Product data sheet



WT100-2N1419

W100-2

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
WT100-2N1419	6052375

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

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background blanking
Dimensions (W x H x D)	11 mm x 31 mm x 20 mm
Housing design (light emission)	Rectangular
Sensing range max.	4 mm ... 140 mm [1]
Sensing range	10 mm ... 100 mm [1]
Type of light	Visible red light
Light source	LED [2]
Light spot size (distance)	Ø 8 mm (90 mm)
Wave length	632 nm
Adjustment	Potentiometer (Sensing range)

[1] Object with 90% remission (based on standard white, DIN 5033).
[2] 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.

Current consumption	30 mA [3]
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via light/dark rotary switch
Signal voltage NPN HIGH/LOW	Approx. V_S / < 1.8 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	Mounting bracket 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.
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Safety-related parameters

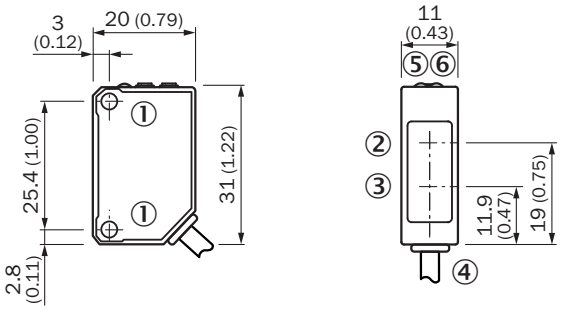
$MTTF_D$	954 years
DC_{avg}	0 %

Classifications

ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904

ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

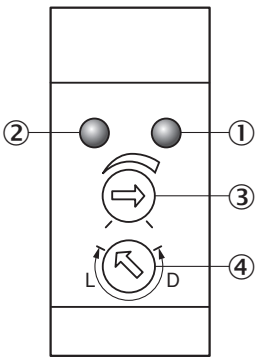
Dimensional drawing (Dimensions in mm (inch))



① Threaded mounting hole M3
② Center of optical axis, receiver
③ Center of optical axis, sender
④ Connection
⑤ LED indicator orange: switching output active
⑥ LED indicator green: power on

Adjustments

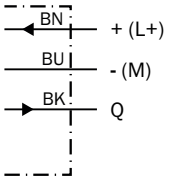
W100-2



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

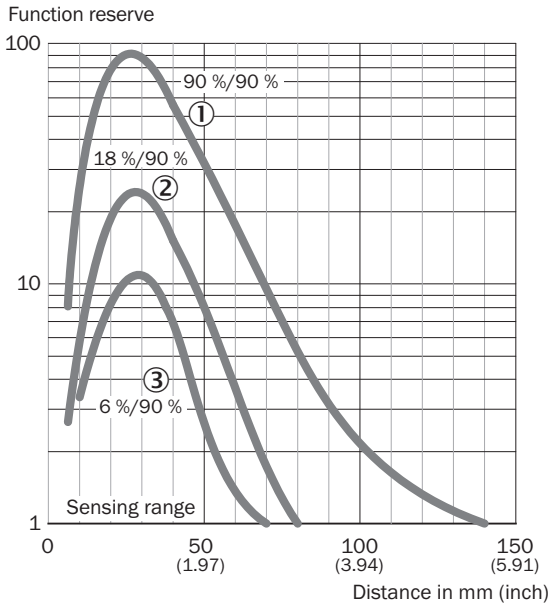
Connection diagram

Cd-043



Characteristic curve

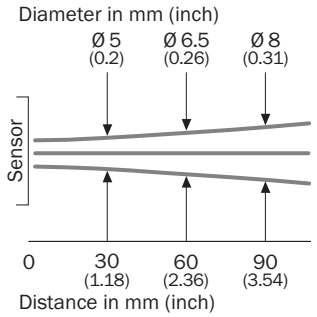
WT100-2, BGB



① Sensing range on white, 90% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on black, 6% remission factor

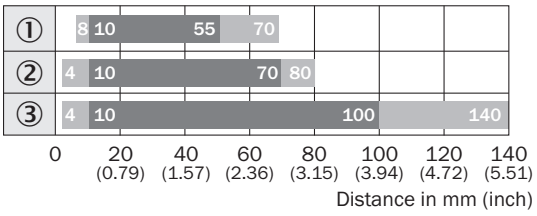
Light spot size

Light spot size



Sensing range diagram

WT100-2, BGB



Sensing range Sensing range max.

① Sensing range on black, 6% remission factor
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for wall mounting, stainless steel, mounting hardware included	BEF-W100-A	5311520
	Mounting bracket for floor mounting, steel, zinc coated, mounting hardware included	BEF-W100-B	5311521
Others			
	• **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

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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.

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For us, that is “Sensor Intelligence.”

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Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

SICK:

KUP-0610-S MPS-160TSTP0 WTB26I-24161420A00 BEF-KHZT01MPA DFS60B-S4PC10000 IMB18-12NPSVC0S IME12-04BPSZW2S IME12-08NPSZW2K MPS-128TSTP0 BEF-WN-W18 GL10G-P4251 IME08-04NPSZW2K IME12-04BNOZC0S SBO-02F12-SM1 C4C-SA06030A10000 C4P-SA03031A00 IMB12-04BPPVC0K LFP2000-A4NMB PLV14-A WL11-2P2432 YF8U14-020UA3XLEAX YF8U14-050UA3XLEAX FX3-MPL000001 IM18-12NNS-ZQD IMB12-04BNPVC0S S30A-XXXXBA VT12T-2P112 WFM50-60P311 WTB2S-2P3230 IME12-04BPOZW2K