Items supplied	BEF-W150-A mounting bracket, Reflector PL20A
Special feature	Detecting transparent objects
Ambient operating temperature	-25 °C ... +55 °C
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRNT2.E128350 & NRNT8.E128350

¹⁾ Limit values.

²⁾ May not fall below or exceed 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⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

Certificates

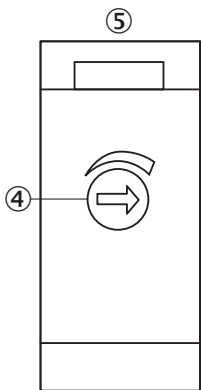
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓

Moroccan declaration of conformity	✓
China RoHS	✓
cRUus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

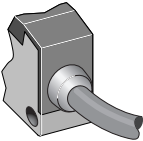
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC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

Adjustments

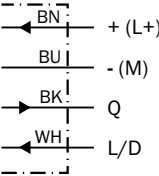


- ④ sensitivity control 270°
- ⑤ LED indicator red:
- ⑤ Light received \geq switching threshold

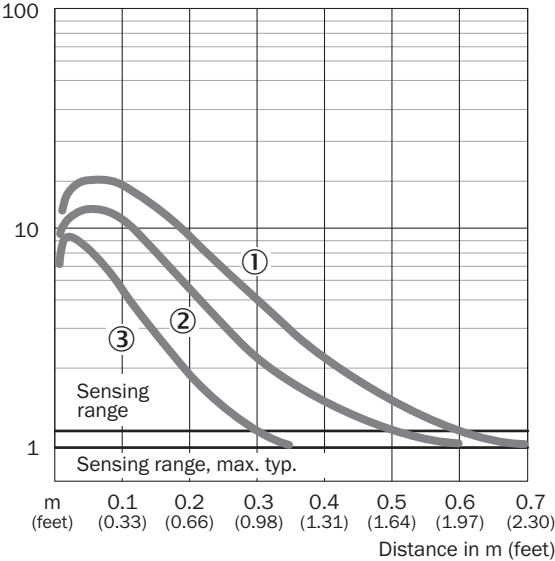
Connection type



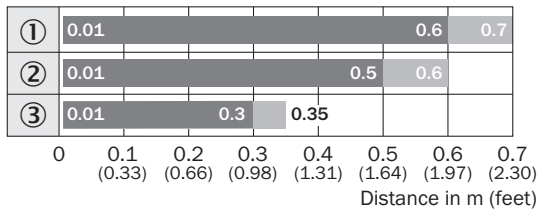
Connection diagram Cd-089



Characteristic curve



Sensing range diagram

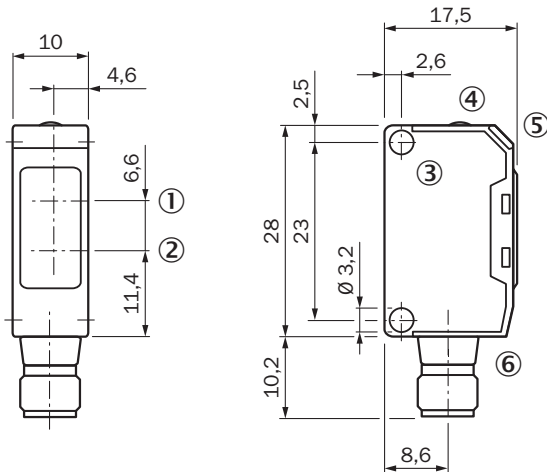


■ Sensing range ■ Sensing range typ. max.

Reflector type

- ① PL80A
- ② PL250
- ③ PL20A

Dimensional drawing








Dimensions in mm (inch)

- ① Center of optical axis, receiver
- ② Center of optical axis, sender
- ③ Mounting hole, \varnothing 3.2 mm
- ④ sensitivity control 270°
- ⑤ LED indicator red:
- ⑤ Light received \geq switching threshold
- ⑥ Connector M8, 4-pin or cable

Recommended accessories

Other models and accessories → www.sick.com/W150

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Plate N08 for universal clamp bracket Material: Steel, zinc diecast Details: Zinc plated steel (sheet), Zinc die cast (clamping bracket) Items supplied: Universal clamp (5322626), mounting hardware Usable for: W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8 	BEF-KHS-N08	2051607
	<ul style="list-style-type: none"> Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574
	<ul style="list-style-type: none"> Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081
reflectors and optics			
	<ul style="list-style-type: none"> Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C ... +65 °C 	P250	5304812
connectors and cables			
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Male connector, M8, 4-pin, straight, A-coded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² ... 0.5 mm² 	STE-0804-G	6037323
	<ul style="list-style-type: none"> Description: Unshielded Connection type head A: Male connector, M12, 4-pin, straight, A-coded 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.”

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