



WSE280-2N1131

W280-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|---------------|----------|
| WSE280-2N1131 | 6044744 |

Included in delivery: BEF-W280 (2)

Other models and accessories → www.sick.com/W280-2

Detailed technical data

Features

| | |
|--|-----------------------------------|
| Sensor/ detection principle | Through-beam photoelectric sensor |
| Dimensions (W x H x D) | 23.5 mm x 74.5 mm x 63 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0 m ... 60 m |
| Sensing range | 0 m ... 50 m |
| Type of light | Visible red light |
| Light source | LED ¹⁾ |
| Light spot size (distance) | Ø 0.6 m (20 m) |
| Adjustment | Potentiometer |

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

Mechanics/electronics

| | |
|----------------------------------|-----------------------------------|
| Supply voltage | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | ≤ 5 V _{pp} ²⁾ |
| Power consumption, sender | ≤ 20 mA |

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⁾ 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.

¹¹⁾ The AC/DC devices (-2Rxxx only) comply with the Radio Safety Requirements for the industrial sector (Radio Safety Class A). They may cause radio interference if used in a residential area.

| | |
|--|---|
| Power consumption, receiver | ≤ 20 mA ³⁾ |
| Switching output | NPN |
| Switching mode | Light/dark switching |
| Switching mode selector | Selectable via light/dark rotary switch |
| Output current I_{max.} | 100 mA |
| Response time | ≤ 0.5 ms ⁴⁾ |
| Switching frequency | 1,000 Hz ⁵⁾ |
| Connection type | Cable, 3-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 | III |
| Weight | 300 g |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP66 IP67 |
| Items supplied | Mounting bracket BEF-W280 |
| EMC | EN 60947-5-2 ¹¹⁾ |
| Ambient operating temperature | -25 °C ... +55 °C |
| Ambient storage temperature | -40 °C ... +70 °C |
| UL File No. | NRKH2.E300503 & NRKH8.E300503 |

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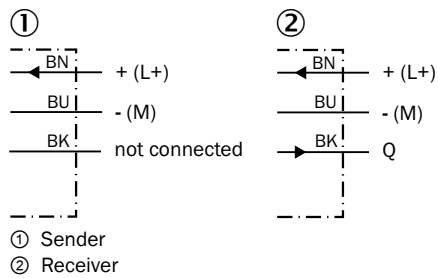
Classifications

| | |
|---------------------|----------|
| 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 |
| UNSPSC 16.0901 | 39121528 |

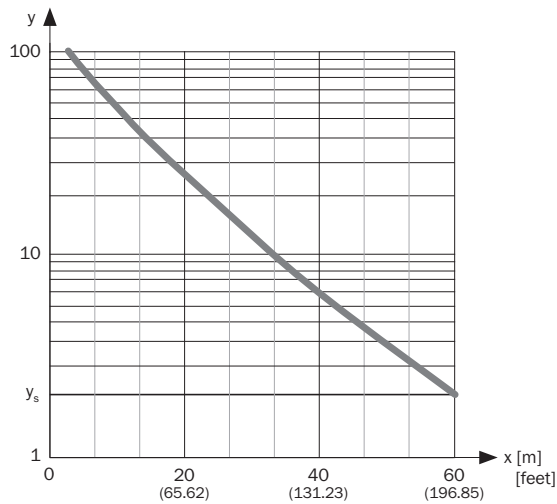
Connection diagram

Cd-049



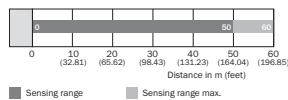
Characteristic curve

WSE280-2



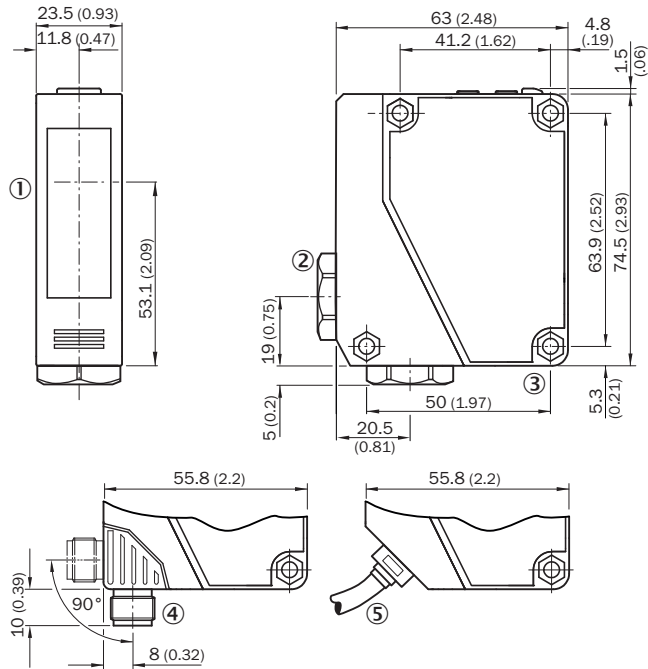
Sensing range diagram

WSE280-2



Dimensional drawing (Dimensions in mm (inch))


WSE280-2, DC



- ① Sender and receiver optical axis center
- ② Cable entry gland 3/8" for cable diameter 6 to 8 mm
- ③ Mounting hole, Ø 4.3 mm
- ④ M12 male connector, 4-pin, can be rotated through 90°, can be locked with slider
- ⑤ Cable, 2 m, 3-wire, Ø 3,8 mm

Recommended accessories

Other models and accessories → www.sick.com/W280-2

| | Brief description | Type | Part no. |
|---|---|------------|----------|
| Plug connectors and cables | | | |
|  | 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.”

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