

SICK.COM



DATA SHEET

WL4-3P2230

W4
Photoelectric sensors

SICK Sensor Intelligence

PHOTOELECTRIC SENSORS

WL4-3P2230

ORDERING INFORMATION

| Type | part no. |
|------------|-------------------------|
| WL4-3P2230 | 1028147 |

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 | With minimum distance to reflector (dual lens system) | |
| Sensing range max. | 0.01 m ... 4.5 m ¹⁾ | |
| Sensing range | 0.02 m ... 3.5 m ¹⁾ | |
| Polarisation filter | Yes | |
| 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 | None |

¹⁾ Reflector PL80A.

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

SAFETY-RELATED PARAMETERS

| | |
|-------------------|-------------|
| MTTF _D | 2,983 years |
| DC _{avg} | 0 % |

ELECTRONICS

| | |
|----------------------|--|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption | 20 mA ³⁾ |
| Protection class | III |
| Digital output | Type PNP Switching mode Light/dark switching Output current I_{max} ≤ 100 mA Response time < 0.5 ms ⁴⁾ Switching frequency 1,000 Hz ⁵⁾ |
| Output function | Complementary |
| 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_B connections reverse-polarity protected.

⁷⁾ C = interference suppression.

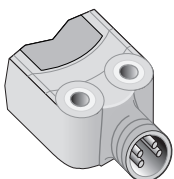
⁸⁾ D = outputs overcurrent and short-circuit protected.

MECHANICS

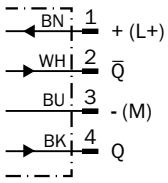
| | |
|------------------------|--|
| Housing | Rectangular |
| Design detail | Flat |
| Dimensions (W x H x D) | 16 mm x 39.5 mm x 12 mm |
| Connection | Male connector M8, 4-pin |
| Material | Housing Plastic, ABS Front screen Plastic, PMMA |
| Weight | 30 g |

AMBIENT DATA

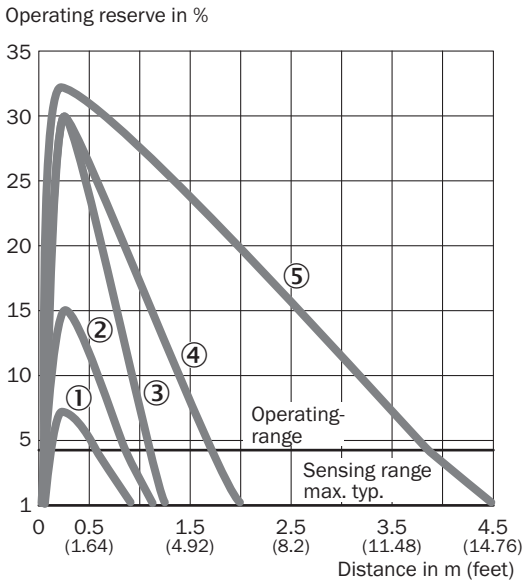
| | |
|-------------------------------|------------------------------|
| Enclosure rating | IP67 IP66 |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

CONNECTION TYPE

CONNECTION DIAGRAM CD-083

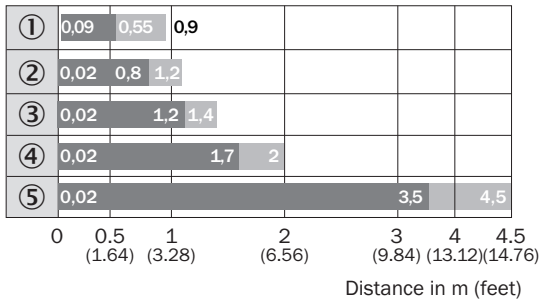


CHARACTERISTIC CURVE WLG4-3 WITH POLARISATION FILTER



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

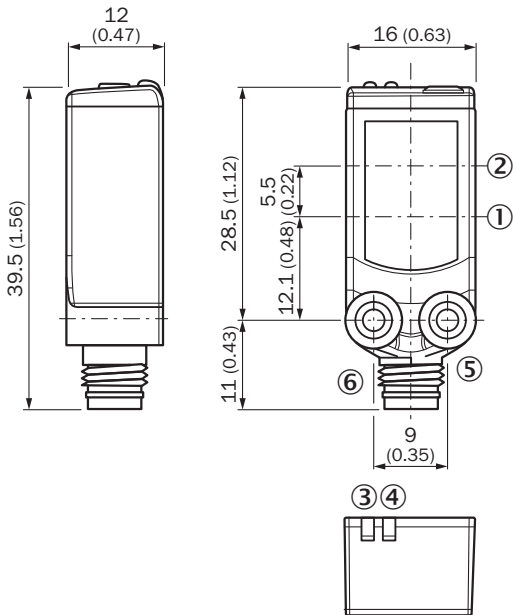
SENSING RANGE DIAGRAM WLG4-3 WITH POLARISATION FILTER



■ Sensing range ■ Sensing range max.

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

DIMENSIONAL DRAWING WL4-3



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

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/1028147



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SICK AT A GLANCE

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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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