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DATA SHEET

WLG4SC-3P3235HS05

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WL- G4SC-3P3235HS05

ORDERING INFORMATION

Type	part no.
WLG4SC-3P3235HS05	1070621

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	IO-Link, Single teach-in button	
Special applications	Detecting transparent objects, Hygienic and washdown zones	
Housing design	Hygiene	
AutoAdapt	✓	

¹⁾ Reflector PL80A.

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

COMMUNICATION INTERFACE

IO-Link	✓
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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	Type PNP ⁴⁾ Switching mode Light switching Output current I_{max} ≤ 100 mA Repeatability (response time) 150 μs Switching frequency 1,000 Hz
Attenuation along light beam	> 8 %
Circuit protection	A ⁵⁾ B ⁶⁾ C ⁷⁾ D ⁸⁾
Response time Q/ on Pin 2	300 μs ... 450 μs ^{10) 9)}
Switching frequency Q / to pin 2	1,000 Hz ¹¹⁾

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load.

⁴⁾ Pin 4: This switching output must not be connected to another output.

⁵⁾ A = V_B connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ C = interference suppression.

⁸⁾ D = outputs overcurrent and short-circuit protected.

⁹⁾ Signal transit time with resistive load.

¹⁰⁾ Valid for Q \ on Pin2, if configured with software.

¹¹⁾ With light / dark ratio 1:1, valid for Q \ on Pin2, if configured with software.

MECHANICS

Housing	Rectangular
Design detail	Slim
Dimensions (W x H x D)	15.25 mm x 48.6 mm x 22.15 mm
Connection	Cable with M8 male connector, 4-pin
Connection detail	Length of cable (L) 150 mm
Material	Housing Metal, Stainless steel V4A (1.4404, 316L) Front screen Plastic, PMMA
Weight	50 g

AMBIENT DATA

Enclosure rating	IP66 IP67 IP68 IP69K
Ambient operating temperature	-30 °C ... +60 °C ¹⁾

¹⁾ At $UV \leq 24$ V and $IA < 30$ mA.

PHOTOELECTRIC SENSORS - WLG4SC-3P3235HS05

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

¹⁾ At UV ≤ 24 V and IA < 30 mA.

SMART TASK

Switching frequency	SIO Direct: 1000 Hz SIO Logic: 1000 Hz IOL: 900 Hz
Response time	¹⁾ ²⁾
Repeatability	SIO Direct: 150 μs ³⁾ SIO Logic: 150 μs ¹⁾ IOL: 300 μs ²⁾

¹⁾ SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

²⁾ IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

³⁾ SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

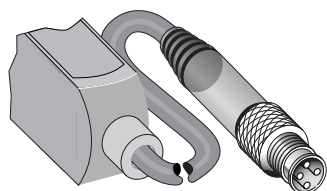
DIAGNOSIS

Device status	Yes
Quality of teach	Yes
Quality of run	Yes, Contamination display

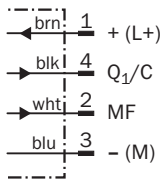
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
IO-Link certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

CONNECTION TYPE

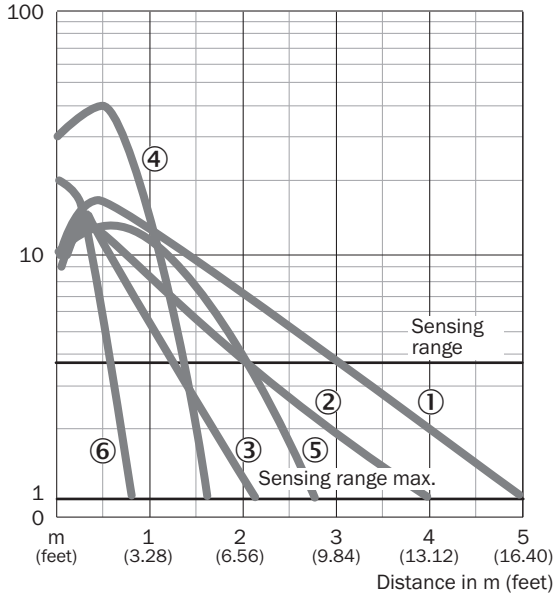


CONNECTION DIAGRAM CD-273



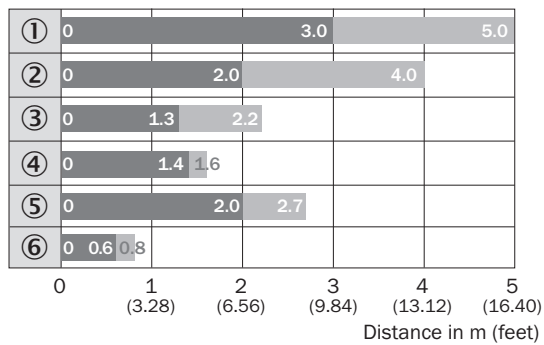
CHARACTERISTIC CURVE WL4S-3, WLG4S-3, 5 M

Operating reserve



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

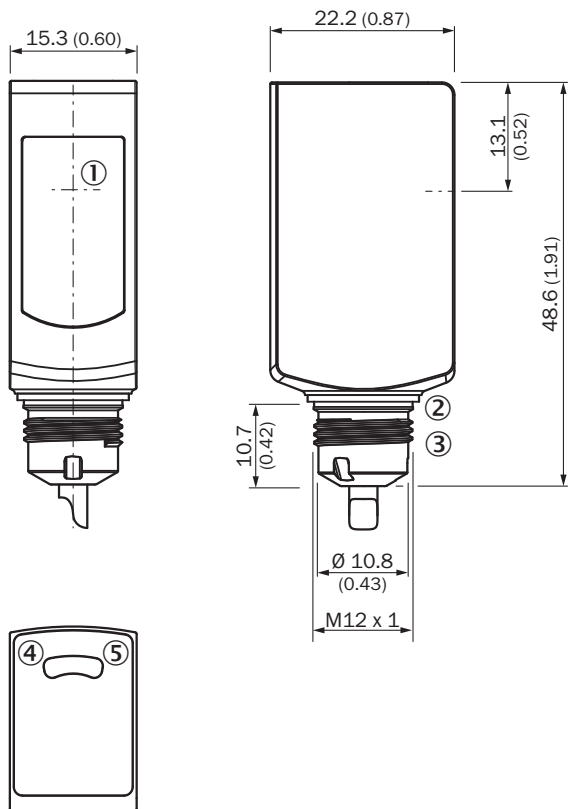
SENSING RANGE DIAGRAM WL4S-3, WLG4S-3, 5 M



■ 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-3H, WLG4S-3H, WITHOUT SINGLE TEACH-IN BUTTON



Dimensions in mm (inch)

- ① Center of optical axis
- ② Sealing ring (tightening torque 6 Nm)
- ③ Connector M12
- ④ LED indicator yellow: Status of received light beam
- ⑤ 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/1070621



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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.

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

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