Data sheet

WS/WE100-2P1439

W100-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
WS/WE100-2P1439	6052366

Included in delivery: BEF-W100-A (1)

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

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 33 m
Sensing range	0 m ... 20 m
Type of light	Visible red light
Light source	LED [1]
Light spot size (distance)	Ø 850 mm (12 m)
Wave length	632 nm
Adjustment	Potentiometer, 270° (Sensitivity)

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

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]

[1] Limit values.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] Do not bend below 0 °C.
[7] A = V_S connections reverse-polarity protected.
[8] B = output reverse-polarity protected.
[9] D = outputs overcurrent and short-circuit protected.

Power consumption, sender	≤ 15 mA [3]
Power consumption, receiver	≤ 20 mA [3]
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage PNP HIGH/LOW	U_V - 1,8 V / ca. 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Connection type	Cable, 3-wire, 2 m [6]
Cable material	Plastic, PVC
Conductor cross section	0.18 mm²
Circuit protection	A [7] B [8] D [9]
Protection class	III
Housing material	Plastic, ABS/PC/POM
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C

[1] Limit values.
[2] May not fall below or exceed U_V tolerances.
[3] Without load.
[4] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] Do not bend below 0 °C.
[7] A = V_S connections reverse-polarity protected.
[8] B = output reverse-polarity protected.
[9] D = outputs overcurrent and short-circuit protected.

Safety-related parameters

$MTTF_D$	565 years
DC_{avg}	0 %

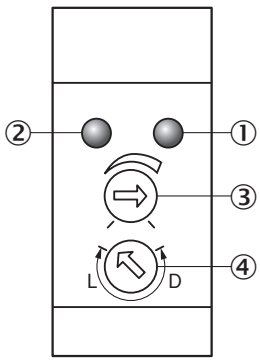
Certificates

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	✓

Classifications

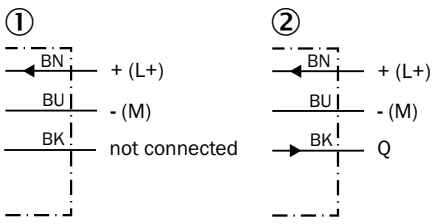
ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments W100-2



① LED indicator orange: switching output active
② LED indicator green: power on
③ Sensing range adjustment: potentiometer
④ Light/ dark rotary switch: L = light switching, D = dark switching

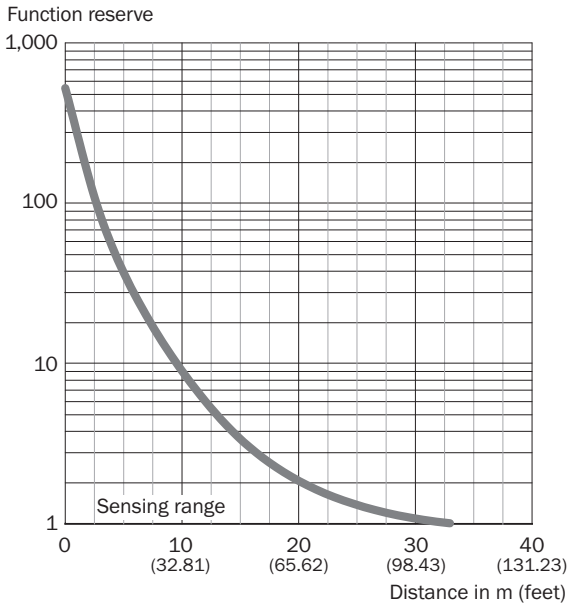
Connection diagram Cd-049



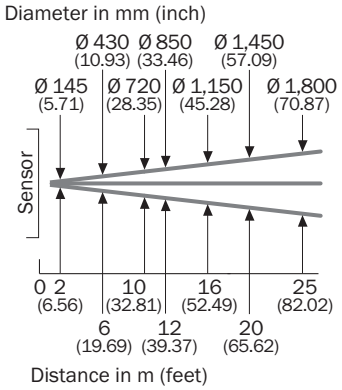
① sender

② receiver

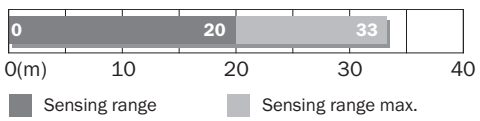
Characteristic curve WS/WE100-2



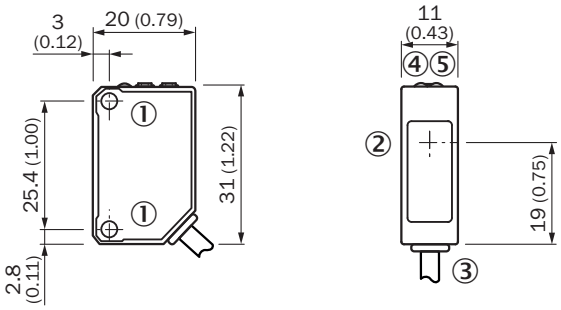
Light spot size



Sensing range diagram WS/WE100-2



Dimensional drawing



Dimensions in mm (inch)
① Threaded mounting hole M3
② Center of optical axis, sender (WS),
② Center of optical axis, receiver (WE)
③ Connection
④ LED indicator orange: switching output active
⑤ LED indicator green: power on

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting bracket for wall mounting • **Material:** Stainless steel • **Details:** Stainless steel • **Items supplied:** Mounting hardware included • **Suitable for:** W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM, W4S	BEF-W100-A	5311520
	• **Description:** Mounting bracket for floor mounting • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Mounting hardware included • **Suitable for:** W8, W8G, W8 Laser, W8 Inox, G6, G6 Inox, W100 Laser, W100-2, KTM Core, KTM Prime, CSM, LUTM	BEF-W100-B	5311521
	• **Description:** Plate N11N for universal clamp bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081

	Brief description	Type	part no.
connectors and cables			
	• **Connection type head A:** Male connector, M8, 3-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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.”

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