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DATA SHEET

WT45-R260

W45
Photoelectric sensors

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Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WT45-R260

ORDERING INFORMATION

Type	part no.
WT45-R260	1009107

Further device versions and accessories at www.sick.com/W45



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	60 mm x 105 mm x 105 mm
Housing design (light emission)	Rectangular
Sensing range max.	200 mm ... 2,000 mm ¹⁾
Sensing range	200 mm ... 2,000 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 35 mm (2,000 mm)
Adjustment	Potentiometer
Special features	Cable gland, for cross-section: 0,14 mm ² ... 2,5 mm ² , max. 16 A

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	20 V AC/DC ... 250 V AC/DC ¹⁾
Power consumption	≤ 3 VA
Switching output	Relay, electrically isolated ²⁾

¹⁾ Limit values.

²⁾ Provide suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

⁴⁾ A = V_S connections reverse-polarity protected.

⁵⁾ C = interference suppression.

⁶⁾ Up to 140 °C with cooling plates (see accessories).

Output function	Change-over contacts
Switching mode	Light/dark switching ²⁾
Switching mode selector	Selectable via time delay selector switch
Switching current (switching voltage)	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 120 V DC UL: 4 A @ 250 V AC, general purpose / 2 A @ 250 V AC, pilot duty
Response time	≤ 20 ms
Switching frequency	10 Hz ³⁾
Time functions	Switch-on delay Off delay ON and OFF delay
Delay time	Adjustable via time delay selector switch, 0.5 s ... 12 s
Connection type	Terminal connection with PG13,5, 6-pin
Circuit protection	A ⁴⁾ C ⁵⁾
Protection class	I
Weight	800 g
Housing material	Metal
Enclosure rating	IP67
Usage category	AC-15, DC-13 According to EN 60947-1
Ambient operating temperature	-25 °C ... +55 °C ⁶⁾
Ambient temperature, storage	-40 °C ... +70 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values.

²⁾ Provide suitable spark suppression for inductive or capacitive loads.

³⁾ With light/dark ratio 1:1.

⁴⁾ A = V_s connections reverse-polarity protected.

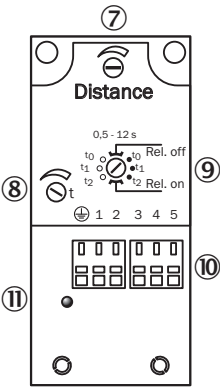
⁵⁾ C = interference suppression.

⁶⁾ Up to 140 °C with cooling plates (see accessories).

CERTIFICATES

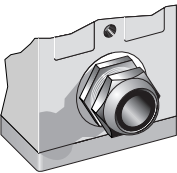
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
cULus certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

ADJUSTMENTS

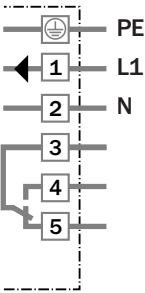


- ⑦ Adjustment of sensing range
- ⑧ Time control
- ⑨ time delay selector switch
- ⑩ terminal strip
- ⑪ Status indicator

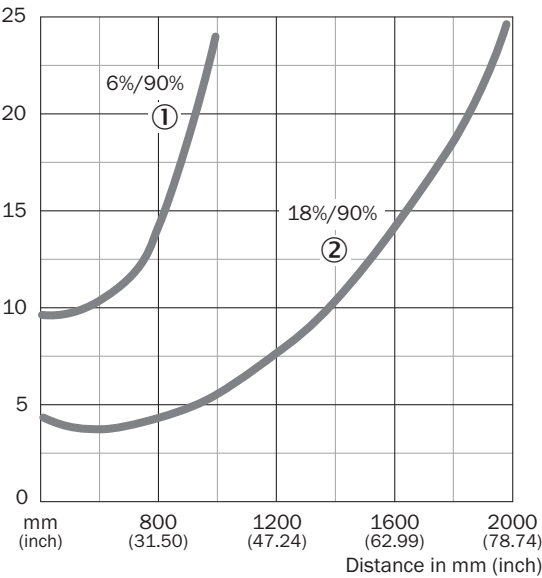
CONNECTION TYPE



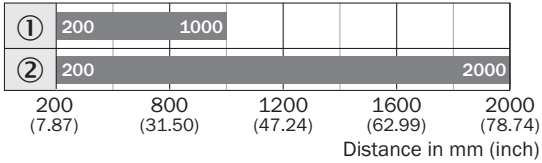
CONNECTION DIAGRAM



CHARACTERISTIC CURVE



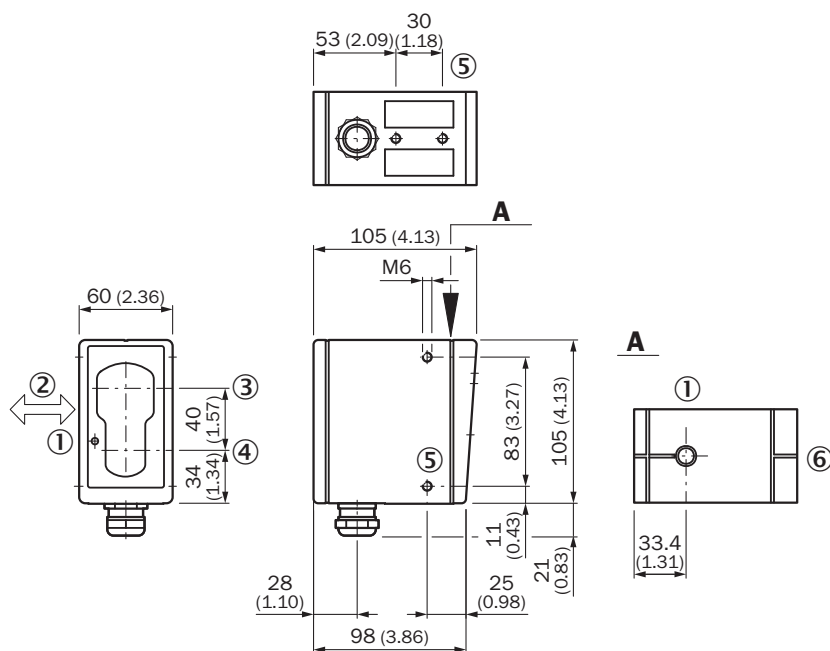
SENSING RANGE DIAGRAM



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission

DIMENSIONAL DRAWING



Dimensions in mm (inch)

- ① LED signal strength indicator
- ② Standard direction of the material being detected
- ③ Center of optical axis, receiver
- ④ Center of transmitter's optical axis
- ⑤ M6 threaded mounting hole, 8 mm deep
- ⑥ Alignment sight

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1009107



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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