



# WT45-P200S03

W45

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
WT45-P200S03	1015316

Other models and accessories → [www.sick.com/W45](http://www.sick.com/W45)

### Detailed technical data

#### Features

<b>Functional principle</b>	Photoelectric proximity sensor
<b>Functional principle detail</b>	Background suppression
<b>Dimensions (W x H x D)</b>	60 mm x 105 mm x 105 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	200 mm ... 1,000 mm <sup>1)</sup>
<b>Sensing range</b>	200 mm ... 1,000 mm
<b>Type of light</b>	Visible red light
<b>Light source</b>	LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 35 mm (1,000 mm)
<b>Adjustment</b>	Potentiometer
<b>Special features</b>	For the detection of hot objects with surface temperatures of > 800 °C

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

#### Mechanics/electronics

<b>Supply voltage U<sub>B</sub></b>	10 V DC ... 60 V DC <sup>1)</sup>
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<sup>1)</sup> Limit values.

<sup>2)</sup> May not fall below or exceed U<sub>V</sub> tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> Reference voltage: 50 V DC.

<sup>10)</sup> Up to 120 °C with cooling plates BEF-KP-W 45.

<b>Ripple</b>	< 5 V <sub>pp</sub> <sup>2)</sup>
<b>Current consumption</b>	50 mA <sup>3)</sup>
<b>Switching output</b>	PNP
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark switching
<b>Output current I<sub>max.</sub></b>	≤ 200 mA
<b>Response time</b>	≤ 6 ms <sup>4)</sup>
<b>Switching frequency</b>	50 Hz <sup>5)</sup>
<b>Connection type</b>	Terminal connection with PG13,5, 6-pin
<b>Circuit protection</b>	A <sup>6)</sup> C <sup>7)</sup> D <sup>8)</sup>
<b>Protection class</b>	I <sup>9)</sup>
<b>Weight</b>	800 g
<b>Special device</b>	✓
<b>Housing material</b>	Metal
<b>Enclosure rating</b>	IP67
<b>Items supplied</b>	Cooling plate BEF-KP-W 45 and special protection hood OBS-W45-H not included in scope of delivery
<b>Test input sender off</b>	TE to 0 V
<b>Ambient operating temperature</b>	-25 °C ... +55 °C <sup>10)</sup>
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C

1) Limit values.

2) May not fall below or exceed U<sub>y</sub> tolerances.

3) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) A = V<sub>S</sub> connections reverse-polarity protected.

7) C = interference suppression.

8) D = outputs overcurrent and short-circuit protected.

9) Reference voltage: 50 V DC.

10) Up to 120 °C with cooling plates BEF-KP-W 45.

### Safety-related parameters

<b>MTTF<sub>D</sub></b>	296 years
<b>DC<sub>avg</sub></b>	0 %

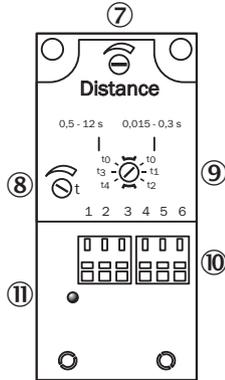
### Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>Photobiological safety (DIN EN 62471) certificate</b>	✓

Classifications

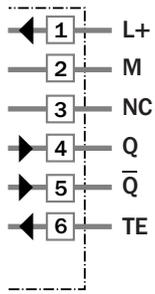
<b>ECLASS 5.0</b>	27270904
<b>ECLASS 5.1.4</b>	27270904
<b>ECLASS 6.0</b>	27270904
<b>ECLASS 6.2</b>	27270904
<b>ECLASS 7.0</b>	27270904
<b>ECLASS 8.0</b>	27270904
<b>ECLASS 8.1</b>	27270904
<b>ECLASS 9.0</b>	27270904
<b>ECLASS 10.0</b>	27270904
<b>ECLASS 11.0</b>	27270904
<b>ECLASS 12.0</b>	27270903
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>ETIM 7.0</b>	EC002719
<b>ETIM 8.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

Adjustments

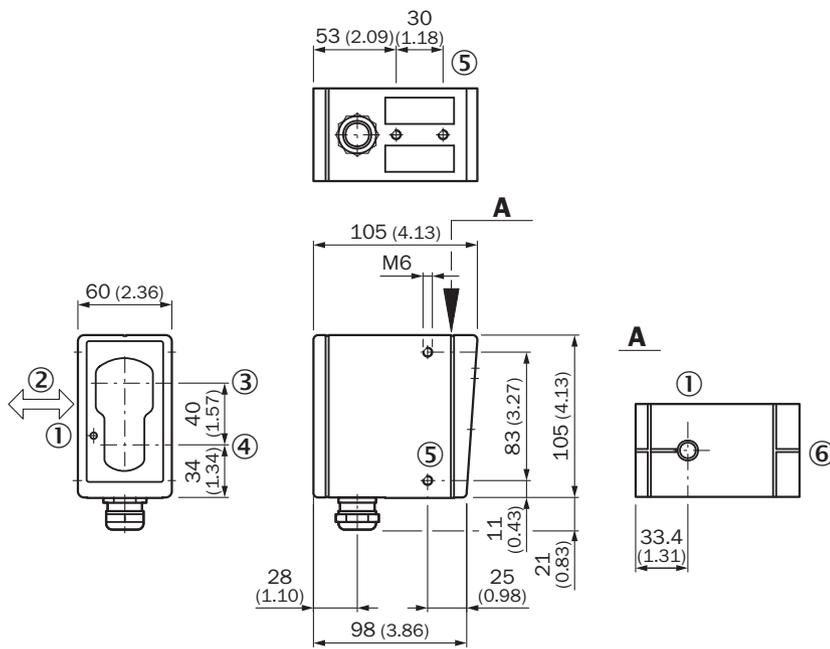


- ⑦ Adjustment of sensing range
- ⑧ Time control
- ⑨ time delay selector switch
- ⑩ terminal strip
- ⑪ Status indicator

Connection diagram



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

### Recommended accessories

Other models and accessories → [www.sick.com/W45](http://www.sick.com/W45)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"><li>• <b>Description:</b> Mounting bracket</li><li>• <b>Material:</b> Steel</li><li>• <b>Details:</b> Steel, zinc coated</li><li>• <b>Items supplied:</b> Mounting hardware included</li></ul>	BEF-WN-W45	2011480

## 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](http://www.sick.com)