



WTB27-3R2611

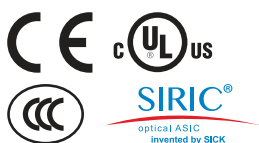
W27-3

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WTB27-3R2611	1027763

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

Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	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% remission (based on standard white, DIN 5033).

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

Mechanics/electronics

Supply voltage	20 V AC/DC ... 250 V AC/DC ¹⁾
Power consumption	≤ 2.5 VA
Switching output	Relay, electrically isolated ²⁾

¹⁾ Limit values.

²⁾ Provide suitable arc suppression for inductive or capacitive loads. Relay contacts are separated from the supply voltage by a basic isolation of 3 mm. Depending on the application, additional isolation might have to be applied in the user's circuit.

³⁾ With light/dark ratio 1:1.

⁴⁾ A = V_S connections reverse-polarity protected.

⁵⁾ C = interference suppression.

⁶⁾ Reference voltage: 250 V AC, overvoltage category 2.

⁷⁾ UL: 0 °C ... +60 °C.

Output function	Change-over contacts
Switching mode	Light/dark switching
Switching mode selector	Selectable via time delay selector switch
Switching current (switching voltage)	4 A @ 250 V AC, 4 A @ 24 V DC, 0.125 A @ 250 V DC UL: 4 A @ 250 V AC, general use / 4 A @ 250 V AC, resistive (NO) / 3 A @ 250 V AC, resistive (NC) / 4 A @ 24 V DC, NO, general use / 3 A @ 24 V DC, NC, general use / R300 / B300 (NO contacts only) / 0 °C ... +60 °C
Response time	≤ 10 ms
Switching frequency	10 Hz ³⁾
Time functions	On delay Off delay Switch on delay and time delay off
Delay time	Adjustable via time delay selector switch, 0.5 s ... 10 s
Connection type	Connector Q6, 6-pin, AC/UC-coding
Circuit protection	A ⁴⁾ C ⁵⁾
Protection class	II ⁶⁾
Weight	120 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP65
Ambient operating temperature	-40 °C ... +60 °C ⁷⁾
Ambient temperature, storage	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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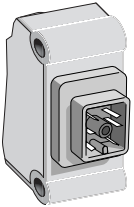
⁷⁾ UL: 0 °C ... +60 °C.

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
eCl@ss 12.0	27270903
ETIM 5.0	EC002719

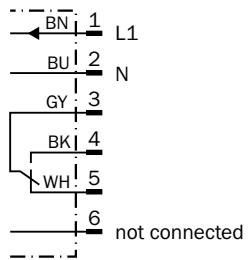
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type



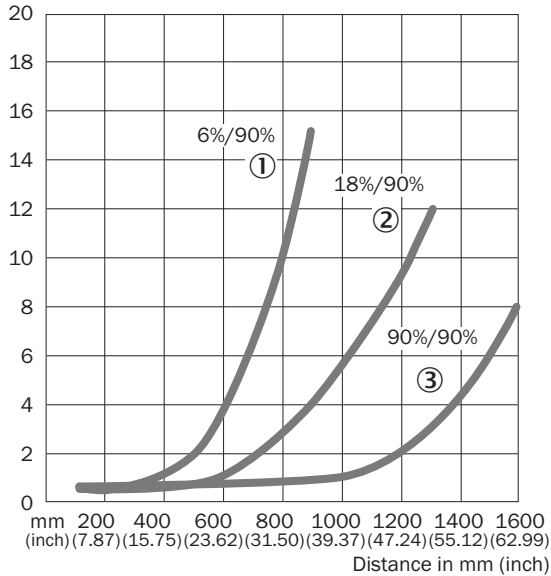
Connection diagram

Cd-181



Characteristic curve

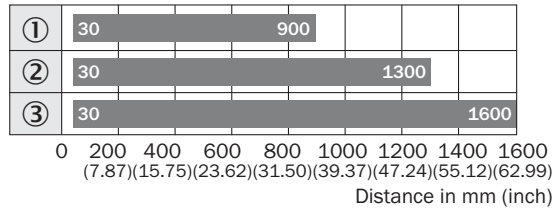
WTB27-3, infrared



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

Sensing range diagram

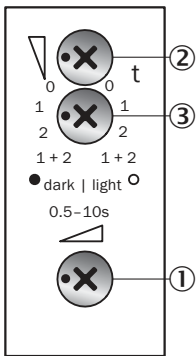
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Adjustments

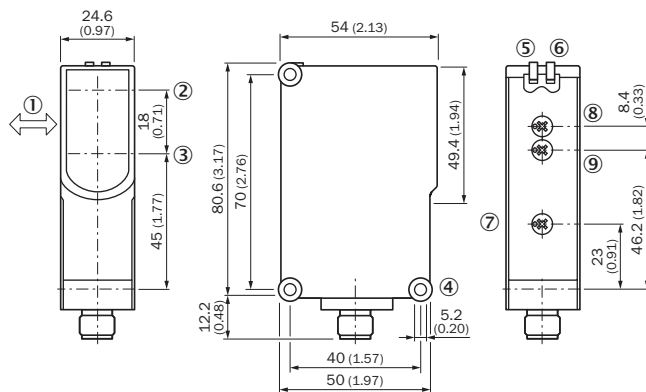
Potentiometer, time functions, light-/dark-switch



- 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
Plug connectors and cables			
	Head A: female connector, 6-pin, angled, AC/UC-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	DOL-1406-W02M	6030221

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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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