



# OLS20-BB1114149

OLS

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
OLS20-BB114149	1103483

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

Detailed technical data

Features

Dimensions (W x H x D)	31 mm x 62 mm x 52.5 mm
Sensing distance	≤ 100 mm
Sensing distance tolerance	± 10 mm
Housing design	Rectangular
Working range	90 mm ... 110 mm
Light source	LED, blue <sup>1)</sup>
Wave length	450 nm
Light spot size	180 mm x 9 mm <sup>2)</sup>
Receiving filters	400 ... 700
Bar code types	Interleaved 2 of 5
Module width (min.)	≥ 1.5 mm
Line radius (min.)	≥ 0.5 m
Track color	Blue
Safety-related parameters	
MTTF <sub>D</sub>	271 years

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

<sup>2)</sup> Field of view line +90mm, field of view code +50mm.

## Interfaces

<b>IO-Link</b>	✓ , COM3 (230,4 kBaud)
Cycle time	5 ms
Process data length	21 Byte Process Data In
<b>CANopen</b>	✓
<b>Digital output</b>	Q <sub>1</sub>
Number	1

## Electronics

<b>Supply voltage</b>	18 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	≤ 5 V <sub>pp</sub> <sup>2)</sup>
<b>Power consumption</b>	< 3 W <sup>3)</sup>
<b>Sampling rate</b>	5 ms
<b>Accuracy optical center</b>	± 1 mm
<b>Switching output</b>	Push-pull: PNP/NPN
<b>Switching output (voltage)</b>	Push-pull: PNP/NPN HIGH = U <sub>V</sub> - 3 V/LOW ≤ 3 V
<b>Output current I<sub>max</sub></b>	< 100 mA
<b>Time delay</b>	None
<b>Protection class</b>	III
<b>Circuit protection</b>	U <sub>V</sub> connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
<b>LED risk group</b>	2 (IEC 62471)

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

<sup>2)</sup> May not fall below or exceed U<sub>V</sub> tolerances.

<sup>3)</sup> Without load.

## Mechanics

<b>Housing material</b>	Zinc diecast
<b>Connection type</b>	Plug, M12, 5-pin
<b>Weight</b>	250 g

## Ambient data

<b>Ambient operating temperature</b>	-10 °C ... +55 °C
<b>Ambient temperature, storage</b>	-25 °C ... +75 °C
<b>Ambient light immunity</b>	50,000 lx
<b>Shock load</b>	According to IEC 60068
<b>Enclosure rating</b>	IP67
<b>UL File No.</b>	NRKH.E181493 & NRKH7.E181493

## Certificates

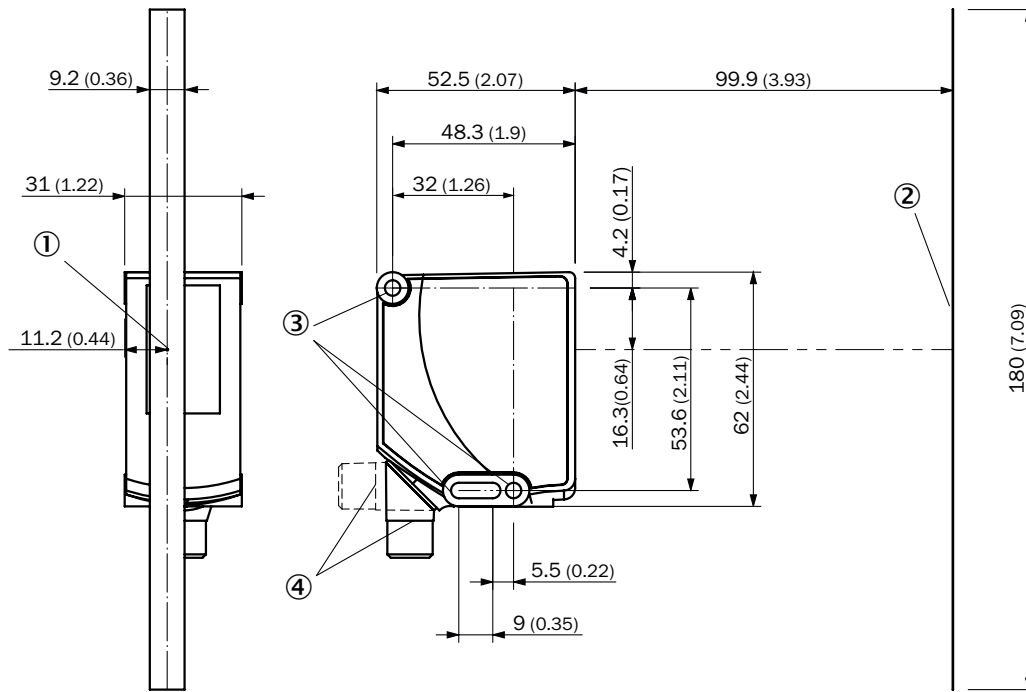
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓

<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>IO-Link certificate</b>	✓
<b>CANopen certificate</b>	✓
<b>Photobiological safety (IEC EN 62471)</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

Classifications

<b>ECLASS 5.0</b>	27270906
<b>ECLASS 5.1.4</b>	27270906
<b>ECLASS 6.0</b>	27270906
<b>ECLASS 6.2</b>	27270906
<b>ECLASS 7.0</b>	27270906
<b>ECLASS 8.0</b>	27270906
<b>ECLASS 8.1</b>	27270906
<b>ECLASS 9.0</b>	27270906
<b>ECLASS 10.0</b>	27270906
<b>ECLASS 11.0</b>	27270906
<b>ECLASS 12.0</b>	27270906
<b>ETIM 5.0</b>	EC001820
<b>ETIM 6.0</b>	EC001820
<b>ETIM 7.0</b>	EC001820
<b>ETIM 8.0</b>	EC001820
<b>UNSPSC 16.0901</b>	39121528

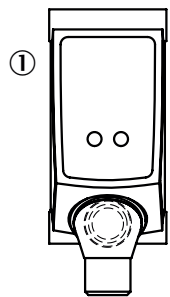
## Dimensional drawing



Dimensions in mm (inch)

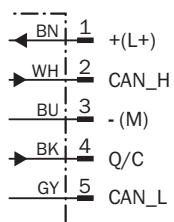
- ① Optical axis
- ② Field of view
- ③ Mounting hole,  $\varnothing$  4.1 mm
- ④ Connector M12 (rotatable up to 180°)

## Adjustments







- ① Indicator lamps

## Connection diagram Cd-422



### Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Plate N04 for universal clamp, steel</li> <li><b>Material:</b> Steel, zinc diecast</li> <li><b>Details:</b> Zinc plated steel (sheet), Zinc die cast (clamping bracket)</li> <li><b>Items supplied:</b> Universal clamp (5322626), mounting hardware</li> <li><b>Usable for:</b> Dx50, UC12, W12G, W14-2, W18-2, W23, W280, W11-2, W12-3, W12-2 Laser, W12 Teflon, W16, W18-3, W23-2, W24-2, W24-2 Ex, W26, W27-2 Laser, W27-2, W27-3, W34, W260, W280-2, PowerProx, Reflex Array, W11G-2, W18-3 Ex, W27-3 Ex</li> </ul>	BEF-KHS-N04	2051610
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li><b>Note:</b> For field bus technology</li> </ul>	STE-1205-G	6022083
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, straight, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 5-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>	YF2A15-050VB5XLEAX	2096240
network devices			
		IOLA2US-01101 (SiLink2 Master)	1061790
Codes			
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 1D bar codes in 2/5 interleaved format, set of 108 bar codes, 12 A4 sheets of 9 bar codes each, luminescent PVC base material with protective film, codes 0001 ... 0108, blue</li> </ul>	BAR CODE 751-053-0001-0108	5342891
	<ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 1D bar codes in 2/5 interleaved format, set of 108 bar codes, 12 A4 sheets of 9 bar codes each, luminescent PVC base material with protective film, codes 0109 ... 0216, blue</li> </ul>	BAR CODE 751-053-0109-0216	5342892

## 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)