



WTB27-3E2611
W27-3

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WTB27-3E2611	1027757

Other models and accessories → www.sick.com/W27-3

Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D)	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission)	Rectangular
Sensing range max.	30 mm ... 1,600 mm ¹⁾
Sensing range	100 mm ... 1,600 mm
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 25 mm (800 mm)
Wave length	880 nm
Adjustment	Potentiometer

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_J = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Current consumption	40 mA ³⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

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⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ Reference voltage: 50 V DC.

Switching output	NPN
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage NPN HIGH/LOW	Approx. $V_S / < 2.5$ V
Output current I_{max}	≤ 100 mA
Response time	≤ 1.5 ms ⁴⁾
Switching frequency	350 Hz ⁵⁾
Time functions	On delay Off delay Switch on delay and time delay off
Delay time	Adjustable via time delay selector switch, 0.02 s ... 0.5 s 0.5 s ... 10 s
Connection type	Connector Q6, 6-pin, DC-coding
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾
Protection class	II ⁹⁾
Weight	100 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
Test input sender off	TE to V_S
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

1) Limit values when operated in short-circuit protected network: max. 8 A.

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) A = V_S connections reverse-polarity protected.

7) B = inputs and output reverse-polarity protected.

8) C = interference suppression.

9) Reference voltage: 50 V DC.

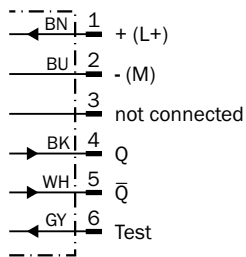
Classifications

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
ECl@ss 10.0	27270904

ECl@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

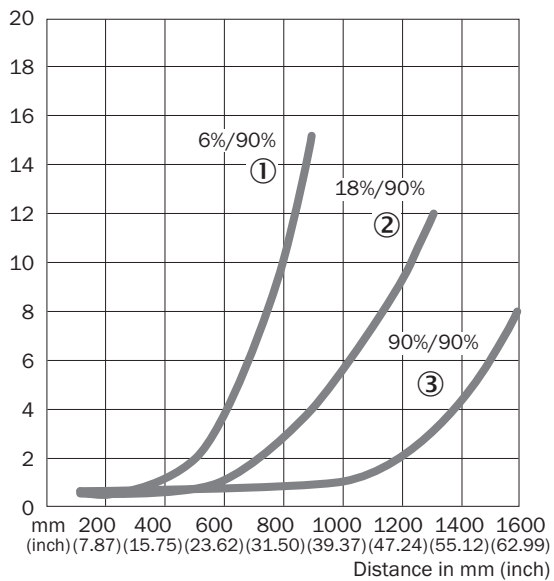
Connection diagram

Cd-178



Characteristic curve

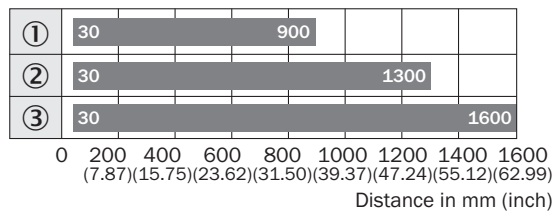
WTB27-3, infrared



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

Sensing range diagram

WTB27-3, infrared

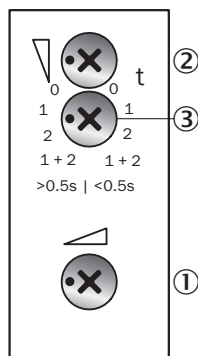


■ Sensing range

- ① Sensing range on black, 6% remission
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Adjustments

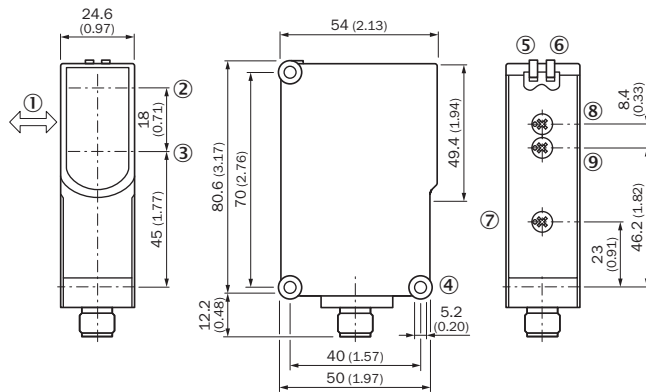
Potentiometer, time functions



- ① Potentiometer
- ② Time control
- ③ Time delay selector switch

Dimensional drawing (Dimensions in mm (inch))

WTB27-3, potentiometer, time functions



- ① Standard direction of the material being detected
- ② Optical axis, sender
- ③ Optical axis, receiver
- ④ Mounting hole \varnothing 5.2 mm
- ⑤ LED indicator green: Supply voltage active
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ Sensing range adjustment: potentiometer
- ⑧ Time control
- ⑨ Time delay selector switch

Recommended accessories

Other models and accessories → www.sick.com/W27-3

	Brief description	Type	Part no.
Device protection (mechanical)			
	Protective housing for W26, W27-3 and mounting rods with diameter 12 mm ... 20 mm, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp BEF-KHS-KH1 (2022726), mounting hardware	BEF-SG-W27	2039601

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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.

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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