Product data sheet



WTB27-3P2413S09

W27

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
WTB27-3P2413S09	1029563

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

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 ... 2,200 mm [1]
Sensing range	100 mm ... 2,200 mm
Type of light	Infrared light
Light source	LED [2]
Light spot size (distance)	Ø 25 mm (800 mm)
Wave length	880 nm
Adjustment	Double teach-in button manual, via double teach-in button
Special features	Sensing range 2200 mm

[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]

[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.

Ripple	< 5 V_{pp} [2]
Current consumption	40 mA [3]
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. V_S – 2.5 V / 0 V
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 2.5 ms [4]
Switching frequency	200 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] B [7] C [8]
Protection class	II [9]
Weight	100 g
Special device	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP66 IP67
Ambient operating temperature	–40 °C ... +60 °C
Ambient temperature, storage	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

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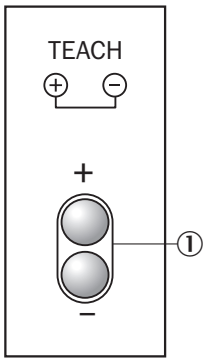
Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904

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

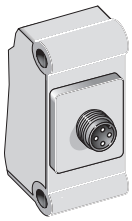
Adjustments

Double teach-in button



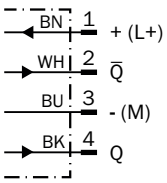
① Double teach-in button

Connection type

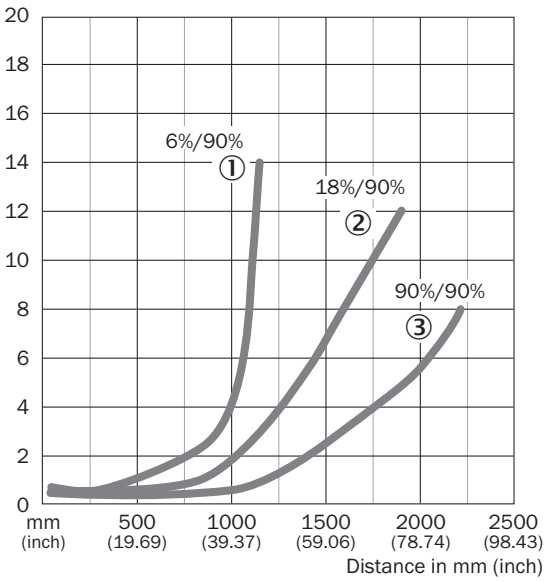


Connection diagram

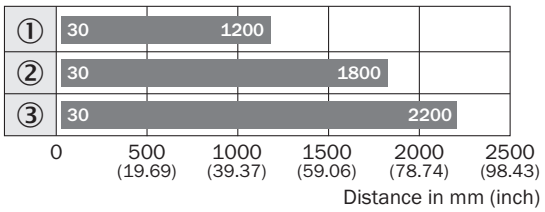
Cd-083



Characteristic curve



Sensing range diagram

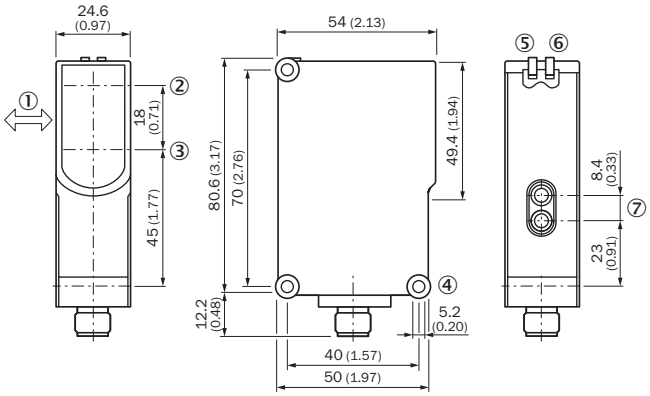


Sensing range

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))

WTB27-3, double teach-in button



① Standard direction of the material being detected
② Optical axis, sender
③ Optical axis, receiver
④ Mounting hole ø 5.2 mm
⑤ LED indicator green: Supply voltage active
⑥ LED indicator yellow: Status of received light beam
⑦ Sensing range adjustment: double teach-in button

Recommended accessories

Other models and accessories ➜ www.sick.com/W27

	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			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF2A14-050VB3XLEAX	2096235
	• **Connection type head A:** Male connector, M12, 4-pin, straight • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932

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.”

WORLDWIDE PRESENCE:

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