



WS/WE12L-2P430S01

W12-2 Laser

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | Part no. |
|-------------------|----------|
| WS/WE12L-2P430S01 | 1025709 |

Other models and accessories → www.sick.com/W12-2_Laser

Detailed technical data

Features

| | | |
|---|---------------------|---|
| Functional principle | | Through-beam photoelectric sensor |
| Sensing range max. | | 0 m ... 25 m |
| Emitted beam | Light source | Laser ¹⁾ |
| | Type of light | Visible red light |
| Key laser figures | Normative reference | EN 60825-1:2014, IEC 60825-1:2007 |
| | Laser class | 2 ²⁾ |
| Key LED figures | Wave length | 650 nm |
| | | |
| Adjustment | | None |
| Special features | | Reactivation delay: 0.5 s Aperture 1mm in front of receiver |
| Special applications | | Detecting small objects, Detection of objects moving at high speeds |
| Part number of individual components | | 2030011 WS12L-2P430S01 2030012 WS12L-2D430S01 |

¹⁾ Average service life: 50,000 h at T_U = +25 °C.

²⁾ Pulse length 4 µs, max. pulse power < 5,0 mW.

Electronics

| | |
|--|---|
| Supply voltage U_B | 10 V DC ... 30 V DC ¹⁾ |
| Ripple | < 5 V _{pp} ²⁾ |
| Current consumption, sender | ≤ 45 mA ³⁾ |
| Current consumption, receiver | ≤ 15 mA ³⁾ |
| Protection class | III |
| Digital output | |
| Type | PNP |
| Output current I_{max} | ≤ 100 mA |
| Response time | ≤ 200 μs ⁴⁾ |
| Switching frequency | 2,500 Hz ⁵⁾ |
| Circuit protection | A ⁶⁾ C ⁷⁾ D ⁸⁾ |

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

²⁾ May not fall below or exceed U_Y 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⁾ C = interference suppression.

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

Mechanics

| | |
|-------------------------------|---------------------------|
| Housing | Rectangular |
| Dimensions (W x H x D) | 15 mm x 49 mm x 41.5 mm |
| Connection | Male connector M12, 4-pin |
| Material | |
| Housing | Metal |
| Front screen | Plastic, PMMA |
| Weight | 260 g |

Ambient data

| | |
|--------------------------------------|-------------------|
| Enclosure rating | IP67 IP69K |
| Ambient operating temperature | -10 °C ... +50 °C |
| Ambient temperature, storage | -25 °C ... +75 °C |

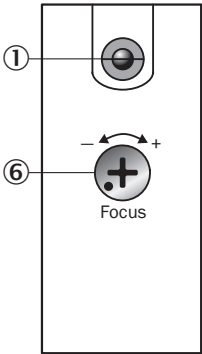
Classifications

| | |
|---------------------|----------|
| ECLASS 5.0 | 27270901 |
| ECLASS 5.1.4 | 27270901 |
| ECLASS 6.0 | 27270901 |
| ECLASS 6.2 | 27270901 |
| ECLASS 7.0 | 27270901 |
| ECLASS 8.0 | 27270901 |
| ECLASS 8.1 | 27270901 |

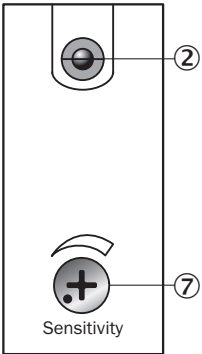
| | |
|-----------------------|----------|
| ECLASS 9.0 | 27270901 |
| ECLASS 10.0 | 27270901 |
| ECLASS 11.0 | 27270901 |
| ECLASS 12.0 | 27270901 |
| ETIM 5.0 | EC002716 |
| ETIM 6.0 | EC002716 |
| ETIM 7.0 | EC002716 |
| ETIM 8.0 | EC002716 |
| UNSPSC 16.0901 | 39121528 |

Adjustments

WS/WE12L-2

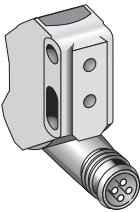


- ① Status indicator (WS, top only)
- ⑥ Focal adjustment (WS)



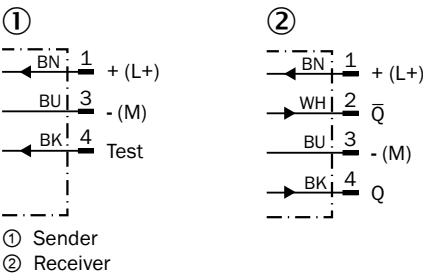
- ② LED signal strength indicator (WE)
- ⑦ Sensitivity adjustment (WE)

Connection type



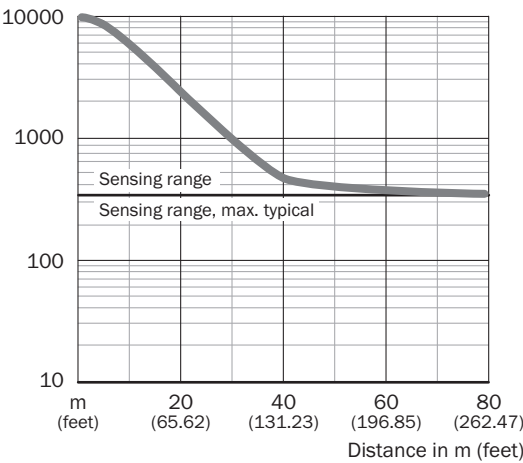
Connection diagram

Cd-077

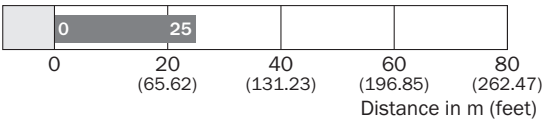


Characteristic curve

WS/WE12L-2, 80 m



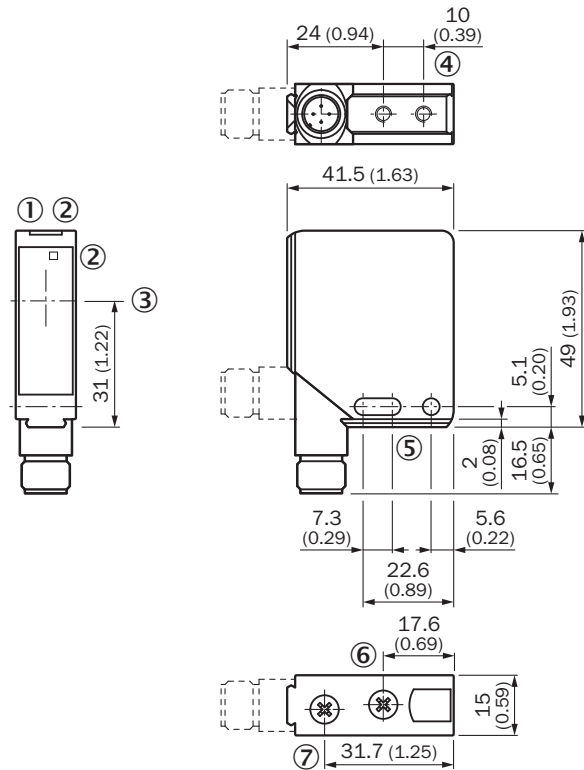
Sensing range diagram



■ Sensing range/sensing range typ. max.

Dimensional drawing (Dimensions in mm (inch))

WL12L-2, WS/WE12L-2



- ① Operating indicator, green
- ② LED reception indicator, yellow
- ③ Center of optical axis
- ④ M4 threaded mounting hole – 4 mm depth
- ⑤ Mounting hole, Ø 4.2 mm
- ⑥ Focal adjustment
- ⑦ Sensitivity control

Recommended accessories

Other models and accessories → www.sick.com/W12-2_Laser

| | Brief description | Type | Part no. |
|--------|---|--------------------|----------|
| Others | | | |
| | <ul style="list-style-type: none"> Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones | YF2A14-050VB3XLEAX | 2096235 |
| | <ul style="list-style-type: none"> Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² | 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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