



# WL100-2P4239S09

W100-2

**PHOTOELECTRIC SENSORS** 





# Ordering information

Туре	part no.
WL100-2P4239S09	6052395

Other models and accessories → www.sick.com/W100-2

Illustration may differ



## Detailed technical data

#### **Features**

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.01 m 6.3 m <sup>1)</sup>
Sensing range	0.01 m 5 m <sup>1)</sup>
Type of light	Visible red light
Light source	LED <sup>2)</sup>
Light spot size (distance)	Ø 280 mm (4 m)
Wave length	632 nm
Adjustment	None
Special features	Higher switching frequency Switching type can be selected via cable

<sup>&</sup>lt;sup>1)</sup> Reflector PL80A.

 $<sup>^{2)}</sup>$  Average service life: 100,000 h at TU = +25 °C.

# Mechanics/electronics

10 V DC 30 V DC <sup>1)</sup>
± 10 % <sup>2)</sup>
30 mA <sup>3)</sup>
PNP
Dark switching
Selectable via L/D control cable
$U_V - 1.8 \text{ V} / \text{ ca. 0 V}$
≤ 100 mA
≤ 0.25 ms <sup>4)</sup>
2,000 Hz <sup>5)</sup>
Male connector M8, 4-pin
A <sup>6)</sup> B <sup>7)</sup> D <sup>8)</sup>
III
✓
✓
Plastic, ABS/PC/POM
Plastic, PMMA
IP67
-25 °C +55 °C
-40 °C +70 °C

<sup>1)</sup> Limit values.

## Safety-related parameters

MTTF <sub>D</sub>	907 years
DC <sub>avg</sub>	0 %

## Certificates

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

 $<sup>^{2)}</sup>$  May not fall below or exceed  $\mathrm{U}_{\mathrm{V}}$  tolerances.

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

<sup>&</sup>lt;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.

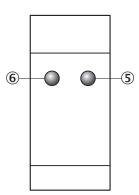
 $<sup>^{7)}</sup>$  B = output reverse-polarity protected.

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

## Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

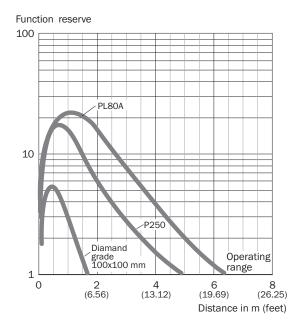
# Adjustments



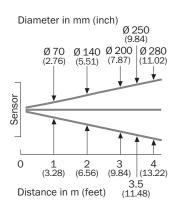
- ⑤ Orange LED indicator: switching output active
- © LED indicator green: stability indicator

# Connection diagram Cd-087

# Operating reserve



# Light spot size

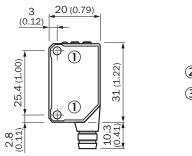


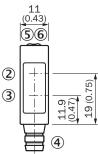
## Sensing range diagram

1	0.01*					5.0	6.	.3		
2	0.01*		3	3.5	4.	.8				
3	0.01*		3	3.5	4	.8				
4	0.01*	2.4			4.5					
(5)	0.01* 1.4	1.9								
6	0.1* 1.2	1.7								
7	0.01* 1.2	1.7								
(		.5 92)	3.0 (9.8		(14		(19	.0 .67) ice in	(24	
Se	Sensing range Sensing range max.									

<sup>\*</sup>Close-up range at maximum sensitivity

## Dimensional drawing WT100, WL100





Dimensions in mm (inch)

- ① Threaded mounting hole M3
- ② Center of optical axis, receiver
- 3 Center of optical axis, sender
- 4 Connection
- $\ensuremath{\mathfrak{D}}$  LED indicator orange: switching output active
- 6 LED indicator green: power on

## Recommended accessories

Other models and accessories → www.sick.com/W100-2

	Brief description	Туре	part no.
Mounting syst	tems		
0, "	<ul> <li>Description: Mounting bracket for wall mounting</li> <li>Material: Stainless steel</li> <li>Details: Stainless steel</li> <li>Items supplied: Mounting hardware included</li> <li>Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S</li> </ul>	BEF-W100-A	5311520
	<ul> <li>Description: Mounting bracket for floor mounting</li> <li>Material: Steel</li> <li>Details: Steel, zinc coated</li> <li>Items supplied: Mounting hardware included</li> <li>Suitable for: W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM</li> </ul>	BEF-W100-B	5311521
0 A 0 0	<ul> <li>Description: Universal mounting bracket for reflectors</li> <li>Dimensions (W x H x L): 85 mm x 90 mm x 35 mm</li> <li>Material: Steel</li> <li>Details: Steel, zinc coated</li> <li>Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A</li> </ul>	BEF-WN-REFX	2064574
6	<ul> <li>Description: Plate N11N for universal clamp bracket</li> <li>Material: Stainless steel</li> <li>Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li> <li>Items supplied: Universal clamp (5322627), mounting hardware</li> <li>Usable for: DeltaPac, Glare, WTD20E</li> </ul>	BEF-KHS-N11N	2071081
reflectors and	optics		
	<ul> <li>Description: Rectangular, screw connection</li> <li>Dimensions: 51 mm 61 mm</li> <li>Ambient operating temperature: -30 °C +65 °C</li> </ul>	P250	5304812
connectors ar	nd cables		
	Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF8U14-050VA3XLEAX	2095889
No.	<ul> <li>Connection type head A: Female connector, M8, 4-pin, straight, A-coded</li> <li>Connection type head B: Flying leads</li> <li>Signal type: Sensor/actuator cable</li> <li>Cable: 5 m, 4-wire, PUR, halogen-free</li> <li>Description: Sensor/actuator cable, unshielded</li> <li>Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul>	YF8U14-050UA3XLEAX	2094792
	<ul> <li>Connection type head A: Male connector, M8, 4-pin, straight, A-coded</li> <li>Description: Unshielded</li> <li>Connection systems: Screw-type terminals</li> <li>Permitted cross-section: 0.14 mm² 0.5 mm²</li> </ul>	STE-0804-G	6037323

# 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

