



WL45-P250

W45

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL45-P250	1008840

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

Detailed technical data

Features

Device type	Photoelectric sensors
Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	60 mm x 105 mm x 105 mm
Housing design (light emission)	Rectangular
Sensing range max.	1 m ... 55 m ¹⁾
Sensing range	1 m ... 45 m ¹⁾
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 230 mm (16 m)
Adjustment	Potentiometer

¹⁾ OP60-00.

²⁾ 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⁾
Current consumption	250 mA ³⁾

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).

Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max.}	≤ 200 mA
Response time	≤ 1.2 ms ⁴⁾
Switching frequency	400 Hz ⁵⁾
Time functions	On delay Off delay ON and OFF delay
Delay time	Adjustable via time delay selector switch, 0.5 s ... 12 s 0.015 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	800 g
Polarisation filter	✓
Front screen heating	✓
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

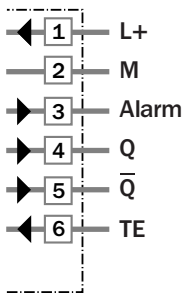
- 1) Limit values.
- 2) May not exceed or fall below U_v tolerances.
- 3) Without load.
- 4) Signal transit time with resistive load.
- 5) With light/dark ratio 1:1.
- 6) A = V_S connections reverse-polarity protected.
- 7) C = interference suppression.
- 8) D = outputs overcurrent and short-circuit 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).

Classifications

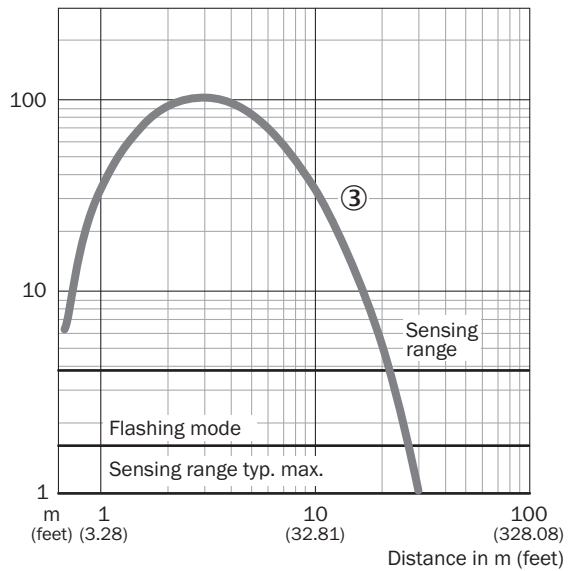
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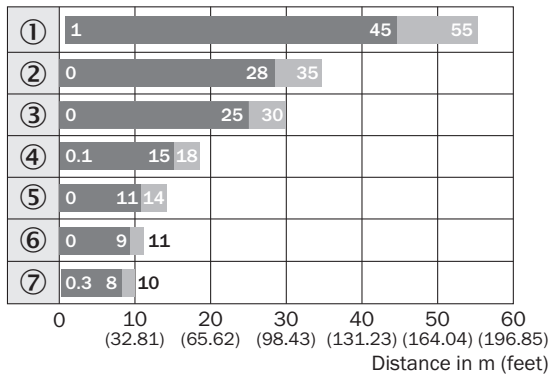
Connection diagram



Characteristic curve



Sensing range diagram

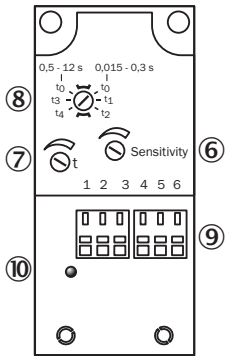


■ Sensing range ■ Sensing range typ. max.

Reflector type

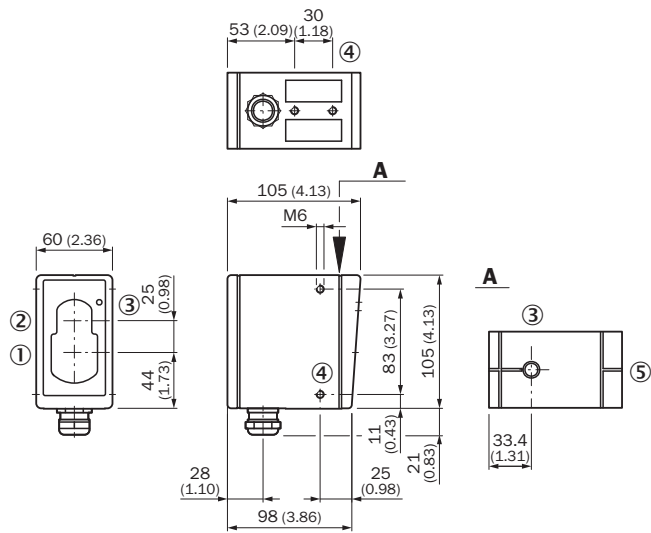
- ① OP60 ... ∞
- ② 4 x PL80
- ③ PL80A
- ④ C110
- ⑤ PL50
- ⑥ PL30
- ⑦ Reflective tape
Diamond Grade

Adjustments



- ⑥ Sensitivity control
- ⑦ Time control
- ⑧ Time delay selector switch
- ⑨ Terminal strip
- ⑩ Status indicator


Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ LED signal strength indicator
- ④ M6 threaded mounting hole, 8 mm deep
- ⑤ Alignment sight

Recommended accessories

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

	Brief description	Type	Part no.
Reflectors			
	Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865

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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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