



WL4C-3P2232A00

W4-3

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WL4C-3P2232A00	1080930

Other models and accessories → www.sick.com/W4-3

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, Dual lens
Dimensions (W x H x D)	16 mm x 39.5 mm x 12 mm
Housing design (light emission)	Rectangular
Sensing range max.	0.01 m ... 4.5 m ¹⁾
Sensing range	0.02 m ... 3.5 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 75 mm (1.5 m)
Wave length	650 nm
Adjustment	Single teach-in button IO-Link
Diagnosis	Device contamination monitoring, Quality of teach-in
Pin 2 configuration	External input, Teach-in input, Sender off input, Detection output, logic output, Device contamination alarm output

¹⁾ Reflector PL80A.

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

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	< 5 V _{pp} ²⁾
Current consumption	20 mA ³⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max}	≤ 100 mA
Response time	< 0.5 ms ⁴⁾
Response time Q/ on Pin 2	300 μs ... 400 μs ^{4) 5)}
Switching frequency	1,000 Hz ⁶⁾
Switching frequency Q / to pin 2	1,000 Hz ⁷⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	30 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP66
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493
Repeatability Q/ on Pin 2:	150 μs ⁵⁾

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ Valid for Q \ on Pin2, if configured with software.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ With light / dark ratio 1:1, valid for Q \ on Pin2, if configured with software.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

Safety-related parameters

MTTF_D	1,212 years
DC_{avg}	0%

Communication interface

Communication interface	IO-Link V1.1
Communication Interface detail	COM2 (38,4 kBaud)

Cycle time	2.3 ms
Process data length	16 Bit
Process data structure	Bit 0 = switching signal Q _{L1} Bit 1 = switching signal Q _{L2} Bit 2 ... 15 = empty
VendorID	26
DeviceID HEX	0x800100
DeviceID DEC	8388864

Smart Task

Smart Task name	Base logics
Logic function	Direct AND OR WINDOW Hysteresis
Timer function	Deactivated On delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes
Switching frequency	SIO Direct: 1000 Hz SIO Logic: 1000 Hz IOL: 900 Hz
Response time	SIO Direct: 300 µs ... 450 µs ¹⁾ SIO Logic: 500 µs ... 600 µs ²⁾ IOL: 500 µs ... 900 µs ³⁾
Repeatability	SIO Direct: 150 µs ¹⁾ SIO Logic: 150 µs ²⁾ IOL: 400 µs ³⁾
Switching signal Q_{L1}	Switching output
Switching signal Q_{L2}	Switching output

¹⁾ 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").

²⁾ SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

³⁾ IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902
ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ECl@ss 10.0	27270902
ECl@ss 11.0	27270902

ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
UNSPSC 16.0901	39121528

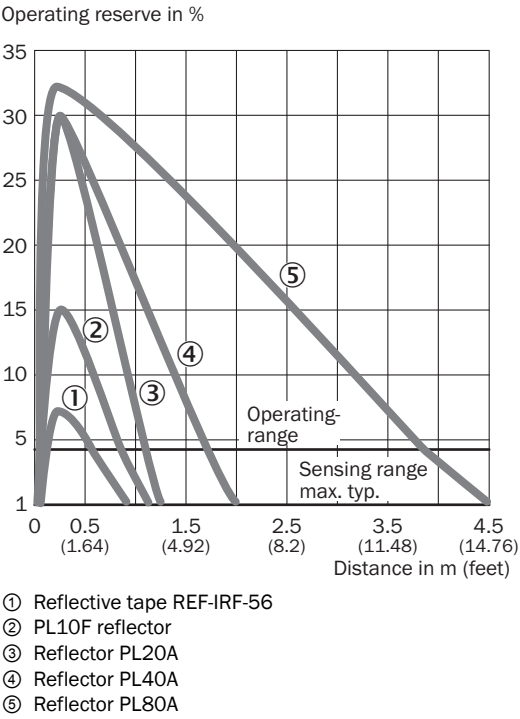
Connection diagram

Cd-083



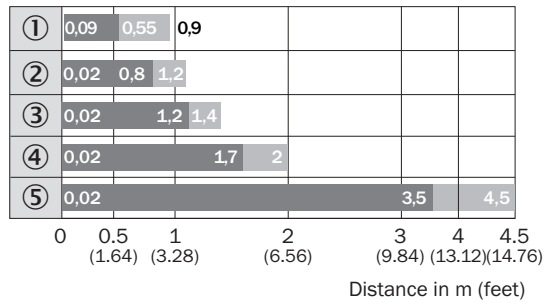
Characteristic curve

WLG4-3 with polarisation filter



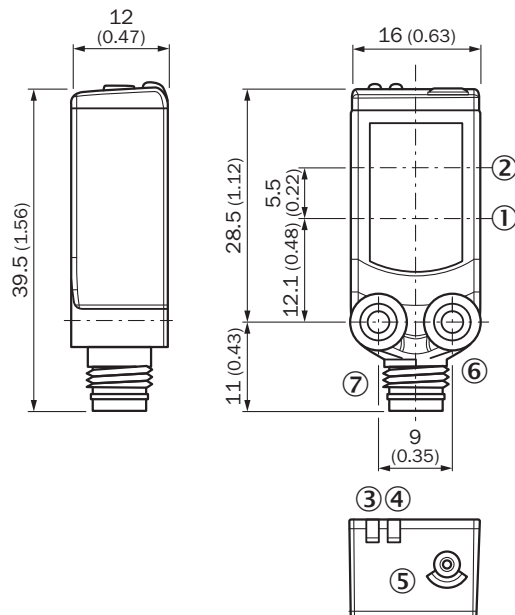
Sensing range diagram

WLG4-3 with polarisation filter



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

Dimensional drawing (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 Teach-in button
- ⑥ Threaded mounting hole M3
- ⑦ Connection

Recommended accessories

Other models and accessories → www.sick.com/W4-3

	Brief description	Type	Part no.
Reflectors			
	Rectangular, screw connection, 40 mm x 60 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL40A	1012720
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF8U14-050VA3XLEAX	2095889
	Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded	STE-0804-G	6037323

Recommended services

Additional services → www.sick.com/W4-3

	Type	Part no.
Function Block Factory		
Description: The Function Block Factory supports common programmable logic controllers (PLCs) from various manufacturers, such as Siemens, Beckhoff, Rockwell Automation and B&R. More information on the FBF can be found here.	Function Block Factory	On request

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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