SICK.COM

DATA SHEET

WL4S-3N2430V

W4
Photoelectric sensors

SICK
Sensor Intelligence

Illustration may differ

PHOTOELECTRIC SENSORS

WL4S-3N2430V

ORDERING INFORMATION

Type	part no.
WL4S-3N2430V	1054712

Further device versions and accessories at www.sick.com/W4

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

$MTTF_D$	1,530 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	NPN
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.

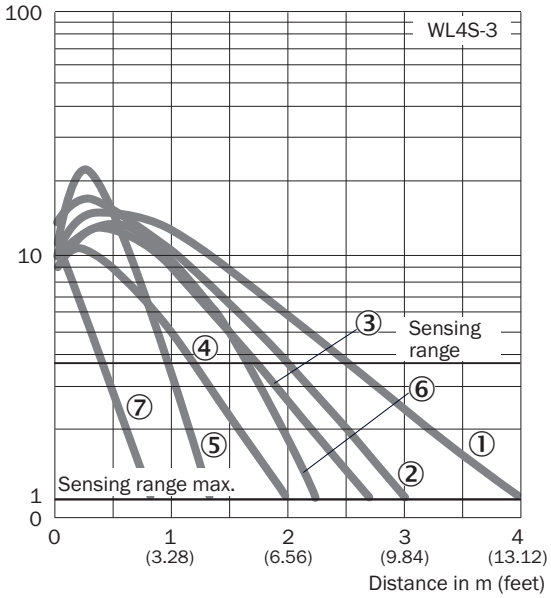
CERTIFICATES

EU declaration of conformity	✓

UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
ECOLAB certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

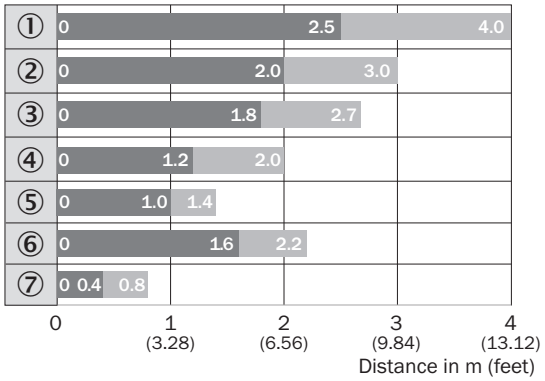
CONNECTION DIAGRAM CD-083

CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 4 M



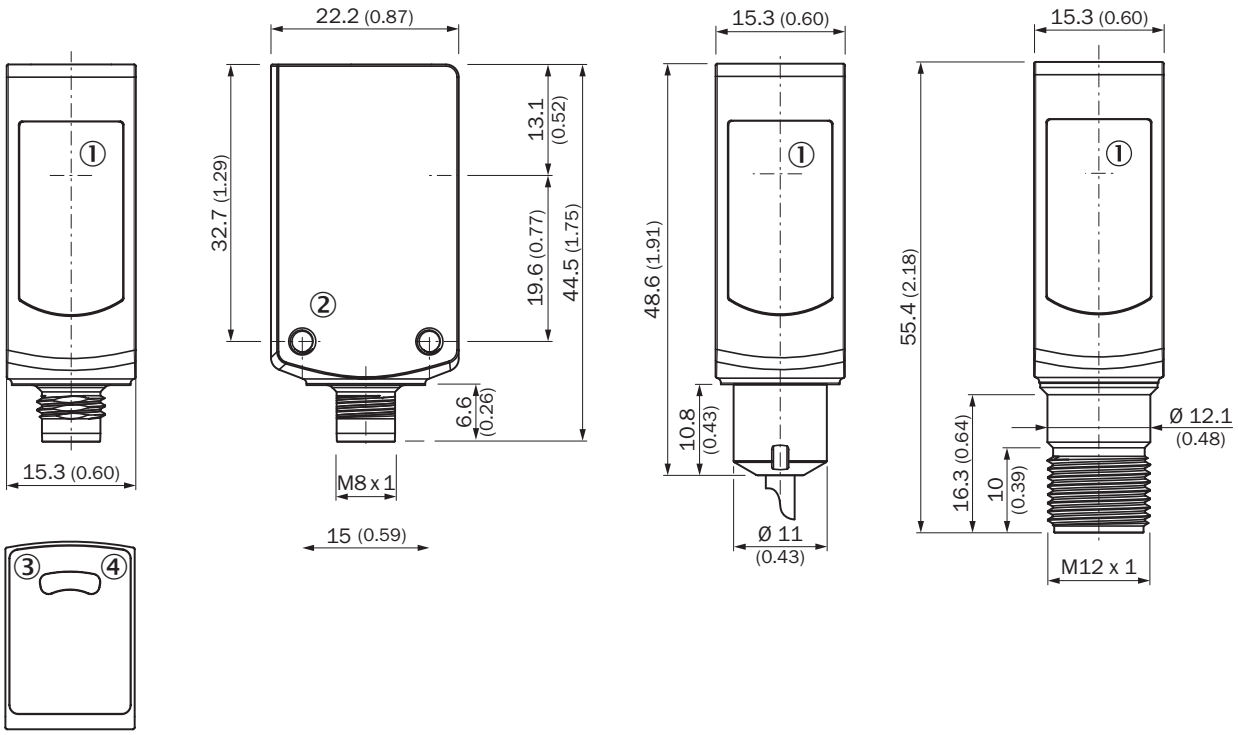
① Reflector PL80A
② Reflector P250F
③ Reflector PL40A
④ Reflector PL20A
⑤ PL10F reflector
⑥ Reflector P250 CHEM
⑦ Reflective tape REF-IRF-56

SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 4 M



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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1054712

SICK AG
WALDKIRCH
GERMANY
SICK.COM

SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

SICK

Sensor Intelligence