



WL4-3F2130

W4

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|------------|----------|
| WL4-3F2130 | 1028155 |

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

Detailed technical data

Features

| | | |
|-----------------------------|----------------------------|---------------------------------------|
| Functional principle | | Photoelectric retro-reflective sensor |
| Functional principle detail | | Dual lens |
| Sensing range max. | | 0.01 m ... 4.5 m ¹⁾ |
| Sensing range | | 0.02 m ... 3.5 m ¹⁾ |
| Polarisation filters | | 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.

Electrical data

| | |
|--|---|
| 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 | Dark switching |
| Output current I_{max} | ≤ 100 mA |
| Response time | < 0.5 ms ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Circuit protection | A ⁶⁾ C ⁷⁾ D ⁸⁾ |

¹⁾ Limit values.

²⁾ May not exceed or fall below 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.

Mechanical data

| | |
|-------------------------------|-------------------------|
| Housing | Rectangular |
| Design detail | Flat |
| Dimensions (W x H x D) | 16 mm x 39.5 mm x 12 mm |
| Connection | Connector M8, 3-pin |
| Material | |
| Housing | Plastic, ABS |
| Front screen | Plastic, PMMA |
| Weight | 30 g |

Ambient data

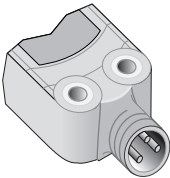
| | |
|--------------------------------------|------------------------------|
| Enclosure rating | IP67 IP66 |
| Ambient operating temperature | -40 °C ... +60 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRKH.E181493 & NRKH7.E181493 |

Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270902 |
| ECLASS 5.1.4 | 27270902 |
| ECLASS 6.0 | 27270902 |
| ECLASS 6.2 | 27270902 |
| ECLASS 7.0 | 27270902 |

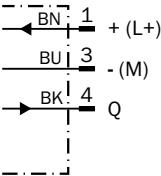
| | |
|----------------|----------|
| ECLASS 8.0 | 27270902 |
| ECLASS 8.1 | 27270902 |
| ECLASS 9.0 | 27270902 |
| ECLASS 10.0 | 27270902 |
| ECLASS 11.0 | 27270902 |
| ECLASS 12.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Connection type



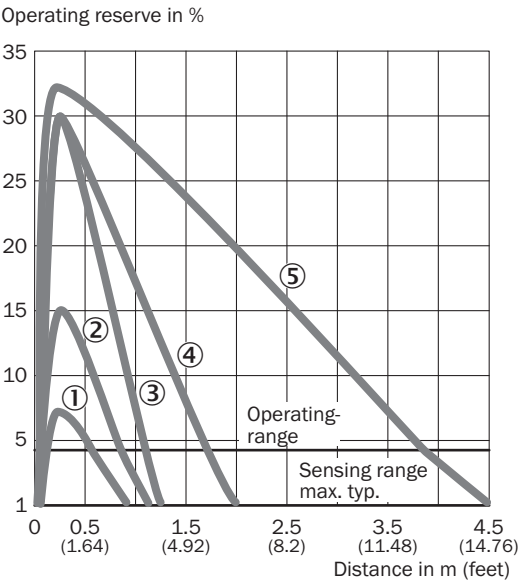
Connection diagram

Cd-045



Characteristic curve

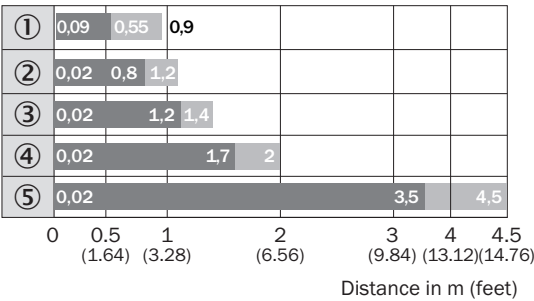
WLG4-3 with polarisation filter



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

Sensing range diagram

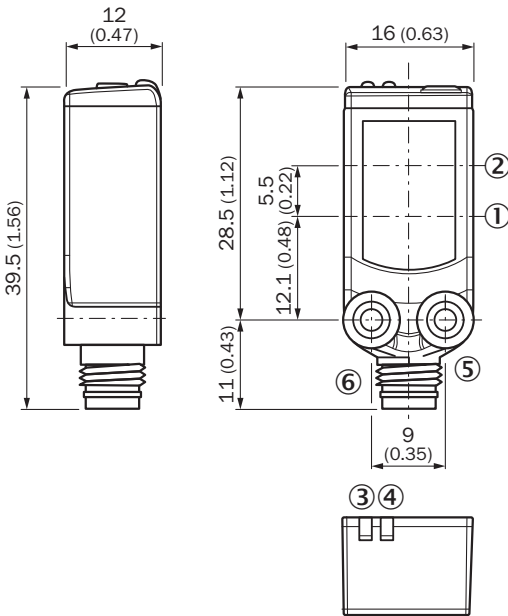
WLG4-3 with polarisation filter



- 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 (Dimensions in mm (inch))

WL4-3



- 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

Recommended accessories

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

| | Brief description | Type | Part no. |
|----------------------------|---|--------------------|----------|
| Plug connectors and cables | | | |
| | <ul style="list-style-type: none">• Connection type head A: Male connector, M8, 3-pin, straight• Description: Unshielded• Connection systems: Screw-type terminals• Permitted cross-section: 0.14 mm² ... 0.5 mm² | STE-0803-G | 6037322 |
| Reflectors | | | |
| | Rectangular, screw connection, 40 mm x 60 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL40A | 1012720 |
| Others | | | |
| | <ul style="list-style-type: none">• Connection type head A: Female connector, M8, 3-pin, straight, A-coded• Connection type head B: Flying leads• Signal type: Sensor/actuator cable• Cable: 5 m, 3-wire, PVC• Description: Sensor/actuator cable, unshielded• Application: Zones with chemicals | YF8U13-050VA1XLEAX | 2095884 |

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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