Online data sheet

WS/WE45-N260

W45

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WS/WE45-N260	1010984

Other models and accessories ➜ www.sick.com/W45

Detailed technical data

Features

Sensor/ detection 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
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
Time type	On delay Off delay ON and OFF delay
Time functions	Adjustable via time delay selector switch: 0.5 ... 12 s 0.015 ... 0.3 s

[1] Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 60 V DC [1]
Ripple	≤ 5 V_{pp} [2]

[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] 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).

Power consumption, sender	50 mA [3]
Power consumption, receiver	50 mA [3]
Switching output	NPN
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]
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 V_S
Ambient operating temperature	–25 °C ... +55 °C [11]
Ambient storage temperature	–40 °C ... +70 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Part number of individual components	2081959 WS45-D260S30 2081961 WE45-N260S30

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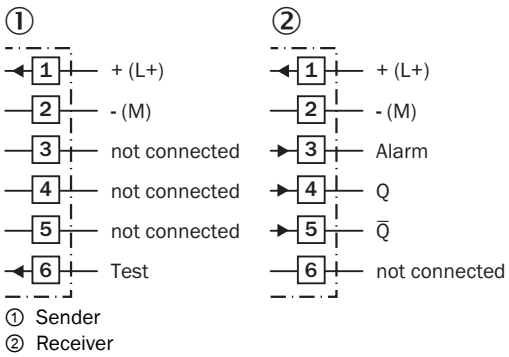
Classifications

ECl@ss 5.0	27270901
ECl@ss 5.1.4	27270901
ECl@ss 6.0	27270901
ECl@ss 6.2	27270901
ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901
ETIM 5.0	EC002716

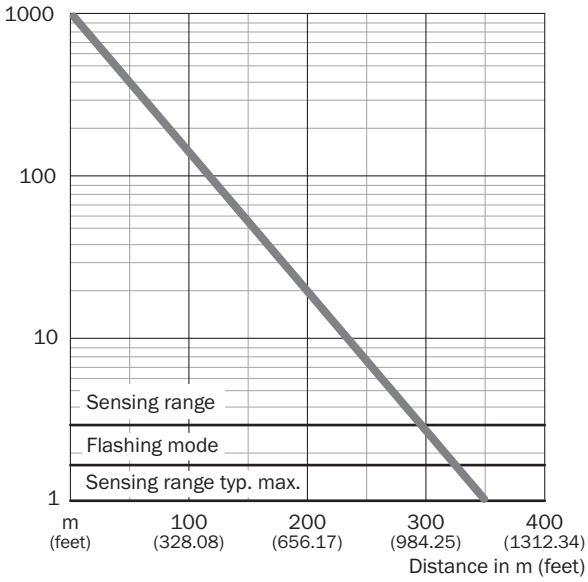
ETIM 6.0	EC002716
UNSPSC 16.0901	39121528

Connection diagram

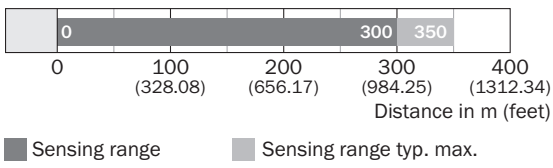
Connection diagram



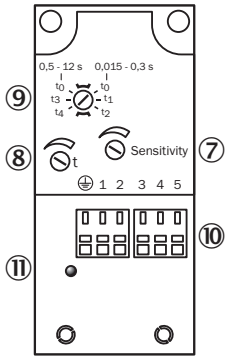
Characteristic curve



Sensing range diagram

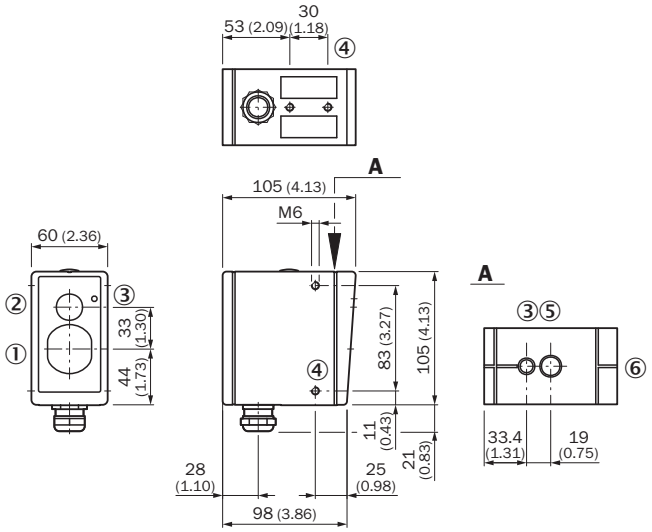


Adjustments possible



⑦ Sensitivity control
⑧ Time control
⑨ Time delay selector switch
⑩ Terminal strip
⑪ Status indicator

Dimensional drawing (Dimensions in mm (inch))



① Center of optical axis, sender (WS), 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

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