WL12L-2B530

W12-2 Laser

SMALL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
WL12L-2B530	1018252

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

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D)	15 mm x 49 mm x 41.5 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 18 m [1]
Type of light	Visible red light
Light source	Laser [2]
Light spot size (distance)	Ø 0.8 mm (300 mm)
Wave length	650 nm
Laser class	2 (EN 60825-1:2014, IEC 60825-1:2007) [3]
Adjustment	Potentiometer
Special applications	Detecting small objects, Detection of objects moving at high speeds
Special features	Focusable from 300 mm to infinite

[1] Reflector PL80A.

[2] Average service life: 50,000 h at T_U = +25 °C.

[3] Pulse length 4 µs, max. pulse power < 5,0 mW.

Mechanics/electronics

Supply voltage	10 V DC … 30 V DC [1]
Ripple	≤ 5 V_{pp} [2]
Power consumption	55 mA [3]
Switching output	PNP [4] NPN [5]
Switching mode	Light switching [4] Dark switching [5]
Switching mode selector	Selectable via L/D control cable
Signal voltage PNP HIGH/LOW	Uv - < 2.9 V, Uv V / 0 V <= 1.5 V
Signal voltage NPN HIGH/LOW	Uv - < 2.9 V, Uv V / 0 V <= 1.5 V
Output current I$_{max.}$	100 mA
Response time	≤ 200 µs [6]
Switching frequency	2,500 Hz [7]
Connection type	Male connector M12, 5-pin
Circuit protection	A [8] C [9] D [10]
Protection class	III
Weight	130 g
Polarisation filter	✓
Housing material	Metal
Optics material	Plastic, PMMA
Enclosure rating	IP67 IP69K
Items supplied	2 x clamps incl. screws
Ambient operating temperature	–10 °C … +50 °C
Ambient storage temperature	–25 °C … +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

[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] 0 V or not connected, light switching.

[5] Uv, dark switching.

[6] Signal transit time with resistive load.

[7] With light/dark ratio 1:1.

[8] A = V_S connections reverse-polarity protected.

[9] C = interference suppression.

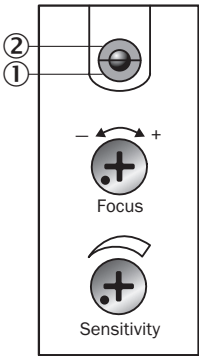[10] D = outputs overcurrent and short-circuit protected.

Classifications

ECl@ss 5.0	27270902
ECl@ss 5.1.4	27270902
ECl@ss 6.0	27270902
ECl@ss 6.2	27270902

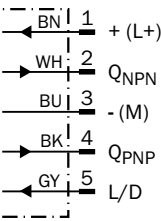| ECl@ss 7.0	27270902
ECl@ss 8.0	27270902
ECl@ss 8.1	27270902
ECl@ss 9.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
UNSPSC 16.0901	39121528

Adjustments possible

WL12L-2

① Operating indicator, green
② LED reception indicator, yellow
⑥ Focal adjustment
⑦ Sensitivity control
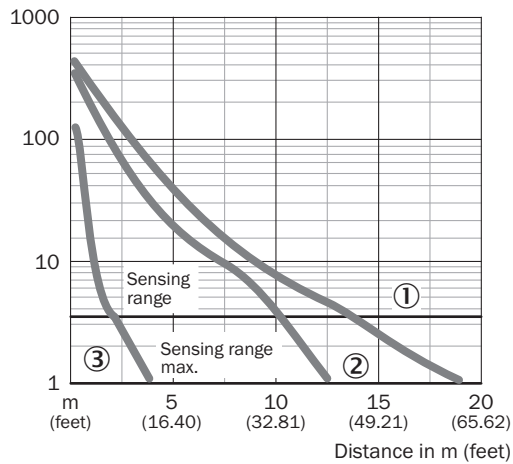
Connection diagram

Cd-145

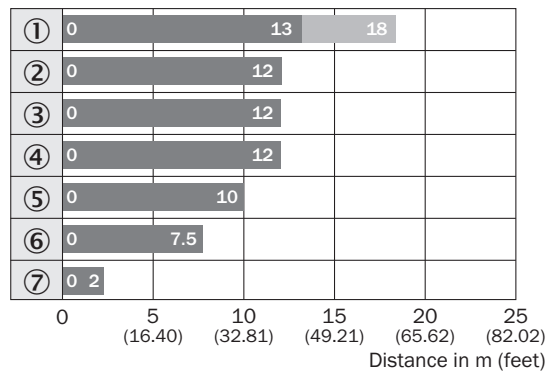|		
BN	1	+ (L+)
WH	2	Q_{NPN}
BU	3	- (M)
BK	4	Q_{PNP}
GY	5	L/D

Characteristic curve

WL12L-2, 18 m

① Reflector PL80A
② Reflector PL50A
③ Reflective tape Diamond Grade

Sensing range diagram

WL12L-2, 18 m
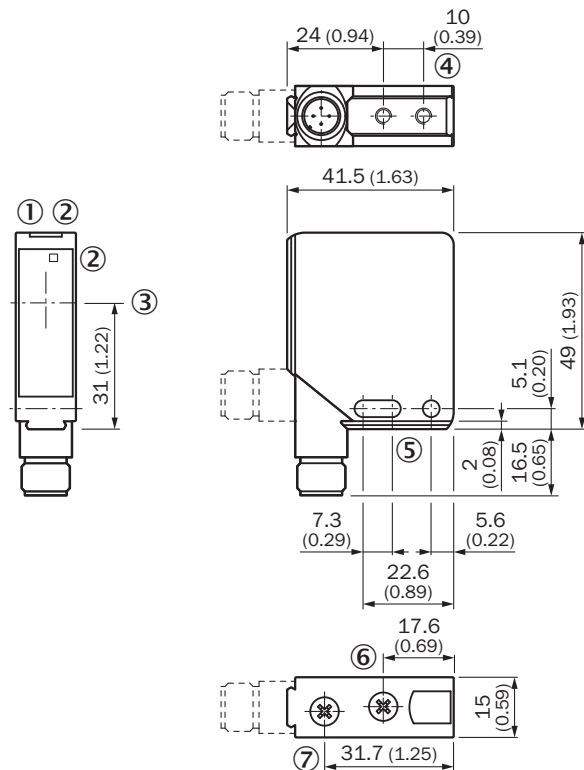

■ Sensing range   ■ Sensing range typ. max.

① Reflector PL80A
② Reflector PL50A
③ Reflector PL40A
④ Reflector P250
⑤ Reflector PL30A
⑥ Reflector PL20A
⑦ Reflective tape Diamond Grade

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 deep
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.
Mounting brackets and plates		
Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors		
Fine triple reflector, screw connection, suitable for laser sensors, 47 mm x 47 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250F	5308843

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For us, that is "Sensor Intelligence."

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