



WSE8-P2131S01

W8

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| WSE8-P2131S01 | 6071912 |

Included in delivery: BEF-W100-A (2)

Other models and accessories → www.sick.com/W8

Detailed technical data

Features

| | |
|--|--|
| Device type | Photoelectric sensors |
| Sensor/ detection principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 11 mm x 31 mm x 20 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 10 m |
| Sensing range | 0 m ... 8 m |
| Type of light | Visible red light |
| Light source | LED ¹⁾ |
| Light spot size (distance) | Ø 30 mm (1 m) |
| Wave length | 650 nm |
| Adjustment | Potentiometer, 270° |
| Special applications | Detection of objects moving at high speeds |
| Special features | Mounting holes, Ø 3,2 mm un-threaded |

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

| | |
|-----------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
|-----------------------|-----------------------------------|

¹⁾ Limit values when operated in short-circuit protected network: max. 8 A.

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⁾ B = inputs and output reverse-polarity protected.

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

| | |
|---|---|
| Ripple | ± 10 % ²⁾ |
| Current consumption | 30 mA ³⁾ |
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| Signal voltage PNP HIGH/LOW | Approx. $V_S - 1.8 \text{ V} / 0 \text{ V}$ |
| Output current I_{max} | ≤ 100 mA |
| Response time | ≤ 0.25 ms ⁴⁾ |
| Switching frequency | 2,000 Hz ⁵⁾ |
| Connection type | Connector M8, 3-pin |
| Circuit protection | A ⁶⁾ B ⁷⁾ D ⁸⁾ |
| Weight | 10 g |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Items supplied | 2 Stainless steel mounting brackets (1.4301/304) BEF-W100-A |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |

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Safety-related parameters

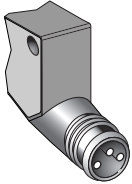
| | |
|-------------------------|-------------|
| MTTF_D | 739.3 years |
| DC_{avg} | 0 % |

Classifications

| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270901 |
| ECl@ss 5.1.4 | 27270901 |
| ECl@ss 6.0 | 27270901 |
| ECl@ss 6.2 | 27270901 |
| ECl@ss 7.0 | 27270901 |
| ECl@ss 8.0 | 27270901 |
| ECl@ss 8.1 | 27270901 |
| ECl@ss 9.0 | 27270901 |
| ECl@ss 10.0 | 27270901 |
| ECl@ss 11.0 | 27270901 |

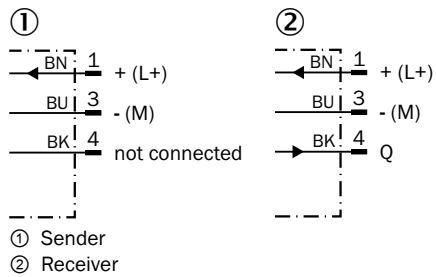
| | |
|-----------------------|----------|
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |

Connection type



Connection diagram

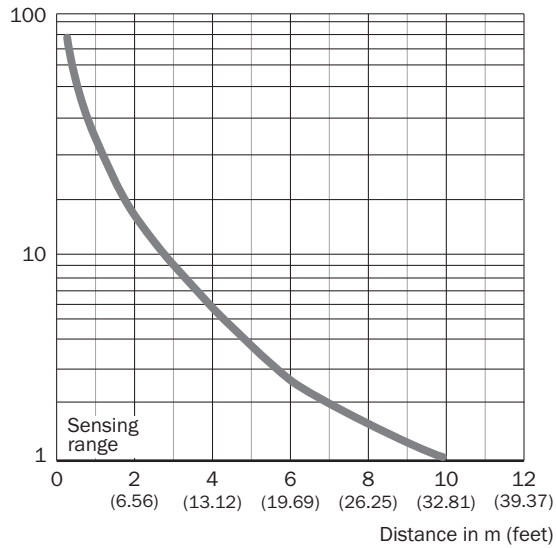
Cd-051



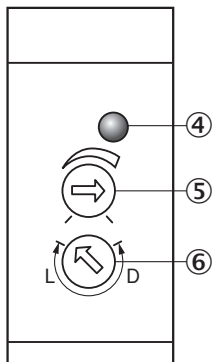
Characteristic curve

Operating reserve

Operating reserve



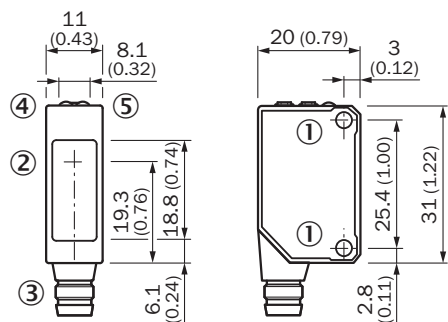
Adjustments



- ④ Orange LED indicator : switching output active
- ⑤ Sensitivity control
- ⑥ Light/ dark rotary switch: L = light switching, D = dark switching

Dimensional drawing (Dimensions in mm (inch))



WL8



- ① Threaded mounting hole M3, max. tightening torque: 0.6 Nm
- ② Center of optical axis
- ③ Connection
- ④ Orange LED indicator : switching output active
- ⑤ LED indicator green: stability indicator

Recommended accessories

Other models and accessories → www.sick.com/W8

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF8U13-050VA1XLEAX | 2095884 |
|  | Head A: male connector, M8, 3-pin, straight Head B: - Cable: unshielded | 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:

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