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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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# WLA26P-34162100A00

W26

COMPACT PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
WLA26P-34162100A00	1218823

Other models and accessories → [www.sick.com/W26](http://www.sick.com/W26)

### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Photoelectric retro-reflective sensor, autocollimation
<b>Dimensions (W x H x D)</b>	24.6 mm x 82.5 mm x 53.3 mm
<b>Housing design (light emission)</b>	Rectangular
<b>Sensing range max.</b>	0 m ... 18 m <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED <sup>2)</sup>
<b>Light spot size (distance)</b>	Ø 100 mm (10 m)
<b>Wave length</b>	635 nm
<b>Adjustment</b>	BluePilot: With alignment aid IO-Link
<b>Pin 2 configuration</b>	External Input (test), Teach-in, switching signal

<sup>1)</sup> Reflector PL80A.

<sup>2)</sup> Average service life: 100,000 h at T<sub>J</sub> = +25 °C.

## Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	$\leq 5 V_{pp}$
<b>Power consumption</b>	30 mA <sup>2)</sup> 50 mA <sup>3)</sup>
<b>Switching output</b>	PUSH/PULL PNP NPN
<b>Output function</b>	Factory setting: Pin 2 (MF): NPN normally closed (light switching), PNP normally open (dark switching), Pin 4 (QL1/C): NPN normally open (dark switching), PNP normally closed (light switching), IO-Link
<b>Switching mode</b>	Light/dark switching
<b>Signal voltage PNP HIGH/LOW</b>	Approx. $V_S - 2.5 V / 0 V$
<b>Signal voltage NPN HIGH/LOW</b>	Approx. $V_S / < 2.5 V$
<b>Output current <math>I_{max}</math></b>	$\leq 100 mA$
<b>Response time</b>	$\leq 500 \mu s$ <sup>4)</sup>
<b>Switching frequency</b>	1,000 Hz <sup>5)</sup>
<b>Connection type</b>	Cable with M12 male connector, 4-pin, 270 mm <sup>6)</sup>
<b>Cable material</b>	PVC
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> C <sup>9)</sup> D <sup>10)</sup>
<b>Protection class</b>	III
<b>Weight</b>	100 g
<b>Polarisation filter</b>	✓
<b>IO-Link</b>	✓
<b>Housing material</b>	Plastic, VISTAL®
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP66 IP67
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Limit values.

<sup>2)</sup> 16 V DC ... 30 V DC, without load.

<sup>3)</sup> 10 V DC ... 16 V DC, without load.

<sup>4)</sup> Signal transit time with resistive load in switching mode. Different values possible in COM2 mode.

<sup>5)</sup> With light/dark ratio 1:1 in switching mode. Different values possible in IO-Link mode.

<sup>6)</sup> Do not bend below 0 °C.

<sup>7)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>8)</sup> B = inputs and output reverse-polarity protected.

<sup>9)</sup> C = interference suppression.

<sup>10)</sup> D = outputs overcurrent and short-circuit protected.

## Classifications

<b>ECI@ss 5.0</b>	27270904
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<b>ECl@ss 5.1.4</b>	27270904
<b>ECl@ss 6.0</b>	27270904
<b>ECl@ss 6.2</b>	27270904
<b>ECl@ss 7.0</b>	27270904
<b>ECl@ss 8.0</b>	27270904
<b>ECl@ss 8.1</b>	27270904
<b>ECl@ss 9.0</b>	27270904
<b>ETIM 5.0</b>	EC002719
<b>ETIM 6.0</b>	EC002719
<b>UNSPSC 16.0901</b>	39121528

### Smart Task

<b>Smart Task name</b>	Base logics
<b>Logic function</b>	Direct AND OR Window Hysteresis
<b>Timer function</b>	Deactivated On delay Off delay ON and OFF delay Impulse (one shot)
<b>Inverter</b>	Yes
<b>Switching frequency</b>	SIO Direct: 1000 Hz <sup>1)</sup> SIO Logic: 800 Hz <sup>2)</sup> IOL: 650 Hz <sup>3)</sup>
<b>Response time</b>	SIO Direct: 500 µs <sup>1)</sup> SIO Logic: 600 µs <sup>2)</sup> IOL: 750 µs <sup>3)</sup>
<b>Repeatability</b>	SIO Direct: 150 µs <sup>1)</sup> SIO Logic: 300 µs <sup>2)</sup> IOL: 400 µs <sup>3)</sup>
<b>Switching signal Q<sub>L1</sub></b>	Switching output
<b>Switching signal Q<sub>L2</sub></b>	Switching output

<sup>1)</sup> SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

<sup>2)</sup> SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

<sup>3)</sup> IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

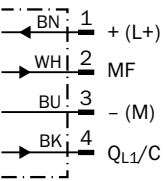
### Communication interface

<b>Communication interface</b>	IO-Link V1.1
<b>Communication Interface detail</b>	COM2 (38,4 kBaud)
<b>Cycle time</b>	2.3 ms
<b>Process data length</b>	16 Bit
<b>Process data structure</b>	Bit 0 = switching signal Q <sub>L1</sub> Bit 1 = switching signal Q <sub>L2</sub> Bit 2 ... 15 = empty
<b>VendorID</b>	26

<b>DeviceID HEX</b>	0x800180
<b>DeviceID DEZ</b>	8388992

**Connection diagram**

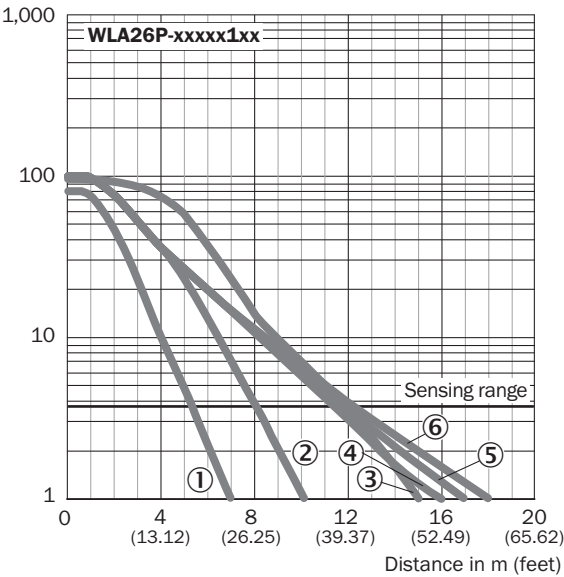
Cd-390



**Characteristic curve**

Standard reflectors

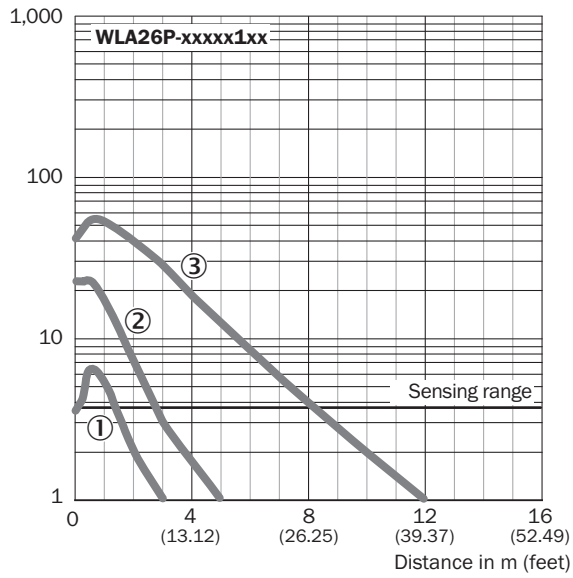
Function reserve



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

### Reflective tape

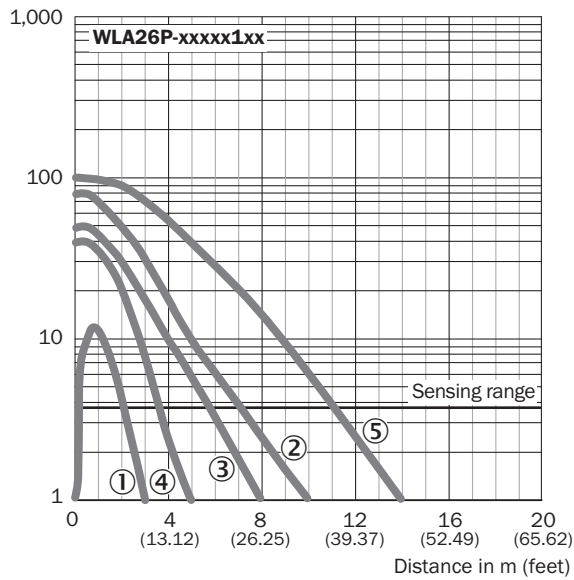
Function reserve



- 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

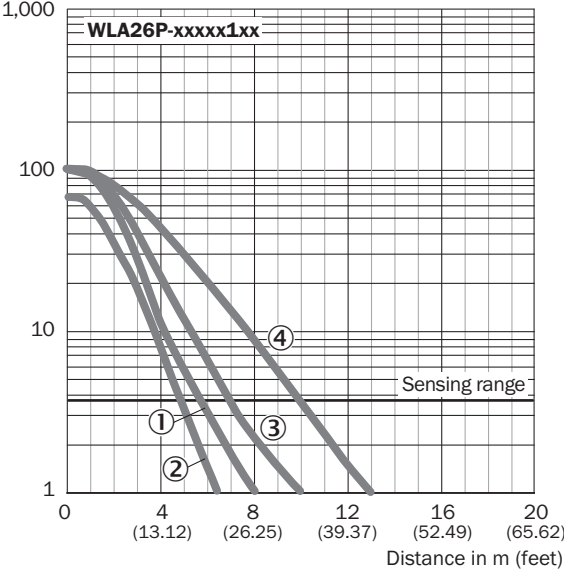
Function reserve



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

Fine triple reflectors

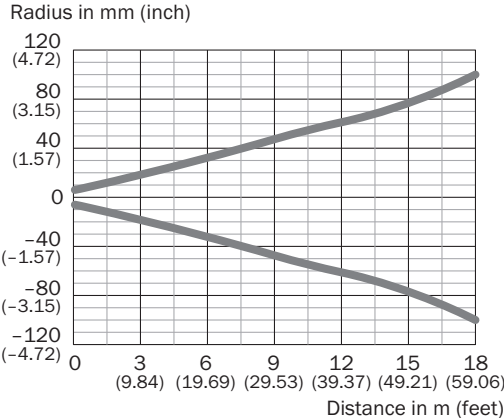
Function reserve



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

Light spot size

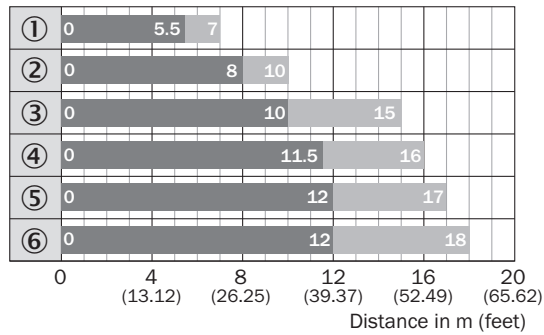
WLA26P-xxxxx1xx





### Sensing range diagram

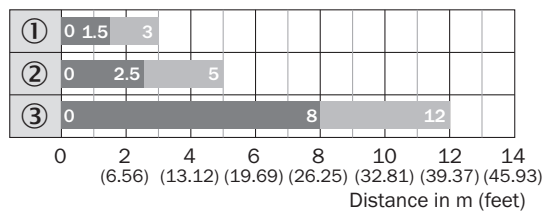
#### Standard reflectors



■ Sensing range      ■ Sensing range typ. max.

- ① Reflector PL20A
- ② Reflector PL22
- ③ Reflector P250
- ④ Reflector PL30A
- ⑤ Reflector PL40A
- ⑥ Reflector PL80A, C110A

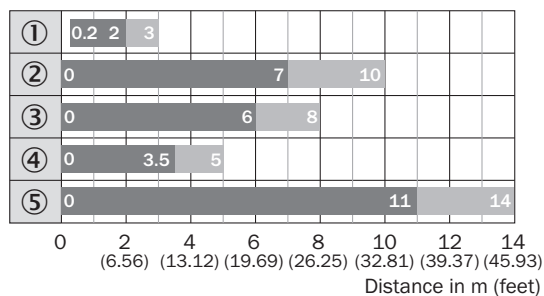
#### Reflective tape



■ Sensing range      ■ Sensing range typ. max.

- 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)

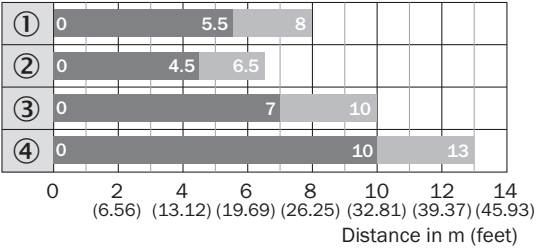
#### Chemical-resistant reflectors



■ Sensing range      ■ Sensing range typ. max.

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

Fine triple reflectors



- Sensing range
- Sensing range typ. max.
- ① PL10FH-1 reflector
- ② PL10F reflector
- ③ Reflector PL20F
- ④ Reflector P250F

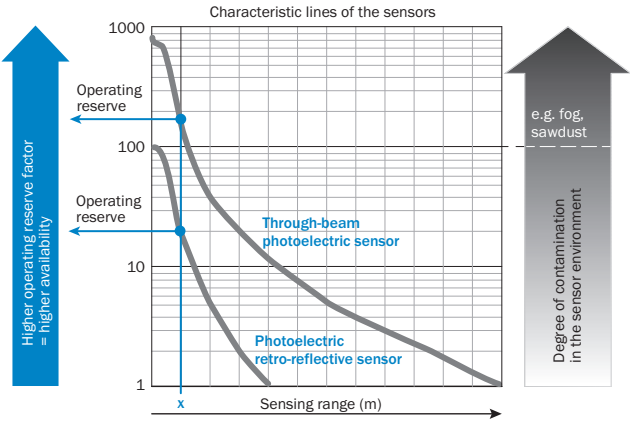
Functions

Operation note

BluePilot: Blue indicator LEDs with double benefits

<p>Easy and quick sensor alignment with the help of the LED indicator</p> <p>All blue LEDs illuminate</p> <ul style="list-style-type: none"> <li>- optimum alignment</li> <li>- highest possible operating reserve</li> </ul>	<p>WLA photoelectric retro-reflection sensor alignment</p>
<p>Service note</p> <p>A reduction in sensor availability is displayed by a decrease of the blue LEDs.</p> <p>Possible causes:</p> <ul style="list-style-type: none"> <li>a) insufficient alignment</li> <li>b) contamination of the optical surfaces</li> <li>c) particles in the light beam</li> </ul>	

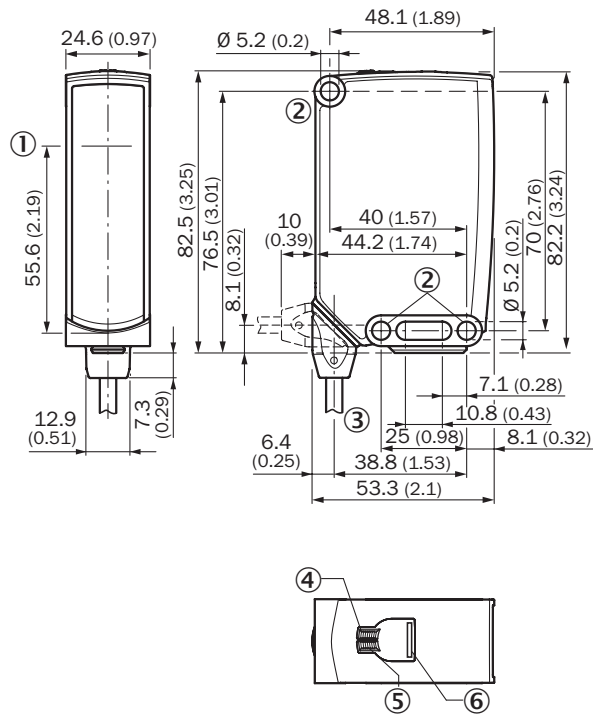
Operation note



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.

### Dimensional drawing (Dimensions in mm (inch))




WLA26, cable













- ① Center of optical axis
- ② Mounting hole, Ø 5.2 mm
- ③ Connection
- ④ LED indicator green: power
- ⑤ LED indicator yellow: Status of received light beam
- ⑥ BluePilot blue: Alignment aid

### Recommended accessories

Other models and accessories → [www.sick.com/W26](http://www.sick.com/W26)

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Plate NO4 for universal clamp, steel, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N04	2051610
	Bar clamp for bar diameter of 12 mm (fixing the mounting rod), Aluminum, 2 screws M6 x 30, 2 spring discs	BEF-RMC-D12	5321878
<b>Device protection (mechanical)</b>			
	Protective housing for universal clamp, Zinc plated steel (protective housing), Zinc die cast (clamping bracket), Universal clamp (2031357), mounting hardware	BEF-SG-W27	2039601

	Brief description	Type	Part no.
<b>Mounting brackets and plates</b>			
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W27	2009122
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A14-020UB3XLEAX	2095607
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14-020VB3XLEAX	2096234
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A14-050UB3XLEAX	2095608
	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: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A14-020VB3XLEAX	2095895
	Head A: female connector, M12, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG2A14-050VB3XLEAX	2095897
	Head A: female connector, M12, 4-pin, straight Head B: - Cable: unshielded	DOS-1204-G	6007302
		DOS-1204-GQU6	6042088
	Head A: female connector, M12, 4-pin, angled Head B: - Cable: unshielded	DOS-1204-W	6007303
	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](http://www.sick.com)