



WL150-P132

W150

MINIATURE PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|------------|----------|
| WL150-P132 | 6011036 |

Included in delivery: PL20A (1), BEF-W150-A (1)

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

Detailed technical data

Features

| | |
|--|--|
| Sensor/ detection principle | Photoelectric retro-reflective sensor, Dual lens |
| 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 ... 2.4 m ¹⁾ |
| Sensing range | 0.01 m ... 2 m ¹⁾ |
| Focus | Approx. 6° |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Angle of dispersion | Approx. 6° |
| Adjustment | Potentiometer, 270° |

¹⁾ Reflector PL80A.

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

Mechanics/electronics

| | |
|----------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ± 10 % ²⁾ |
| Current consumption | 20 mA ³⁾ |
| Switching output | PNP |

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⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

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

| | |
|---|---|
| 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 ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Connection type | Cable, 4-wire, 2 m ⁶⁾ |
| Cable material | PVC |
| Conductor cross-section | 0.18 mm ² |
| Circuit protection | A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾ |
| Protection class | II |
| Weight | 44 g |
| Polarisation filter | ✓ |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Items supplied | BEF-W150-A mounting bracket, Reflector PL20A |
| 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) Without load.

4) Signal transit time with resistive load.

5) With light/dark ratio 1:1.

6) Do not bend below 0 °C.

7) A = V_S connections reverse-polarity protected.

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

9) C = interference suppression.

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

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 1,932 years |
| DC_{avg} | 0 % |

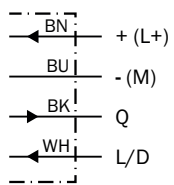
Classifications

| | |
|---------------------|----------|
| 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 |

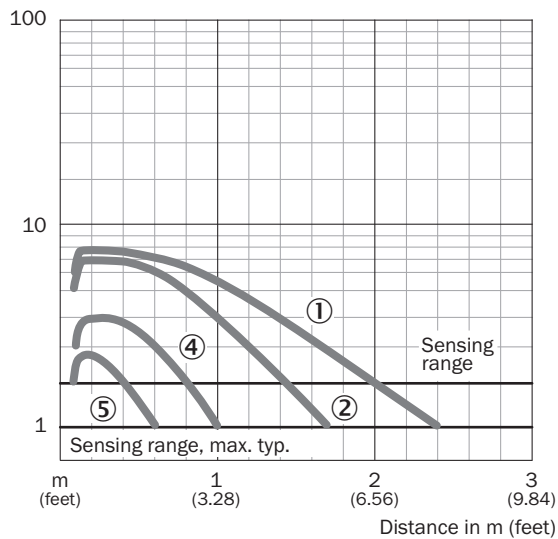
| | |
|-----------------------|----------|
| ECl@ss 9.0 | 27270902 |
| ECl@ss 10.0 | 27270902 |
| ECl@ss 11.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |
| ETIM 8.0 | EC002717 |
| UNSPSC 16.0901 | 39121528 |

Connection diagram

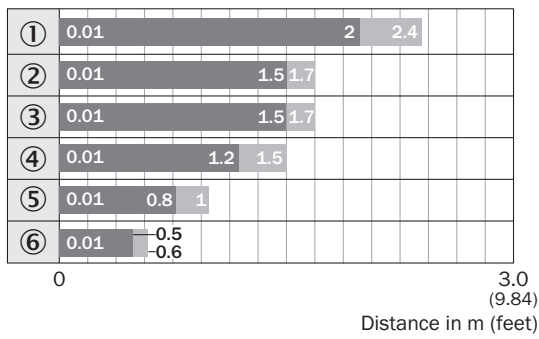
Cd-089



Characteristic curve



Sensing range diagram

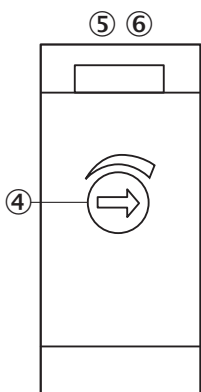


■ Sensing range ■ Sensing range typ. max.

Reflector type

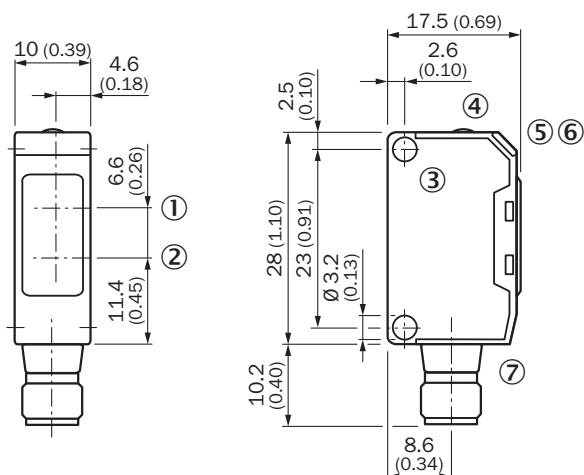
- ① PL80A
- ② PL250
- ③ PL50A or PL40A
- ④ PL30A or PL31A
- ⑤ PL20A
- ⑥ Reflective tape
Diamond Grade

Adjustments



- ④ Sensing range adjustment: potentiometer, 5 turns
- ⑤ LED indicator green: stability indicator
- ⑥ LED indicator orange: output active




Dimensional drawing (Dimensions in mm (inch))



- ① Standard direction of the material being detected
- ② Center of optical axis, receiver
- ③ Center of optical axis, sender
- ④ Mounting hole, Ø 3.2 mm
- ⑤ Sensing range adjustment: potentiometer, 5 turns
- ⑥ LED indicator green: stability indicator
- ⑦ LED indicator orange: output active
- ⑧ Connection

Recommended accessories

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

| | Brief description | Type | Part no. |
|---|---|-------------|----------|
| Mounting brackets and plates | | | |
|  | Universal mounting bracket for reflectors, steel, zinc coated | BEF-WN-REFX | 2064574 |
| Plug connectors and cables | | | |
|  | Head A: male connector, M8, 4-pin, straight Head B: - Cable: unshielded | STE-0804-G | 6037323 |
| Reflectors | | | |
|  | Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting | P250 | 5304812 |

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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.”

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