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DATA SHEET

WLG4S-3P2234VS05

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WL- G4S-3P2234VS05

ORDERING INFORMATION

Type	part no.
WLG4S-3P2234VS05	1058027

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	Cable, Single teach-in button ³⁾
Special features	Teach-in button lockable	
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.

³⁾ External teach-in: pulse > 2 s with voltage U_v with PNP and M with NPN.

SAFETY-RELATED PARAMETERS

MTTF _D	1,232 years
DC _{avg}	0 %

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>Type</td> <td>PNP</td> </tr> <tr> <td>Switching mode</td> <td>Light switching</td> </tr> <tr> <td>Output current I_{max.}</td> <td>≤ 100 mA</td> </tr> <tr> <td>Response time</td> <td>< 0.5 ms⁴⁾</td> </tr> <tr> <td>Switching frequency</td> <td>1,000 Hz⁵⁾</td> </tr> </table>	Type	PNP	Switching mode	Light switching	Output current I _{max.}	≤ 100 mA	Response time	< 0.5 ms ⁴⁾	Switching frequency	1,000 Hz ⁵⁾
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Output current I _{max.}	≤ 100 mA										
Response time	< 0.5 ms ⁴⁾										
Switching frequency	1,000 Hz ⁵⁾										
Attenuation along light beam	> 8 %										
Circuit protection	<table border="0"> <tr> <td>A⁶⁾</td> </tr> <tr> <td>B⁷⁾</td> </tr> <tr> <td>C⁸⁾</td> </tr> </table>	A ⁶⁾	B ⁷⁾	C ⁸⁾							
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 44.9 mm x 22.2 mm				
Connection	Male connector M8, 4-pin ¹⁾				
Material	<table border="0"> <tr> <td>Housing</td> <td>Metal, Stainless steel V4A (1.4404, 316L)</td> </tr> <tr> <td>Front screen</td> <td>Plastic, PMMA</td> </tr> </table>	Housing	Metal, Stainless steel V4A (1.4404, 316L)	Front screen	Plastic, PMMA
Housing	Metal, Stainless steel V4A (1.4404, 316L)				
Front screen	Plastic, PMMA				
Weight	40 g				

¹⁾ Max. tightening torque: 0.6 Nm.

AMBIENT DATA

Enclosure rating	<table border="0"> <tr> <td>IP66</td> </tr> <tr> <td>IP67</td> </tr> <tr> <td>IP68</td> </tr> <tr> <td>IP69K¹⁾</td> </tr> </table>	IP66	IP67	IP68	IP69K ¹⁾
IP66					
IP67					
IP68					
IP69K ¹⁾					
Ambient operating temperature	-30 °C ... +60 °C ²⁾				

¹⁾ Only in case of correctly mounted IP69K connecting cable.

²⁾ At UV ≤ 24 V and IA < 30 mA.

PHOTOELECTRIC SENSORS - WLG4S-3P2234VS05

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

¹ Only in case of correctly mounted IP69K connecting cable.

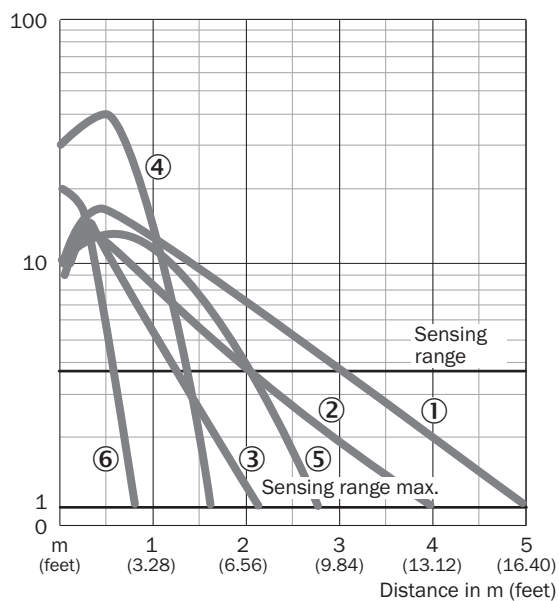
² At UV ≤ 24 V and IA < 30 mA.

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	✓

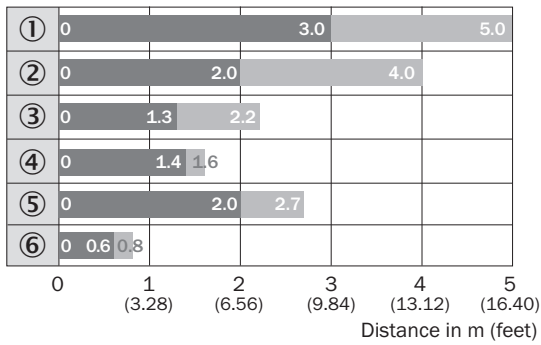
CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 5 M

Operating reserve



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

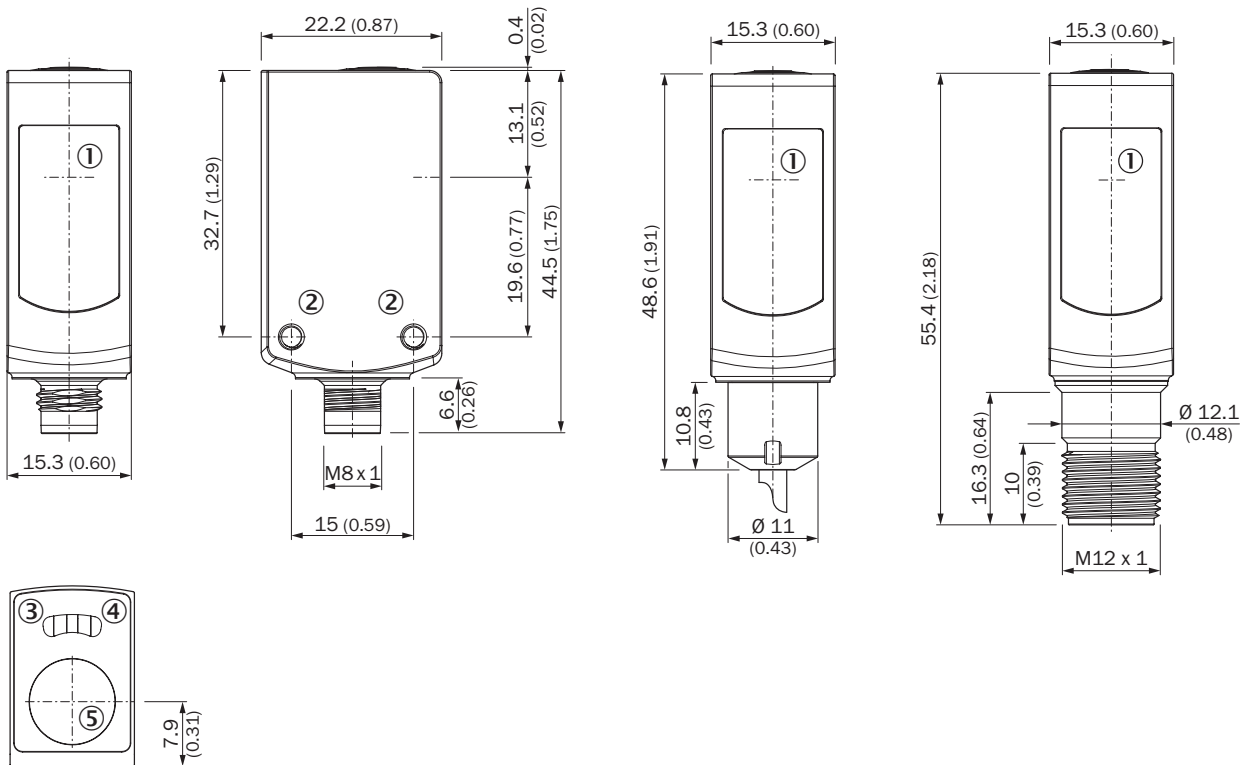
SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 5 M



■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
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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/1058027



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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.

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