



WL23-2P2430

W23-2

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------|----------|
| WL23-2P2430 | 1027785 |

Other models and accessories → www.sick.com/W23-2

Detailed technical data

Features

| | |
|--|------------------------------|
| Dimensions (W x H x D) | 24.6 mm x 80.6 mm x 54 mm |
| Housing design (light emission) | Rectangular |
| Sensing range max. | 0.1 m ... 10 m ¹⁾ |
| Sensing range | 0.3 m ... 7 m ¹⁾ |
| Type of light | Visible red light |
| Light source | LED ²⁾ |
| Light spot size (distance) | Ø 45 mm (2.7 m) |
| Angle of dispersion | 1.5° |
| Wave length | 660 nm |
| Adjustment | None |

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 | < 5 V _{pp} ²⁾ |
| Switching output | PNP |

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

²⁾ May not exceed or fall below U_V tolerances.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

⁸⁾ Reference voltage: 50 V DC.

| | |
|---|---|
| Output function | Complementary |
| Switching mode | Light/dark switching |
| Signal voltage PNP HIGH/LOW | Approx. $V_S - 2.5 \text{ V} / 0 \text{ V}$ |
| Output current I_{max} | $\leq 100 \text{ mA}$ |
| Response time | $\leq 2.5 \text{ ms}^{3)}$ |
| Switching frequency | 200 Hz ⁴⁾ |
| Circuit protection | A ⁵⁾ C ⁶⁾ D ⁷⁾ |
| Protection class | II ⁸⁾ |
| Weight | 100 g |
| Polarisation filter | ✓ |
| Housing material | Plastic, ABS |
| Optics material | Plastic, PMMA |
| Enclosure rating | IP67 |
| Ambient operating temperature | -25 °C ... +60 °C |
| Ambient storage temperature | -40 °C ... +70 °C |

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

2) May not exceed or fall below U_V tolerances.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

5) A = V_S connections reverse-polarity protected.

6) C = interference suppression.

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

8) Reference voltage: 50 V DC.

Safety-related parameters

| | |
|-------------------------|-------------|
| MTTF_D | 2,205 years |
| DC_{avg} | 0% |

Classifications

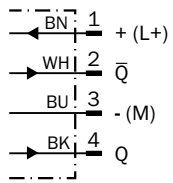
| | |
|---------------------|----------|
| ECl@ss 5.0 | 27270902 |
| ECl@ss 5.1.4 | 27270902 |
| ECl@ss 6.0 | 27270902 |
| ECl@ss 6.2 | 27270902 |
| ECl@ss 7.0 | 27270902 |
| ECl@ss 8.0 | 27270902 |
| ECl@ss 8.1 | 27270902 |
| ECl@ss 9.0 | 27270902 |
| ECl@ss 10.0 | 27270902 |
| ECl@ss 11.0 | 27270902 |
| ETIM 5.0 | EC002717 |
| ETIM 6.0 | EC002717 |
| ETIM 7.0 | EC002717 |

UNSPSC 16.0901

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Connection diagram

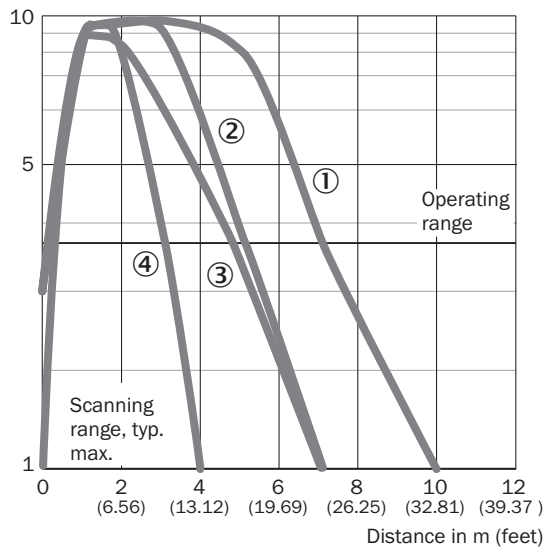
Cd-083



Characteristic curve

WL23-2

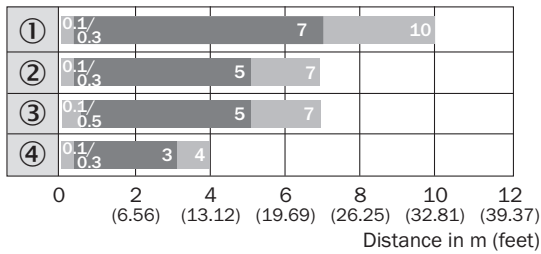
Operating reserve



- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector C110A
- ④ Reflector PL20A

Sensing range diagram

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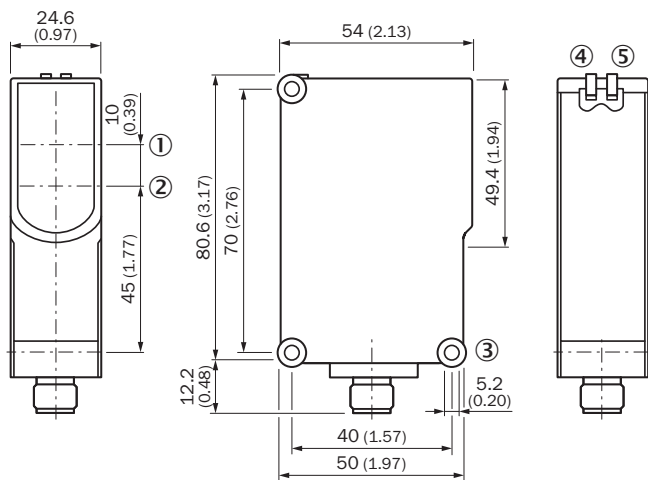


■ Operating range ■ Scanning range typ. max.

- ① Reflector PL80A
- ② Reflector PL40A
- ③ Reflector C110A
- ④ Reflector PL20A

Dimensional drawing (Dimensions in mm (inch))

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- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole \varnothing 5.2 mm
- ④ LED indicator green: Supply voltage active
- ⑤ LED indicator yellow: Status of received light beam

Recommended accessories

Mounting systems

Mounting brackets and plates

Mounting brackets

Reflectors and optics

Reflectors

Angular

Plug connectors and cables

Plug connectors and cables

Connecting cables

Field-attachable connectors

Other models and accessories → www.sick.com/W23-2

| Brief description | Type | Part no. |
|---|--------------------|----------|
| Universal mounting bracket for reflectors, steel, zinc coated | BEF-WN-REFX | 2064574 |
| Brief description | Type | Part no. |
| Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting | PL80A | 1003865 |
| Brief description | Type | Part no. |
| Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m | YF2A14-050VB3XLEAX | 2096235 |
| Brief description | Type | Part no. |
| Head A: male connector, M12, 4-pin, straight Head B: - Cable: unshielded | STE-1204-G | 6009932 |

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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