



WLA26P-24114100ZZZ

W26

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
WLA26P-24114100ZZZ	1222793

Other models and accessories → www.sick.com/W26

Detailed technical data

Features

Sensor/ detection principle	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D)	24.6 mm x 82.5 mm x 53.3 mm
Housing design (light emission)	Rectangular
Sensing range max.	0 m ... 18 m ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 100 mm (10 m)
Wave length	635 nm
Indication	
LED indicator blue	BluePilot: Alignment aid
LED indicator green	Operating indicator Static: power on
LED indicator yellow	Status of received light beam Static: object not present Static off: object present Flashing: Below the 1.5 function reserve
Special applications	Detecting objects wrapped in film

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}
Current consumption	30 mA ²⁾ 50 mA ³⁾
Switching output	Push-pull: PNP/NPN
Output function	Factory setting: Pin 2/white: health, Pin 4 / black: NPN normally closed (light switching), PNP normally open (dark switching)
Switching mode	Dark switching
Signal voltage PNP HIGH/LOW	Approx. V _S – 2.5 V / 0 V
Signal voltage NPN HIGH/LOW	Approx. V _S / < 2.5 V
Output current I_{max}	≤ 100 mA
Response time	≤ 500 µs ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	80 g
Polarisation filter	✓
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP66 (According to EN 60529) IP67 (According to EN 60529) IP69 (According to EN 60529) ¹⁰⁾
Ambient operating temperature	–40 °C ... +60 °C
Ambient storage temperature	–40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values.

²⁾ 16 V DC ... 30 V DC, without load.

³⁾ 10 V DC ... 16 V DC, without load.

⁴⁾ Signal transit time with resistive load in switching mode.

⁵⁾ With light/dark ratio 1:1 in switching mode.

⁶⁾ A = V_S connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

¹⁰⁾ Replaces IP69K with ISO 20653: 2013-03.

Safety-related parameters

MTTF_D	693 years
DC_{avg}	0%

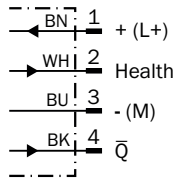
Classifications

ECI@ss 5.0	27270904
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ECI@ss 5.1.4	27270904
ECI@ss 6.0	27270904
ECI@ss 6.2	27270904
ECI@ss 7.0	27270904
ECI@ss 8.0	27270904
ECI@ss 8.1	27270904
ECI@ss 9.0	27270904
ECI@ss 10.0	27270904
ECI@ss 11.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
UNSPSC 16.0901	39121528

Connection diagram

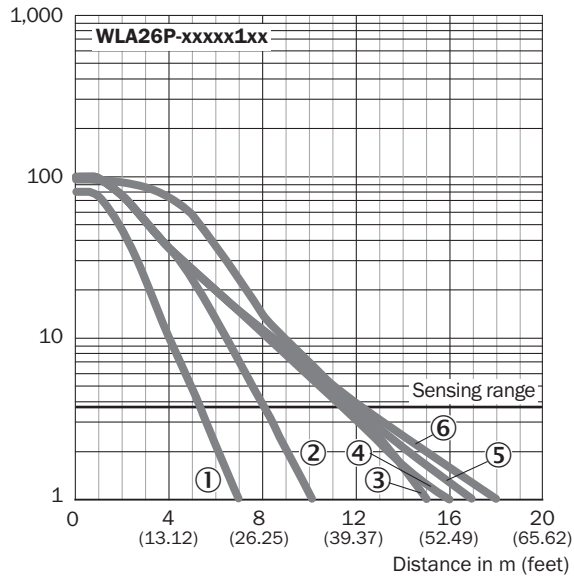
Cd-105



Characteristic curve

Standard reflectors

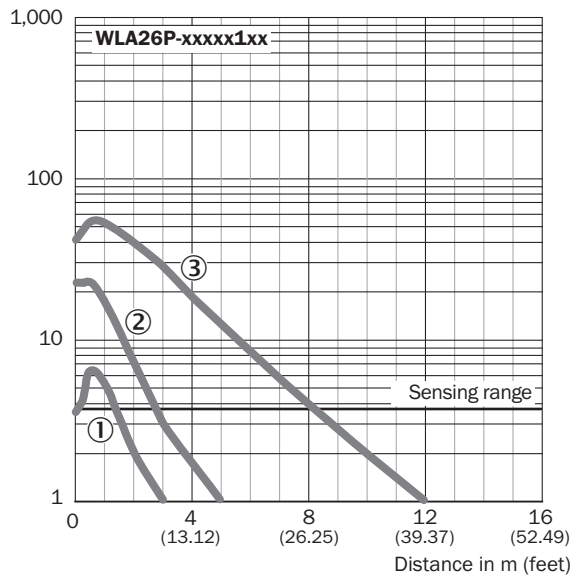
Function reserve



- ① Reflector PL20A
- ② Reflector PL22
- ③ Reflector PL250
- ④ Reflector PL30A
- ⑤ Reflector PL40A
- ⑥ Reflector PL80A, C110A

Reflective tape

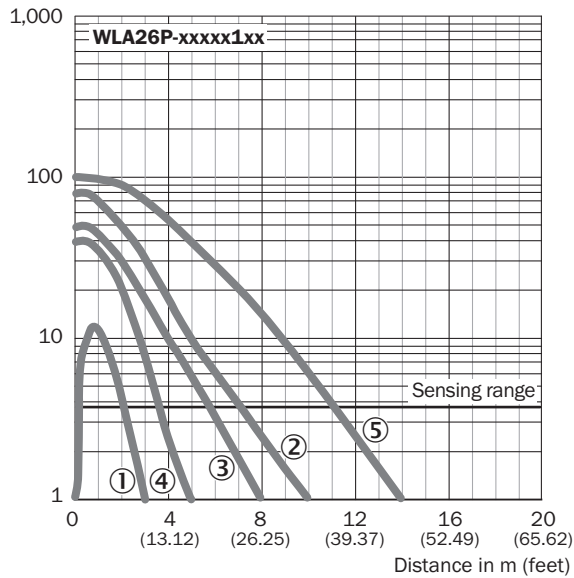
Function reserve



- ① Reflective tape REF-DG (50 x 50 mm)
- ② Reflective tape REF-IRF-56 (50 x 50 mm)
- ③ Reflective tape REF-AC1000 (50 x 50 mm)

Chemical-resistant reflectors

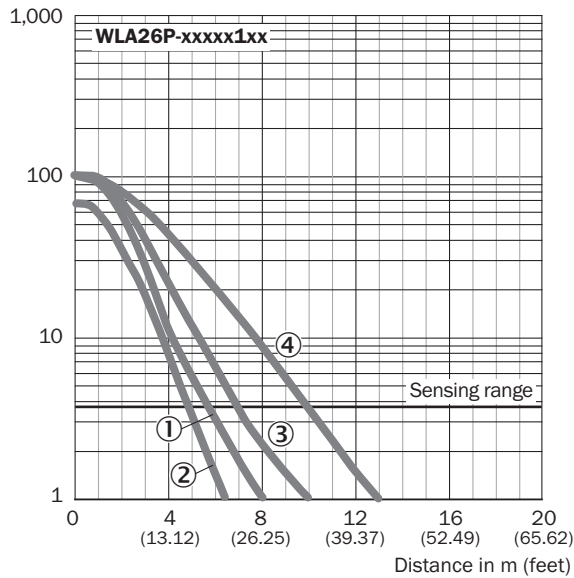
Function reserve



- ① PL10F CHEM reflector
- ② Reflector P250H
- ③ Reflector P250 CHEM
- ④ Reflector PL20 CHEM
- ⑤ Reflector PL40A Antifog

Fine triple reflectors

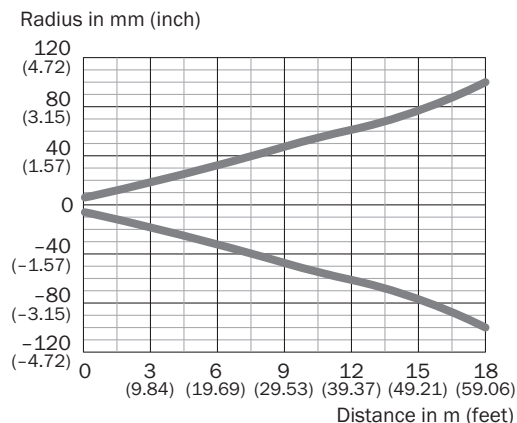
Function reserve



- ① PL10FH-1 reflector
- ② PL10F reflector
- ③ Reflector PL20F
- ④ Reflector P250F

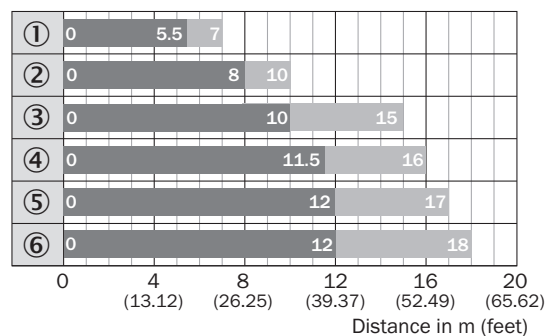
Light spot size

WLA26P-xxxxx1xx



Sensing range diagram

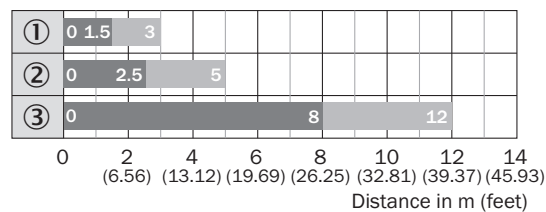
Standard reflectors



■ Sensing range ■ Sensing range typ. max.

- ① Reflector PL20A
- ② Reflector PL22
- ③ Reflector P250
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- ⑤ Reflector PL40A
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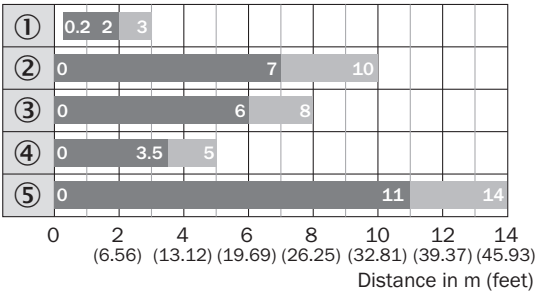
Reflective tape



■ Sensing range ■ Sensing range typ. max.

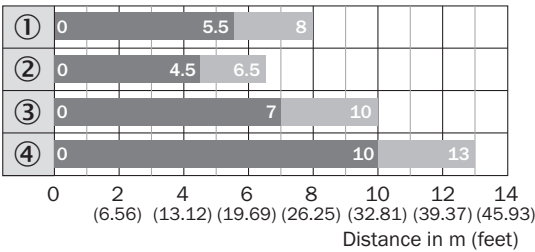
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Fine triple reflectors



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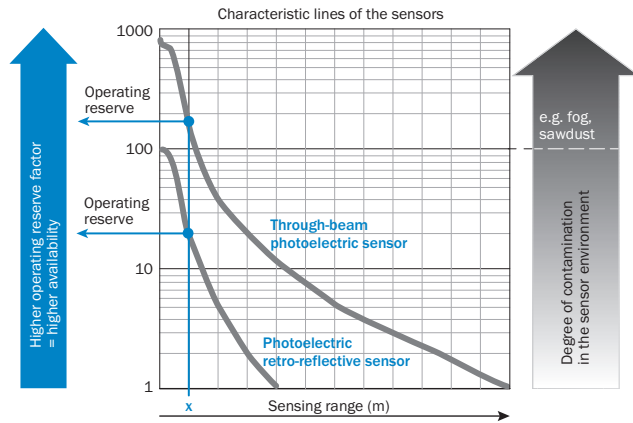
Functions

Operation note

BluePilot: Blue indicator LEDs with double benefits

Easy and quick sensor alignment with the help of the LED indicator All blue LEDs illuminate - optimum alignment - highest possible operating reserve	WLA photoelectric retro-reflection sensor alignment
Service note A reduction in sensor availability is displayed by a decrease of the blue LEDs. Possible causes: a) insufficient alignment b) contamination of the optical surfaces c) particles in the light beam	

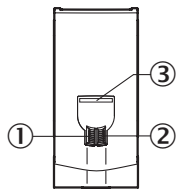
Operation note



At a sensing range of „x“ the photoelectric retro-reflective and through-beam photoelectric sensors have different operating reserves (see blue arrow). The higher the operating reserve factor, the better the sensor can compensate the contamination in the air or in the light beam and on the optical surfaces (front screen, reflector), i.e. the sensor has the maximum availability, otherwise the sensor switches due to pollution although there is no object in the path of the light beam.

Adjustments

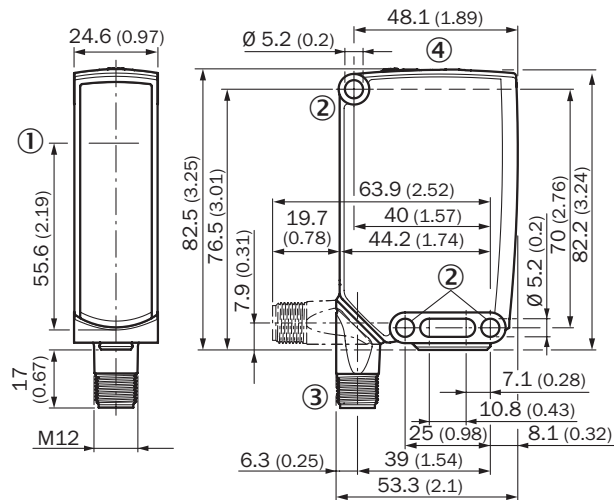
Display and adjustment elements



- ① LED indicator green
- ② LED indicator yellow
- ③ LED indicator blue

Dimensional drawing (Dimensions in mm (inch))

WLA26, connector



- ① Center of optical axis
- ② Mounting hole, Ø 5.2 mm
- ③ Connection
- ④ Display and adjustment elements

Recommended accessories

Other models and accessories → www.sick.com/W26

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N12 for universal clamp. For mounting PL30A, P250 reflectors, W27 and WTR2 sensors., Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (2022726), mounting hardware	BEF-KHS-N12	2071950
Mounting brackets and plates			
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Reflectors			
	Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865
Plug connectors and cables			
	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
	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:

Contacts and other locations –www.sick.com