

SICK.COM



DATA SHEET

WLG4S-3P3432V

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WLG4S-3P3432V

ORDERING INFORMATION

Type	part no.
WLG4S-3P3432V	1046449

Further device versions and accessories at 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 ... 5 m ¹⁾	
Sensing range	0 m ... 3 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	Single teach-in button	
Special applications	Hygienic and washdown zones, Detecting transparent objects	
Housing design	Washdown	
AutoAdapt	✓	

¹⁾ Reflector PL80A.

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

SAFETY-RELATED PARAMETERS

MTTF _D	1,215 years
DC _{avg}	0 %

T_M (mission time)	20 years
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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	<table border="0"> <tr> <td style="text-align: right;">Type</td> <td>PNP</td> </tr> <tr> <td style="text-align: right;">Switching mode</td> <td>Light/dark switching</td> </tr> <tr> <td style="text-align: right;">Output current I_{max}</td> <td>≤ 100 mA</td> </tr> <tr> <td style="text-align: right;">Response time</td> <td>< 0.5 ms ⁴⁾</td> </tr> <tr> <td style="text-align: right;">Switching frequency</td> <td>1,000 Hz ⁵⁾</td> </tr> </table>	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⁾
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Switching mode	Light/dark switching										
Output current I_{max}	≤ 100 mA										
Response time	< 0.5 ms ⁴⁾										
Switching frequency	1,000 Hz ⁵⁾										
Attenuation along light beam	> 8 %										
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_B 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 49.2 mm x 22.2 mm						
Connection	Cable with M12 male connector, 4-pin ^{1) 2)}						
Connection detail	<table border="0"> <tr> <td style="text-align: right;">Length of cable (L)</td> <td>150 mm ²⁾</td> </tr> </table>	Length of cable (L)	150 mm ²⁾				
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Material	<table border="0"> <tr> <td style="text-align: right;">Housing</td> <td>Metal, Stainless steel V4A (1.4404, 316L)</td> </tr> <tr> <td style="text-align: right;">Front screen</td> <td>Plastic, PMMA</td> </tr> <tr> <td style="text-align: right;">Cable</td> <td>Plastic, PVC</td> </tr> </table>	Housing	Metal, Stainless steel V4A (1.4404, 316L)	Front screen	Plastic, PMMA	Cable	Plastic, PVC
Housing	Metal, Stainless steel V4A (1.4404, 316L)						
Front screen	Plastic, PMMA						
Cable	Plastic, PVC						
Weight	60 g						

¹⁾ Max. tightening torque: 0.7 Nm.

²⁾ Do not bend below 0 °C.

AMBIENT DATA

Enclosure rating	IP66 IP67 IP68 IP69K
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¹⁾ At $UV \leq 24$ V and $IA < 30$ mA.

PHOTOELECTRIC SENSORS - WLG4S-3P3432V

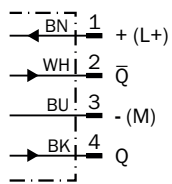
Ambient operating temperature	-30 °C ... +60 °C ¹⁾
Ambient temperature, storage	-30 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ At UV ≤ 24 V and IA < 30 mA.

CERTIFICATES

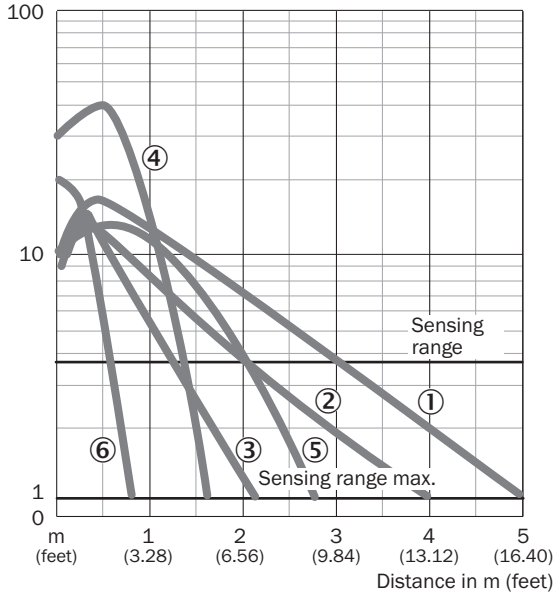
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
ECOLAB certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓

CONNECTION DIAGRAM CD-083



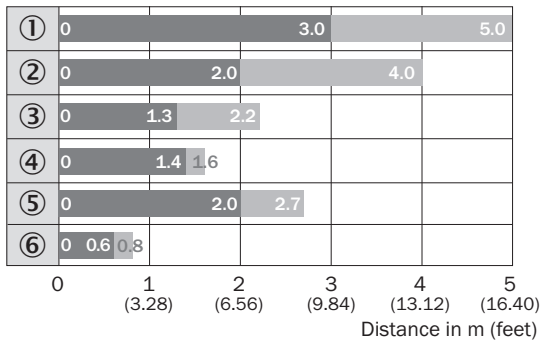
CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 5 M

Operating reserve



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

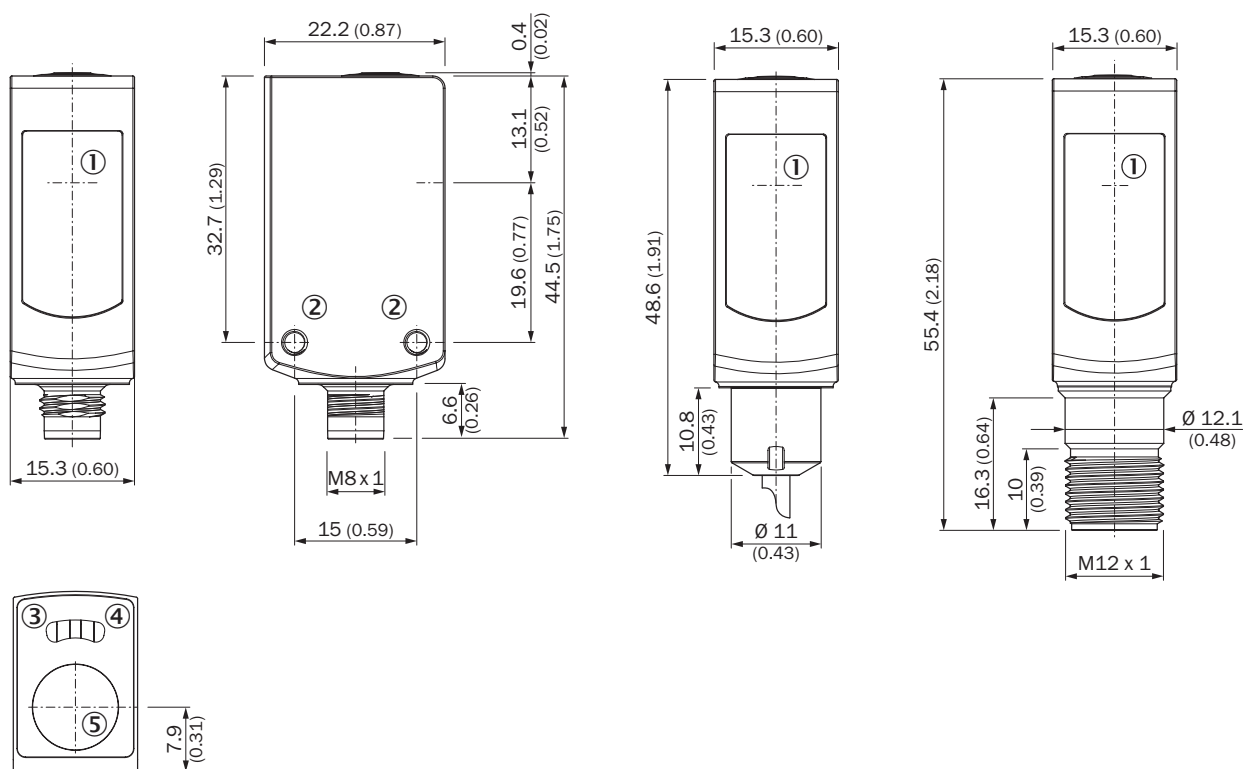
SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 5 M



■ Sensing range ■ Sensing range max.

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

DIMENSIONAL DRAWING WL4S-3V, WLG4S-3V, WITH 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
- ⑤ Teach-in button

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/1046449



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SICK AT A GLANCE

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