Data sheet

WLG4SC-3P3235HS05

W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
WLG4SC-3P3235HS05	1070621

Other models and accessories ➜ 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 ... 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	✓

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] [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_S 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

[1] At UV ≤ 24 V and IA < 30 mA.

	IP68 IP69K
Ambient operating temperature	–30 °C ... +60 °C [1]
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

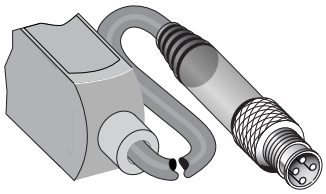
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
ECOLAB certificate	✓
IO-Link certificate	✓
Photobiological safety (DIN EN 62471) certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)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

Classifications

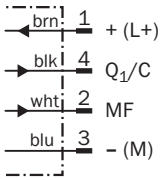
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902

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

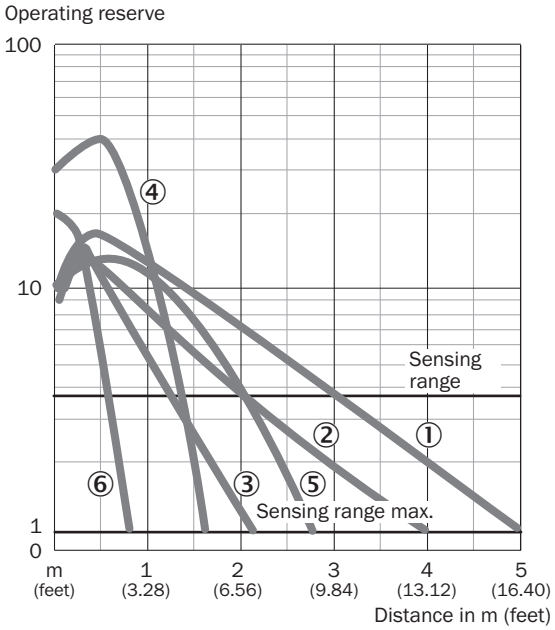
Connection type



Connection diagram Cd-273

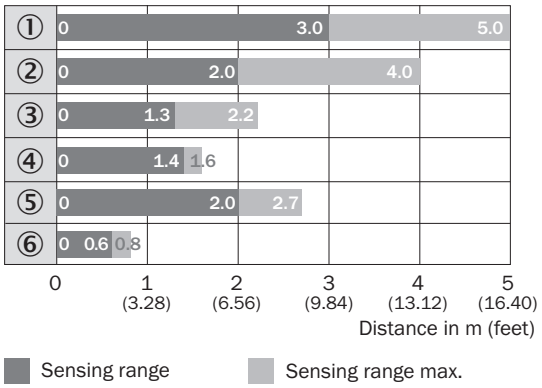


Characteristic curve WL4S-3, WLG4S-3, 5 m



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



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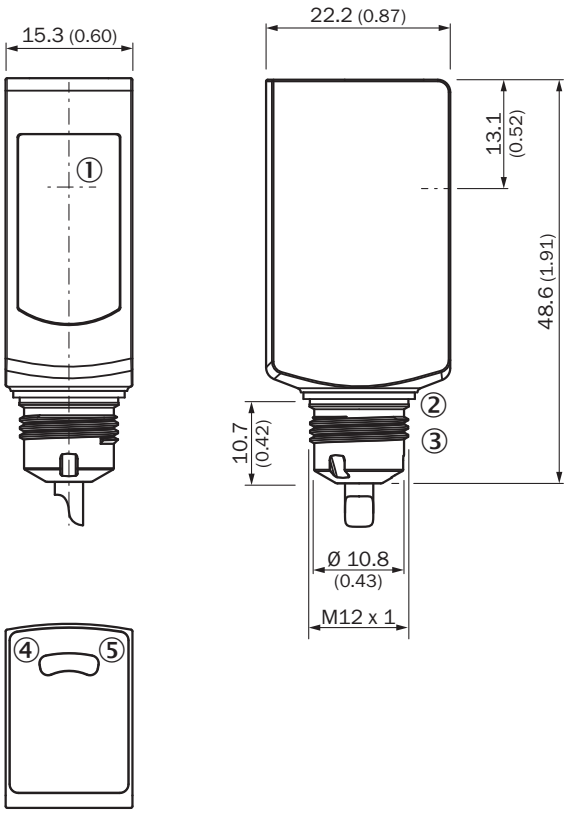
Dimensional drawing WL4S-3H, WLG4S-3H, without single teach-in button



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

Recommended accessories

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

	Brief description	Type	part no.
reflectors and optics			
	• **Description:** Chemically resistant, screw connection • **Dimensions:** 52 mm 61 mm • **Ambient operating temperature:** –20 °C ... +140 °C	P250 CHEM	5321097

	Brief description	Type	part no.
connectors and cables			
	• **Connection type head A:** Female connector, M8, 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-0804-G05MNI	6059194
	• **Connection type head A:** Female connector, M8, 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-0804-G05MRN	6058511

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:

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