



WL15-P2430

W15

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
WL15-P2430	1043321

Other models and accessories → www.sick.com/W15

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
Dimensions (W x H x D)	16.2 mm x 48.5 mm x 31.9 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18 x 1
Sensing range max.	0.035 m ... 5 m ¹⁾
Sensing range	0.035 m ... 3.5 m
Focus	1.5°
Type of light	Visible red light
Light source	LED ²⁾
Light spot size (distance)	Ø 140 mm (3.5 m)
Angle of dispersion	1.5°
Wave length	650 nm
Adjustment	None

¹⁾ Reflector PL80A.
²⁾ 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⁾

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⁾ A = V_S connections reverse-polarity protected.
⁷⁾ B = inputs and output reverse-polarity protected.
⁸⁾ D = outputs overcurrent and short-circuit protected.
⁹⁾ Reference voltage: 50 V DC.

Current consumption	30 mA ³⁾
Switching output	PNP
Output function	Complementary
Switching mode	Light/dark switching
Output current I_{max.}	≤ 100 mA
Response time	≤ 1.25 ms ⁴⁾
Switching frequency	400 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ D ⁸⁾
Protection class	II ⁹⁾
Weight	10 g
Polarisation filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Items supplied	Snap-ring and M18 nut
Ambient operating temperature	-25 °C ... +55 °C
Ambient temperature, storage	-25 °C ... +70 °C
UL File No.	NRKH.E189383 & NRKH7.E189383

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

²⁾ May not exceed or fall below 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⁾ B = inputs and output reverse-polarity protected.

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

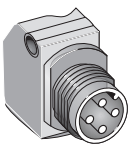
⁹⁾ Reference voltage: 50 V DC.

Classifications

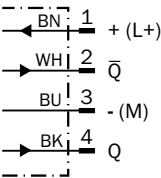
ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717

ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

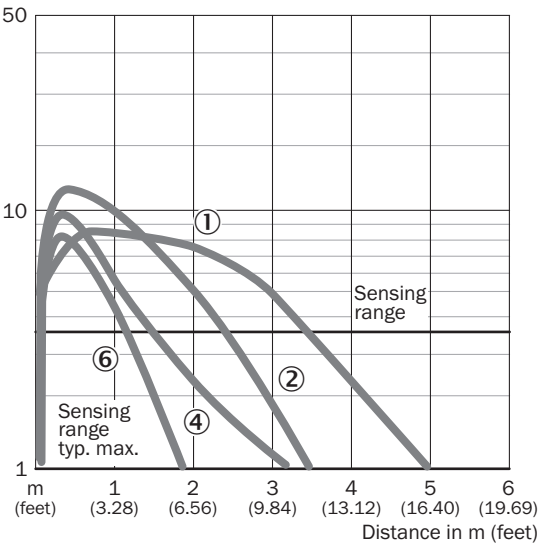
Connection type



Connection diagram Cd-083

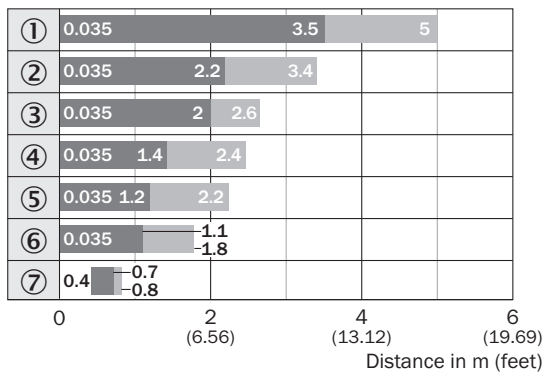


Characteristic curve WL15



- ① Reflector PL80A
- ② Reflector P250
- ③ Reflector C110A
- ④ Reflector PL50A, PL40A
- ⑤ Reflector PL30A, PL31A
- ⑥ Reflector PL20A
- ⑦ Reflective tape REF-Plus

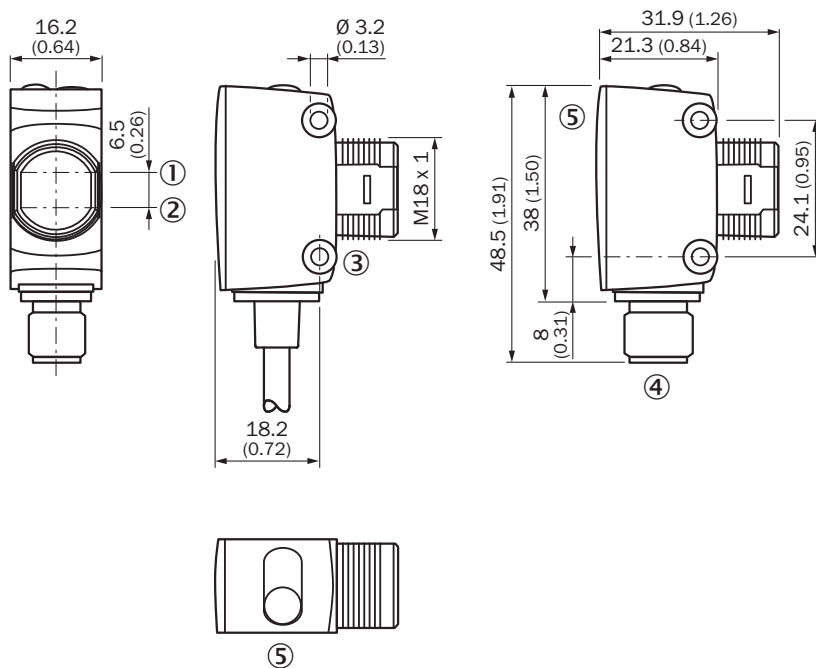
Sensing range diagram WL15



■ Sensing range ■ Sensing range max.

- ① Reflector PL80A
- ② Reflector P250
- ③ Reflector C110A
- ④ Reflector PL50A, PL40A
- ⑤ Reflector PL30A, PL31A
- ⑥ Reflector PL20A
- ⑦ Reflective tape REF-Plus

Dimensional drawing WL15, WSE15, without time functions



Dimensions in mm (inch)

- ① Optical axis, receiver
- ② Optical axis, sender
- ③ Mounting hole, Ø 3.2 mm
- ④ M12 male device connector, 4-pin
- ⑤ LED indicator green: power; yellow: output

Recommended accessories

Other models and accessories → www.sick.com/W15

	Brief description	Type	part no.
reflectors and optics			
	Description: Rectangular, screw connection Dimensions: 51 mm 61 mm Ambient operating temperature: -30 °C ... +65 °C	P250	5304812
Mounting systems			
	Description: Universal mounting bracket for reflectors Dimensions (W x H x L): 85 mm x 90 mm x 35 mm Material: Steel Details: Steel, zinc coated Suitable for: C110A, P250, PL20, PL30A, PL40A, PL80A	BEF-WN-REFX	2064574
connectors and cables			
	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
	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:

Contacts and other locations –www.sick.com