WT150-P162
W150

SICK
Sensor Intelligence.

PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
WT150-P162	6011048

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

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

Illustration may differ

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	10 mm x 28 mm x 18 mm
Housing design (light emission)	Rectangular
Sensing range max.	2 mm ... 100 mm [1]
Focus	Approx. 5 °
Type of light	Visible red light
Light source	LED [2]
Angle of dispersion	Approx. 5 °
Adjustment	Potentiometer, 5 turns

[1] Object with 90% remission (based on standard white, DIN 5033).
[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	± 10 % [2]
Current consumption	20 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]
Connection type	Cable, 4-wire, 2 m [6]
Cable material	Plastic, PVC
Conductor cross section	0.18 mm²
Circuit protection	A [7] B [8] C [9] D [10]
Protection class	II
Weight	44 g
Housing material	Plastic, ABS
Optics material	Plastic, PC
Enclosure rating	IP67
Items supplied	BEF-W150-A mounting bracket
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.

Safety-related parameters

MTTF$_D$	1,686 years
DC$_{avg}$	0 %

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	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Adjustments
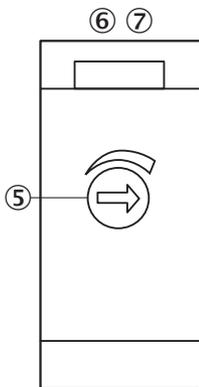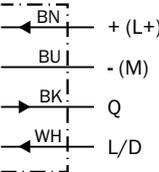
⑤ Sensing range adjustment: potentiometer, 5 turns
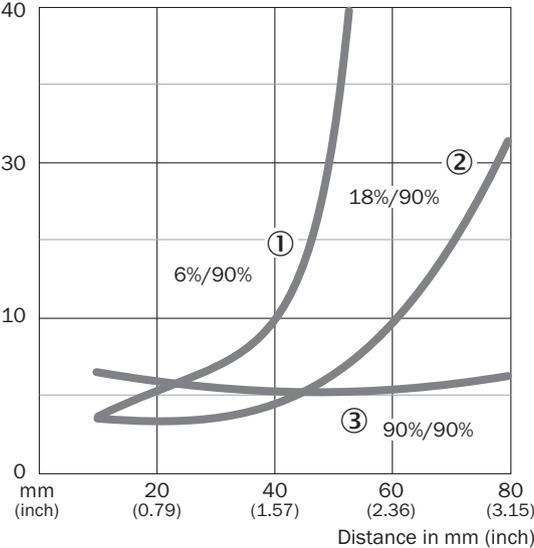⑥ LED indicator green: stability indicator
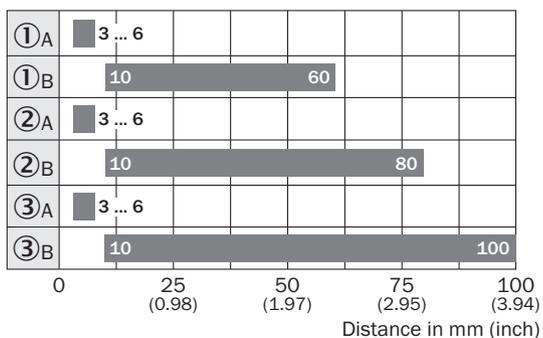⑦ LED indicator orange: output active

Connection type

Connection diagram Cd-089

```
BN ─── + (L+)
BU ─── - (M)
BK ─── Q
WH ─── L/D
```

Characteristic curve

90%/90% ③
6%/90% ①
18%/90% ②

Distance in mm (inch)

Sensing range diagram

①A	3 ... 6				
①B	10		60		
②A	3 ... 6				
②B	10			80	
③A	3 ... 6				
③B	10				100

0   25 (0.98)   50 (1.97)   75 (2.95)   100 (3.94)

Distance in mm (inch)

■ Sensing range

① Sensing range on black [12]/white background
② Sensing range on gray [12]/white background
③ Sensing range on white [12]/white background
A Sensing range control set to MIN
B Sensing range control set to MAX

Dimensional drawing
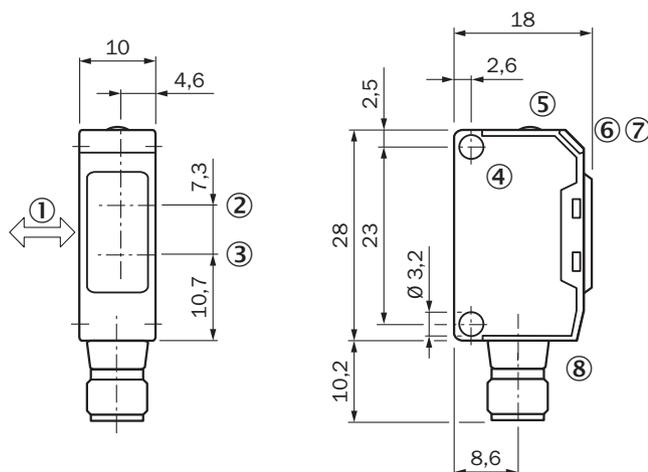
Dimensions in mm (inch)
① Standard direction of the material being detected
② Center of optical axis, receiver
③ Center of optical axis, sender
④ Mounting hole, ø approx. 3.1 mm
⑤ Sensing range adjustment: potentiometer, 5 turns
⑥ LED indicator green: stability indicator
⑦ LED indicator orange: output active
⑧ Connection

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **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
	• **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
connectors and cables			
	• **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
	• **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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