



WS/WE150-P132

W150

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| WS/WE150-P132 | 6011030 |

Included in delivery: BEF-W150-A (1)

Other models and accessories → www.sick.com/W150

Detailed technical data

Features

| | |
|--|-----------------------------------|
| Functional principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 10 mm x 28 mm x 17.5 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 4.4 m |
| Sensing range | 0 m ... 4 m |
| Focus | 6° |
| Type of light | Visible red light |
| Light source | LED ¹⁾ |
| Angle of dispersion | 6° |
| Adjustment | Potentiometer, 270° |

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

Mechanics/electronics

| | |
|-------------------------------------|--|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 10 % ²⁾ |
| Current consumption | 15 mA ³⁾ 20 mA ⁴⁾ |

¹⁾ Limit values.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Sender.

⁴⁾ Receiver.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

⁷⁾ Do not bend below 0 °C.

⁸⁾ A = V_S connections reverse-polarity protected.

⁹⁾ B = inputs and output reverse-polarity protected.

¹⁰⁾ C = interference suppression.

¹¹⁾ D = outputs overcurrent and short-circuit protected.

| | |
|---|--|
| Switching output | PNP |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via L/D control cable |
| Output current I_{\max} | ≤ 100 mA |
| Response time | ≤ 0.5 ms ⁵⁾ |
| Switching frequency | 1,000 Hz ⁶⁾ |
| Angle of reception | 15° |
| Connection type | Cable, 4-wire, 2 m ⁷⁾ |
| Cable material | PVC |
| Conductor cross section | 0.18 mm ² |
| Circuit protection | A ⁸⁾ B ⁹⁾ C ¹⁰⁾ D ¹¹⁾ |
| Protection class | II |
| Weight | 44 g |
| Enclosure rating | IP67 |
| Items supplied | BEF-W150-A mounting bracket |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient temperature, storage | -40 °C ... +75 °C |
| UL File No. | NRNT2.E128350 & NRNT8.E128350 |

1) Limit values.

2) May not exceed or fall below U_V tolerances.

3) Sender.

4) Receiver.

5) Signal transit time with resistive load.

6) With light/dark ratio 1:1.

7) Do not bend below 0 °C.

8) A = V_S connections reverse-polarity protected.

9) B = inputs and output reverse-polarity protected.

10) C = interference suppression.

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

Safety-related parameters

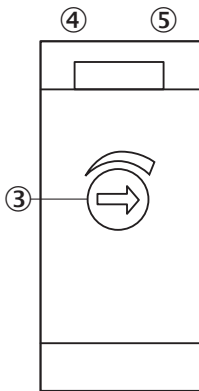
| | |
|-------------------------|-------------|
| MTTF_D | 1,452 years |
| DC_{avg} | 0 % |

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 |

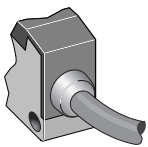
| | |
|-----------------------|----------|
| eCl@ss 10.0 | 27270901 |
| eCl@ss 11.0 | 27270901 |
| eCl@ss 12.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |

Adjustments



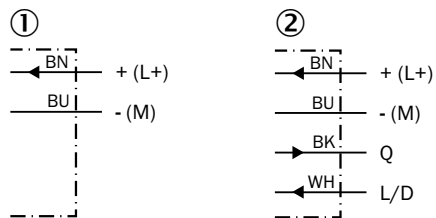
- ③ Sensitivity adjustment 270° (only WE)
- ④ Green LED: stability indicator (WE only)
- ⑤ Orange LED: output active (WE only)

Connection type



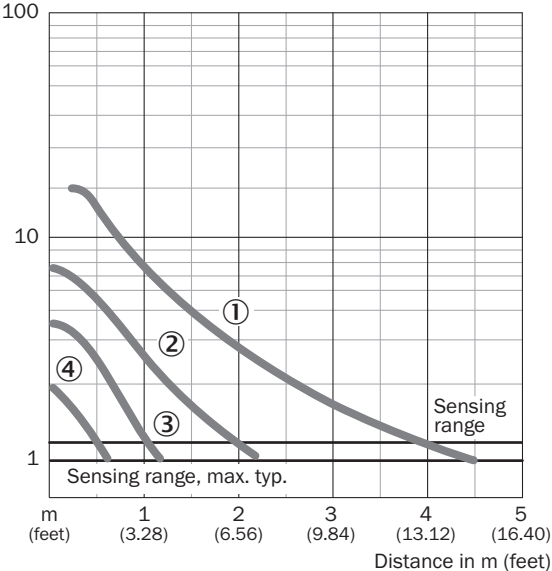
Connection diagram

Cd-058

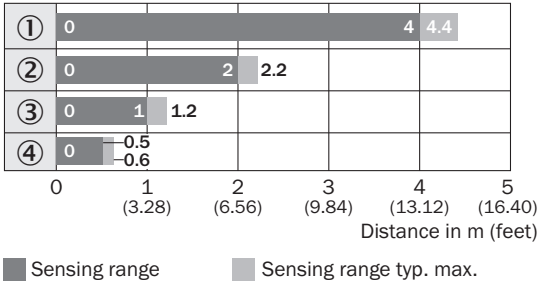


- ① Sender
- ② Receiver

Characteristic curve



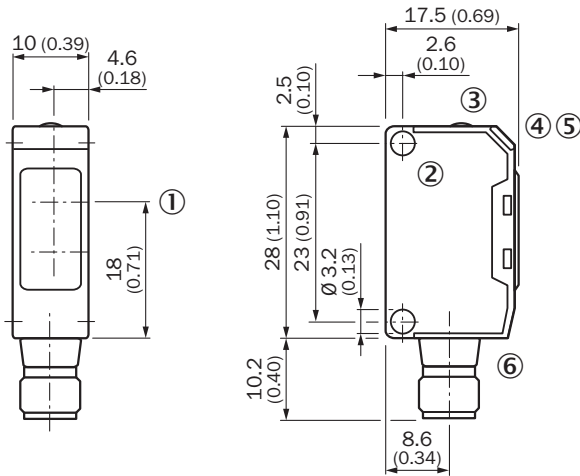
Sensing range diagram



Reduction in sensing range with slotted masks

- ① Without slotted mask
- ② Mask aperture width 2.0 mm
- ③ Mask aperture width 1.0 mm
- ④ Mask aperture width 0.5 mm


Dimensional drawing (Dimensions in mm (inch))



- ① Center of optical axis
- ② Mounting hole, \varnothing approx. 3.1 mm
- ③ Sensing range adjustment: potentiometer, 5 turns
- ④ LED indicator green: stability indicator
- ⑤ LED indicator orange: output active
- ⑥ Connection

Recommended accessories

Other models and accessories → www.sick.com/W150

| | Brief description | Type | Part no. |
|---|--|-------------|-----------------|
| Plug connectors and cables | | | |
|  | Head A: male connector, M8, 4-pin, straight Cable: unshielded | STE-0804-G | 6037323 |

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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