WL4S-3P2430V

W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WL4S-3P2430V | W4

PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
WL4S-3P2430V	1054707

Other models and accessories ➔ www.sick.com/W4

Illustration may differ

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Without reflector minimum distance (autocollimation/coaxial optics)
Sensing range max.	0 m ... 4 m [1]
Sensing range	0 m ... 2.5 m [1]
Polarisation filter	Yes
Emitted beam	
Light source	PinPoint LED [2]
Type of light	Visible red light
Light spot size (distance)	Ø 45 mm (1.5 m)
Key LED figures	
Wave length	650 nm
Adjustment	None
Special applications	Hygienic and washdown zones
Housing design	Washdown

[1] Reflector PL80A.
[2] Average service life: 100,000 h at T_U = +25 °C.

Safety-related parameters

$MTTF_D$	3,027 years
DC_{avg}	0 %
T_M (mission time)	20 years

Electronics

Supply voltage U$_B$	10 V DC ... 30 V DC [1]
Ripple	< 5 V$_{pp}$ [2]
Current consumption	30 mA [3]
Protection class	III
Digital output	
Type	PNP
Switching mode	Light/dark switching
Output current I$_{max.}$	≤ 100 mA
Response time	< 0.5 ms [4]
Switching frequency	1,000 Hz [5]
Output function	Complementary
Circuit protection	A [6] B [7] C [8]

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

[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] A = V$_S$ connections reverse-polarity protected.

[7] B = inputs and output reverse-polarity protected.

[8] C = interference suppression.

Mechanics

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	15.25 mm x 48.6 mm x 22.2 mm
Connection	Male connector M12, 4-pin [1]
Material	
Housing	Metal, Stainless steel V4A (1.4404, 316L)
Front screen	Plastic, PMMA
Weight	60 g

[1] Max. tightening torque: 0.7 Nm.

Ambient data

Enclosure rating	IP66 IP67 IP68 IP69K
Ambient operating temperature	–30 °C ... +70 °C [1] –30 °C ... +60 °C
Ambient temperature, storage	–30 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[1] At UV ≤ 24 V and IA < 30 mA.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Connection diagram Cd-083

BN	1	+ (L+)
WH	2	$\overline{Q}$
BU	3	- (M)
BK	4	Q
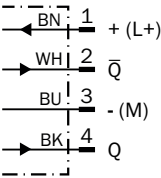
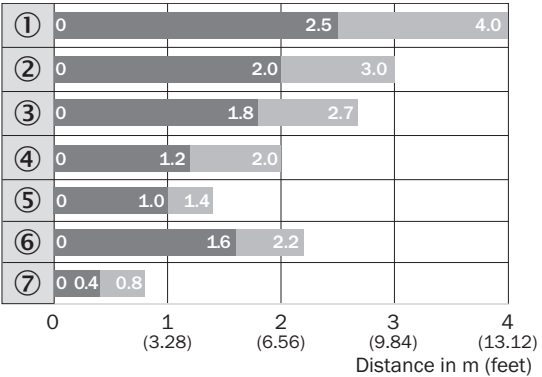## Characteristic curve WL4S-3, WLG4S-3, 4 m
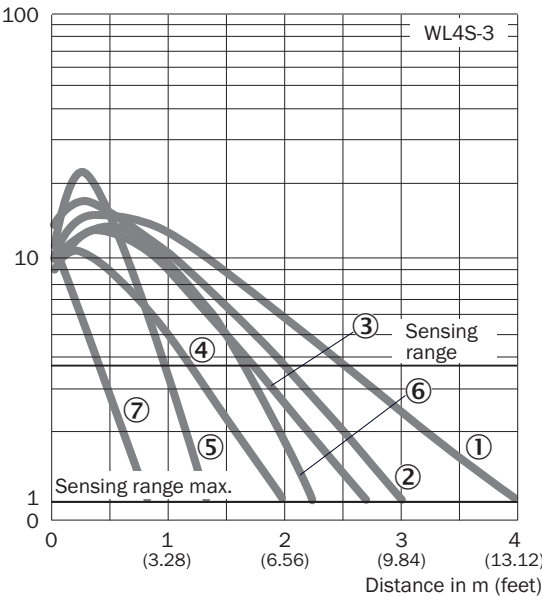
① Reflector PL80A
② Reflector P250F
③ Reflector PL40A
④ Reflector PL20A
⑤ PL10F reflector
⑥ Reflector P250 CHEM
⑦ Reflective tape REF-IRF-56

Sensing range diagram WL4S-3, WLG4S-3, 4 m

■ Sensing range   ■ Sensing range max.

① Reflector PL80A
② Reflector P250F
③ Reflector PL40A
④ Reflector PL20A
⑤ PL10F reflector
⑥ Reflector P250 CHEM
⑦ Reflective tape REF-IRF-56

Dimensional drawing WL4S-3V, WLG4S-3V, without single teach-in button
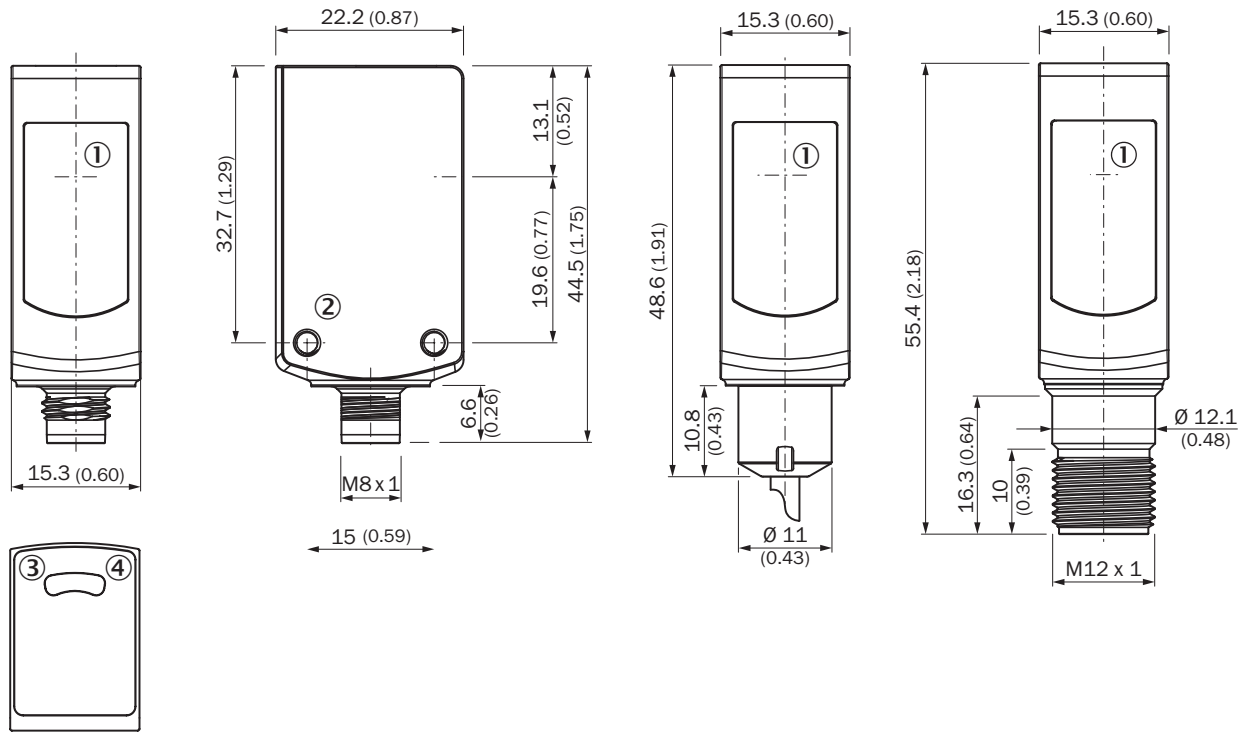
Dimensions in mm (inch)
① Center of optical axis
② Threaded mounting hole M3
③ LED indicator yellow: Status of received light beam
④ LED indicator green: Supply voltage active

Recommended accessories

Other models and accessories ➜ www.sick.com/W4

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Mounting bracket for floor mounting • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 • **Items supplied:** Mounting hardware included • **Suitable for:** W4S, W4F, W4S	BEF-W4-B	2051630
	• **Description:** Plate N02N for universal clamp bracket • **Material:** Stainless steel, stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** W4S-3 Glass, W10, W4SLG-3, W4S-3 Inox, W4S-3 Inox Glass, W9, W11-2, W12-3, W12-2 Laser, W12G, W12 Teflon, W16, W250, W250-2, PowerProx, W11G-2, TranspaTect, WTT12, UC12, P250, G6 Inox, W4S, W4SL-3V, W4SLG-3V, W4SL-3H	BEF-KHS-N02N	2051618
	• **Description:** Plate N11N for universal clamp bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
reflectors and optics			
	• **Description:** Chemically resistant, screw connection • **Dimensions:** 52 mm 61 mm • **Ambient operating temperature:** –20 °C ... +140 °C	P250 CHEM	5321097
connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Note:** This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) • **Application:** Uncontaminated zones, Hygienic and washdown zones, Zones with chemicals	DOL-1204-G05MNI	6052615
	• **Connection type head A:** Female connector, M12, 4-pin, straight • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PP • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Note:** This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H2O2 and CH2O2. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H2O2) • **Application:** Hygienic and washdown zones, Drag chain operation, Robot, cold bending resistant, seawater resistant	DOL-1204-G05MRN	6058476

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:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com

SICK
Sensor Intelligence.