



WLG4-3N1382
W4

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
WLG4-3N1382	1040493

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

Detailed technical data

Features

Functional principle		Photoelectric retro-reflective sensor
Sensing range max.		0.01 m ... 1.6 m ¹⁾
Sensing range		0.02 m ... 0.9 m ¹⁾
Emitted beam		
	Light source	PinPoint LED ²⁾
	Type of light	Visible red light
	Light spot size (distance)	Ø 75 mm (1.5 m)
Key LED figures		
	Wave length	650 nm
Adjustment		Single teach-in button
Special features		Without polarisation filter
Special applications		Detecting transparent objects
AutoAdapt		✓

¹⁾ Reflector PL80A.

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

Electronics

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾

¹⁾ Limit values.

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⁾ C = interference suppression.

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

Protection class	III
Digital output	
Type	NPN
Switching mode	Light switching
Output current I_{\max}	$\leq 100 \text{ mA}$
Response time	$< 0.5 \text{ ms}^{4)}$
Switching frequency	$1,000 \text{ Hz}^{5)}$
Attenuation along light beam	$> 8 \%$
Circuit protection	A ⁶⁾ C ⁷⁾ D ⁸⁾

1) Limit values.

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) C = interference suppression.

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

Mechanics

Housing	Rectangular
Design detail	Flat
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Connection	Cable, 3-wire, 2 m ¹⁾
Connection detail	
Conductor size	0.14 mm ²
Cable diameter	$\varnothing 3.4 \text{ mm}$
Length of cable (L)	2 m ¹⁾
Material	
Housing	Plastic, ABS
Front screen	Plastic, PMMA
Cable	Plastic, PVC
Weight	30 g

1) Do not bend below 0°C .

Ambient data

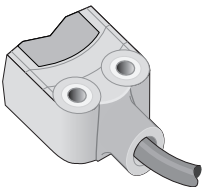
Enclosure rating	IP67 IP66
Ambient operating temperature	$-40^\circ \text{C} \dots +60^\circ \text{C}$
Ambient temperature, storage	$-40^\circ \text{C} \dots +75^\circ \text{C}$

Classifications

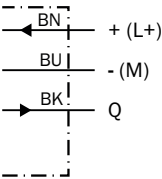
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902

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

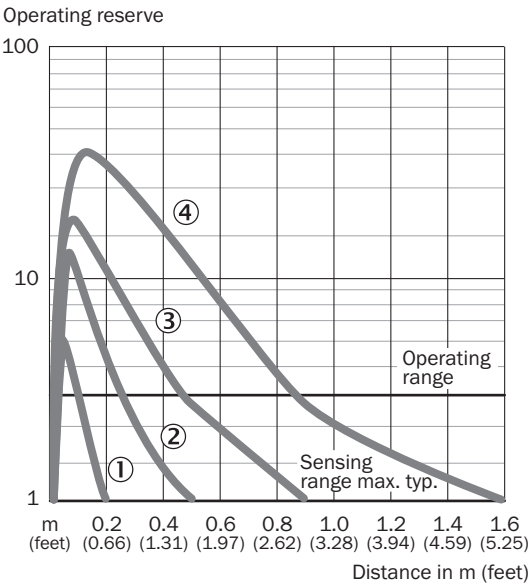
Connection type



Connection diagram Cd-043

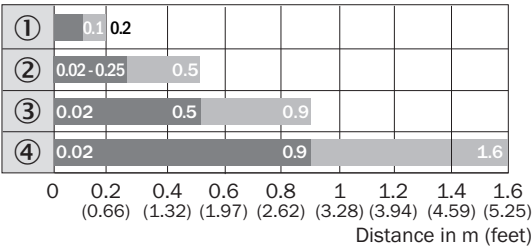


Characteristic curve WLG4-3 without polarisation filter



- ① PL10F reflector
- ② Reflector PL20A
- ③ Reflector PL40A
- ④ Reflector PL80A

Sensing range diagram WLG4-3 without polarisation filter



- Sensing range ■ Sensing range max.
- ① PL10F reflector
 - ② Reflector PL20A
 - ③ Reflector PL40A
 - ④ Reflector PL80A

Modified teach mode

Geänderter Teach Modus
modified teach mode
WLG4-3

Bitte neuen Teach-In-Mode ab Herstellungswoche
01/2013 berücksichtigen.

Teach-In-Taste drücken:

- **2 Sek.** für transparente Objekte (8% Schaltschwelle mit autom. Nachführung)
- **8 Sek.** für Standardanwendungen (Schaltschwelle 50%)

Teach-In-Mode **vor** Herstellungswoche **01/2013**

Teach-In-Taste drücken:

- **2 Sek.** (50% Schaltschwelle ohne Nachführung)
- **8 Sek.** für transparente Objekte (Schaltschwelle 10%)

Please consider new teach-in mode as of
production week **01/2013**.

Press teach-in button:

- **2 sec.** for clear objects (8% threshold with continuous threshold adaption)
- **8 sec.** for standard mode (50% threshold)

Teach-In-Mode **before** production week **01/2013**.

Press teach-in button:

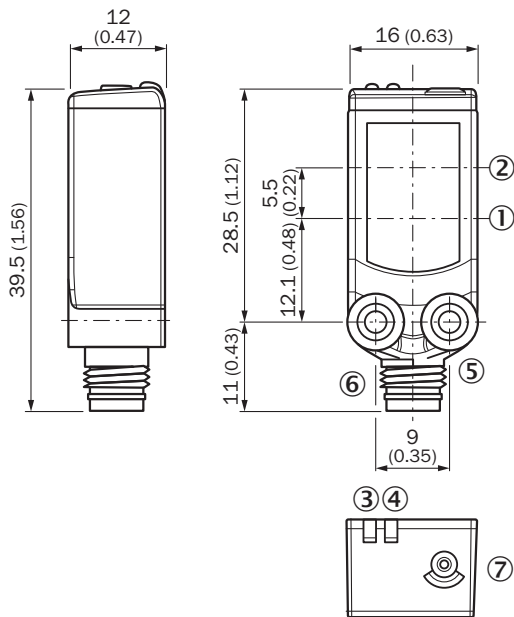
- **2 sec.** (50% threshold without continuous threshold adaption)
- **8 sec.** for clear objects (threshold 10%)

Bsp. Herstellungswoche 1309 = KW09/2013
eg production week 1309 = CW09/2013



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Dimensional drawing WLG4-3






Dimensions in mm (inch)

- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Orange LED indicator: status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Threaded mounting hole M3
- ⑥ Connection
- ⑦ Teach-in button

Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A 	BEF-WN-REFX	2064574
reflectors and optics			
	<ul style="list-style-type: none"> Description: Fine triple reflector, screw connection, suitable for laser sensors Dimensions: 52 mm 62 mm Ambient operating temperature: -30 °C ... +65 °C 	P250F	5308843

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none">• Connection type head A: Male connector, M8, 3-pin, straight, A-coded• Description: Unshielded• Connection systems: Screw-type terminals• Permitted cross-section: 0.14 mm² ... 0.5 mm²	STE-0803-G	6037322

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:

Contacts and other locations –www.sick.com