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DATA SHEET

WS/WE45-P260

W45
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

WS/WE45-P260

ORDERING INFORMATION

Type	part no.
WS/WE45-P260	1010985

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



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	60 mm x 105 mm x 105 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 350 m
Sensing range	0 m ... 300 m
Focus	Approx. 0.9°
Type of light	Infrared light
Light source	LED ¹⁾
Light spot size (distance)	Ø 4.5 m (300 m)
Angle of dispersion	Approx. 0.9°
Adjustment	Potentiometer

¹⁾ Average service life: 100,000 h at T_u = +25 °C.

MECHANICS/ELECTRONICS

Supply voltage U_s	10 V DC ... 60 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Power consumption, sender	50 mA ³⁾
Power consumption, receiver	50 mA ³⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max}	≤ 200 mA
Response time	≤ 500 μs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Time functions	Switch-on delay Off delay ON and OFF delay
Delay time	Adjustable via time delay selector switch, 0.5 s, 0.015 s ... 12 s, 0.3 s
Connection type	Terminal connection with PG13,5, 6-pin
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾
Protection class	I ⁹⁾
Weight	1,600 g
Alarm output	100 mA ¹⁰⁾
Housing material	Metal
Enclosure rating	IP67
Test input sender off	TE to 0 V
Ambient operating temperature	-25 °C ... +55 °C ¹¹⁾
Ambient temperature, storage	-40 °C ... +70 °C
Part number of individual components	1009410 WS45-D260 1009412 WE45-P260

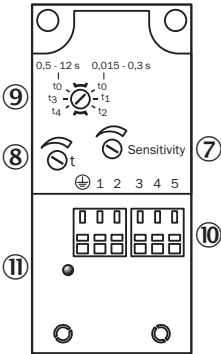
¹⁾ Limit values.²⁾ May not fall below or exceed U_s tolerances.³⁾ Without load.⁴⁾ Signal transit time with resistive load.⁵⁾ With light/dark ratio 1:1.⁶⁾ A = V_s connections reverse-polarity protected.⁷⁾ C = interference suppression.⁸⁾ D = outputs overcurrent and short-circuit protected.⁹⁾ Reference voltage: 50 V DC.¹⁰⁾ Flashes at approx. 5 Hz, switch to VS.¹¹⁾ Up to 140 °C with cooling plates (see accessories).**SAFETY-RELATED PARAMETERS**

MTTF _D	263 years
DC _{avg}	0 %
T _M (mission time)	20 years

CERTIFICATES

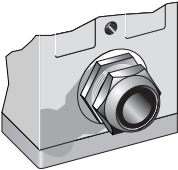
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) ex-empt	✓
Photobiological safety (DIN EN 62471) certificate	✓

ADJUSTMENTS

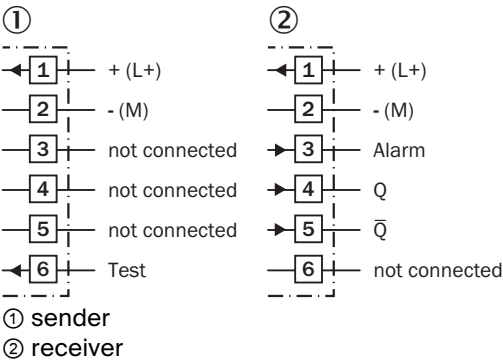


- ⑦ sensitivity control
- ⑧ Time control
- ⑨ time delay selector switch
- ⑩ terminal strip
- ⑪ Status indicator

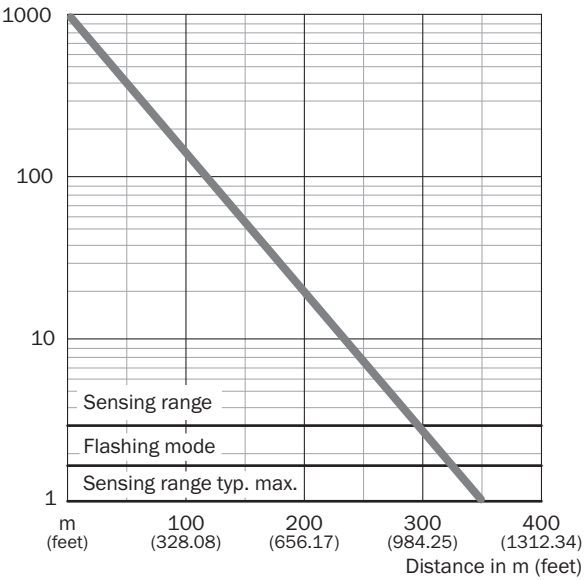
CONNECTION TYPE



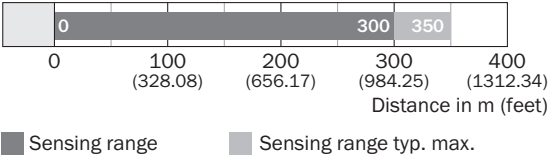
CONNECTION DIAGRAM CD-166



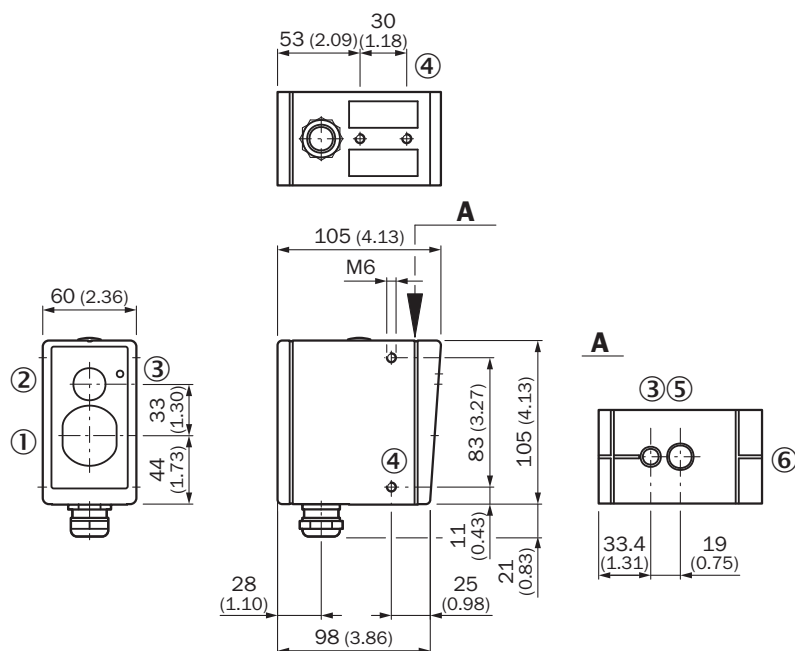
CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM



DIMENSIONAL DRAWING



Dimensions in mm (inch)

- ① Center of optical axis, sender (WS),
- ① Center of optical axis, receiver (WE)
- ② View finder lens
- ③ LED signal strength indicator
- ④ M6 threaded mounting hole, 8 mm deep
- ⑤ Eyepiece for alignment aid
- 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/1010985



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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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