Product data sheet

WT150-P162

W150

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WT150-P162	6011048

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

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

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, 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 % reflectance (referred to standard white, DIN 5033).
[2] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Current consumption	20 mA [3]
Switching output	PNP
Switching mode	Light/dark switching

[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] B = inputs and output reverse-polarity protected.
[9] C = interference suppression.
[10] D = outputs overcurrent and short-circuit protected.

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	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

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Safety-related parameters

$MTTF_D$	1,686 years
DC_{avg}	0 %

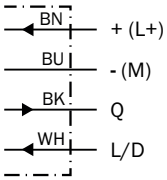
Classifications

ECl@ss 5.0	27270903
ECl@ss 5.1.4	27270903
ECl@ss 6.0	27270903
ECl@ss 6.2	27270903
ECl@ss 7.0	27270903
ECl@ss 8.0	27270903
ECl@ss 8.1	27270903
ECl@ss 9.0	27270903
ECl@ss 10.0	27270904

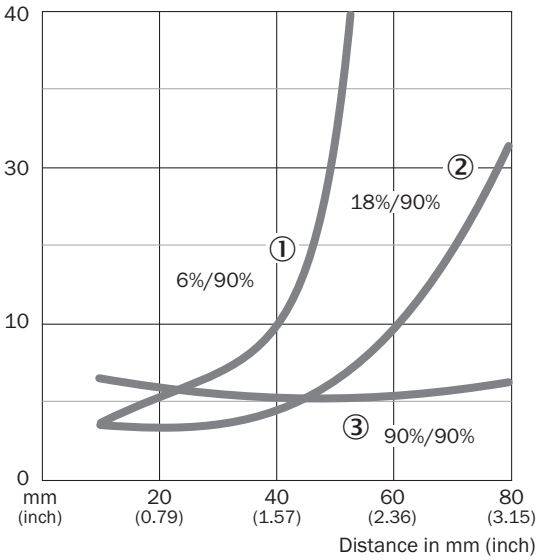
ECl@ss 11.0	27270904
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

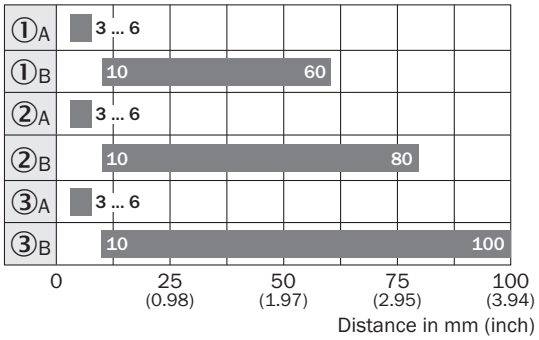
Cd-089



Characteristic curve



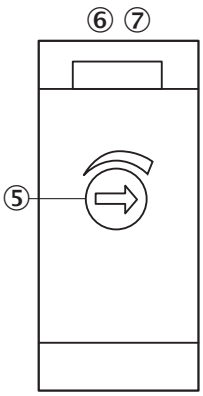
Sensing range diagram



Sensing range

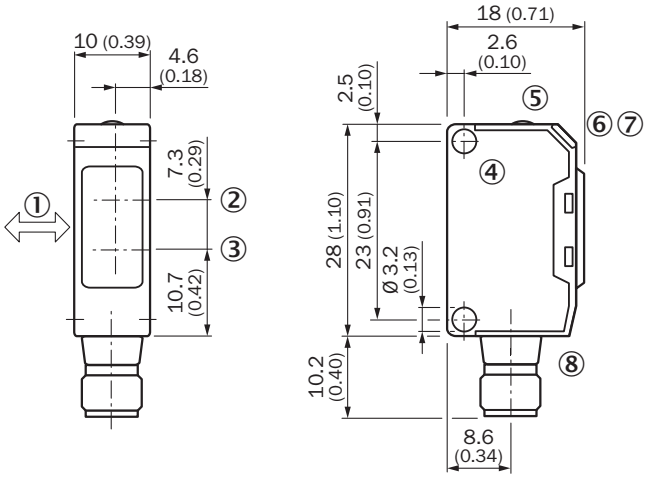
① Sensing range on black [12]/white background
② Sensing range on gray [12]/white background
③ Sensing range on white [12]/white background
A Sensing range control set to MIN
B Sensing range control set to MAX

Adjustments



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

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.
Plug connectors and cables			
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

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

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