WS/WE12L-2P430S01

W12-2 Laser

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

WS/WE12L-2P430S01 | W12-2 Laser

SMALL PHOTOELECTRIC SENSORS

Ordering information

Type	Part no.
WS/WE12L-2P430S01	1025709

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

Illustration may differ

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 WE12L-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.

Electrical data

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_V 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.

Mechanical data

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

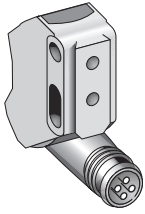|	
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Adjustments

WS/WE12L-2
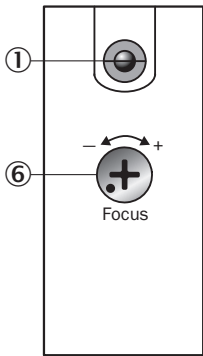
① Status indicator (WS, top only)
⑥ Focal adjustment (WS)
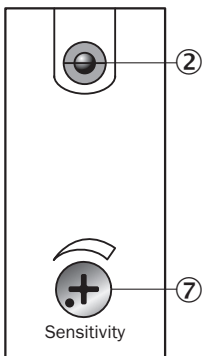
② LED signal strength indicator (WE)
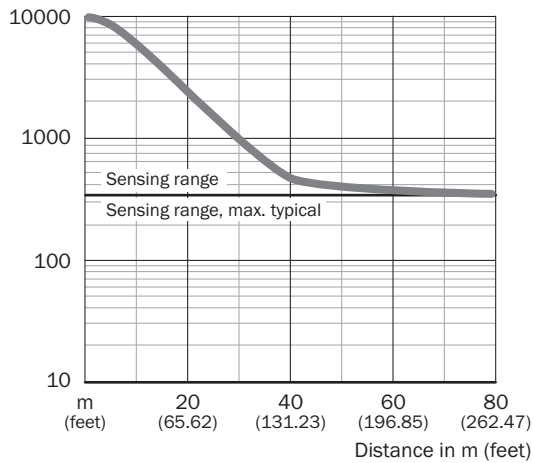⑦ Sensitivity adjustment (WE)

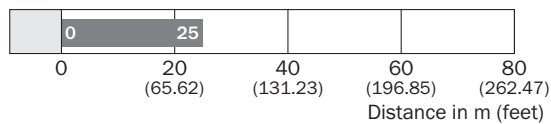## Connection type

Connection diagram

Cd-077

①
BN	1	+ (L+)
BU	3	- (M)
BK	4	Test

②
BN	1	+ (L+)
WH	2	$\overline{Q}$
BU	3	- (M)
BK	4	Q

① Sender
② Receiver
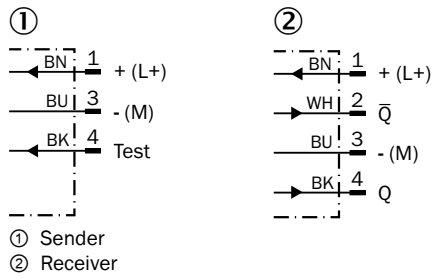
Characteristic curve

WS/WE12L-2, 80 m
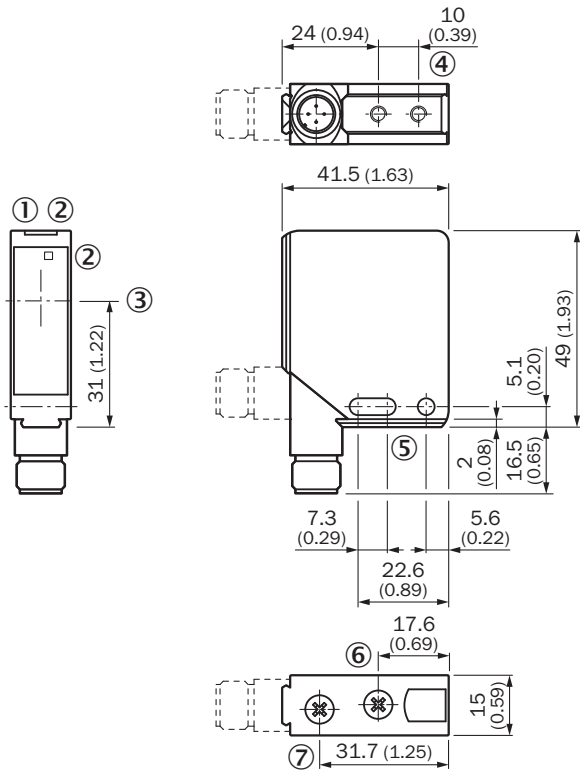

Sensing range
Sensing range, max. typical

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			
	• **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	YF2A14-050VB3XLEAX	2096235
	• **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."

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