WT100-2N1419

W100-2

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WT100-2N1419 | W100-2
PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
WT100-2N1419	6052375

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

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, 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 % reflectance (referred to standard white, DIN 5033).

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC [1]
Ripple	± 10 % [2]
Power consumption	≤ 30 mA [3]
Switching output	NPN

[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] 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.

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	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 storage temperature	−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] Do not bend below 0 °C.

[7] A = V_S connections reverse-polarity protected.

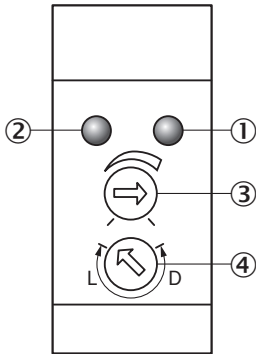[8] B = output reverse-polarity protected.

[9] D = outputs overcurrent and short-circuit protected.

Classifications

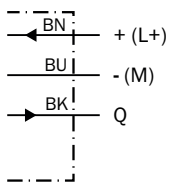|	
ECl@ss 5.0	27270904
ECl@ss 5.1.4	27270904
ECl@ss 6.0	27270904
ECl@ss 6.2	27270904
ECl@ss 7.0	27270904
ECl@ss 8.0	27270904
ECl@ss 8.1	27270904
ECl@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Adjustments possible

W100-2

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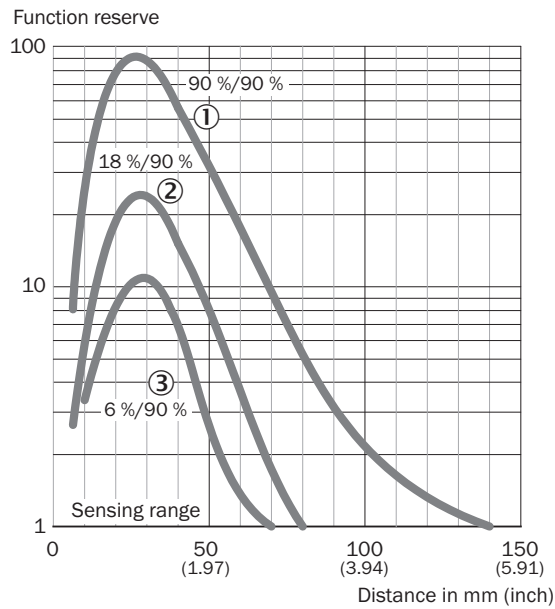④ Light/ dark rotary switch: L = light switching, D = dark switching
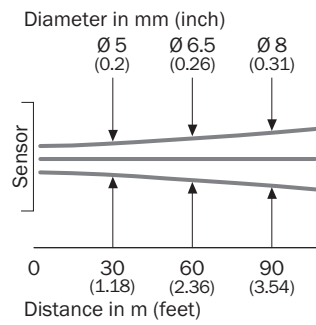
Connection diagram

cd-043

BN — + (L+)
BU — - (M)
BK — Q

Characteristic curve

WT100-2, BGB

Function reserve

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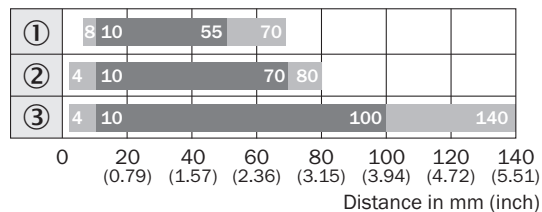② Sensing range on gray, 18 % remission
③ Sensing range on black, 6% remission

Light spot size

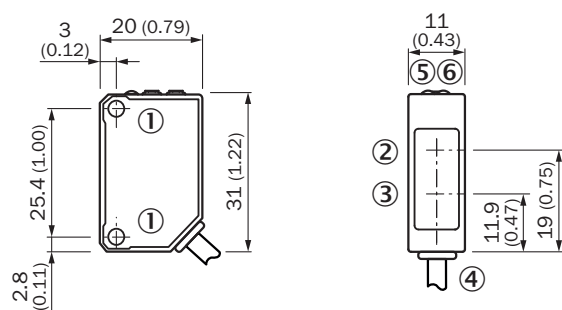WT100-2, BGB

Sensing range diagram

WT100-2, BGB

Distance in mm (inch)

■ Sensing range   ■ Sensing range max.

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

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

Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate L for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included	BEF-KHS-L01	2023057
Plug connectors and cables			
	Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded	STE-0803-G	6037322

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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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