



# OLS20-BB1114342

OLS

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type           | part no. |
|----------------|----------|
| OLS20-BB114342 | 1113053  |

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

### Detailed technical data

#### Features

|                                   |                                       |
|-----------------------------------|---------------------------------------|
| <b>Housing design</b>             | Middle                                |
| <b>Dimensions (W x H x D)</b>     | 31 mm x 62 mm x 52.5 mm               |
| <b>Module width (min.)</b>        | ≥ 1.5 mm                              |
| <b>Line radius (min.)</b>         | ≥ 0.5 m                               |
| <b>Track color</b>                | Orange                                |
| <b>Light source</b>               | LED, visible blue light <sup>1)</sup> |
| <b>Light spot size</b>            | 180 mm x 9 mm <sup>2)</sup>           |
| <b>Receiving filters</b>          | ≤ 610 nm                              |
| <b>Wave length</b>                | 450 nm                                |
| <b>Bar code types</b>             | 2/5 Interleaved with checksum         |
| <b>Working range</b>              | 90 mm ... 110 mm                      |
| <b>Sensing distance</b>           | ≤ 100 mm                              |
| <b>Sensing distance tolerance</b> | ± 10 mm                               |
| <b>Safety-related parameters</b>  |                                       |
|                                   | 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<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>LED risk group</b>                  | 2<br>(IEC 62471)   |
| <b>Connection type</b>                 | Plug, M12, 5-pin   |

<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>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 |

## 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 |

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> | ✓ |



Recommended accessories

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

|   | Brief description   | Type                            | part no. |
|---|---|---------------------------------|----------|
| 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 with 3 digits plus checksum, set of 108 bar codes, 12 A4 sheets of 9 bar codes each, luminescent PVC base material with protective film, codes 0001 ... 0108, neon orange</li> </ul>  | BARCODE<br>7510-038-0001-0108-N | 5343612  |
|   | <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 with 3 digits plus checksum, set of 108 bar codes, 12 A4 sheets of 9 bar codes each, luminescent PVC base material with protective film, codes 0109 ... 0216, neon orange</li> </ul>  | BARCODE<br>7510-038-0109-0216-N | 5343613  |
|    | <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, 9 A4 sheets of 12 bar codes each, luminescent PVC base material with protective film, codes 0001 ... 0108, neon orange</li> </ul>  | BARCODE<br>7510-038-0001-0108   | 5338408  |
|    | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Luminescent duct tape for easy application to all types of flooring, width 2.5 cm, length 25 m, neon orange</li> </ul>   | ADHESIVE<br>TAPE, FABRIC        | 5337868  |
|   | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Luminescent rugged PVC adhesive tape for easy application to all types of flooring, width 2 cm, length 25 m, neon orange</li> </ul>  | TAPE<br>7510-038-20-25          | 5338378  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Scope of delivery: 1 x 90° arc: luminescent rugged PVC adhesive tape, prepared as 90° arc with a radius of 500 mm, neon orange</li> </ul>  | TAPE 7510-038-500               | 5338387  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Scope of delivery: 1 x 90° arc, luminescent rugged PVC adhesive tape, prepared as 90° arc with a radius of 1,000 mm, neon orange</li> </ul>  | TAPE<br>7510-038-1000           | 5338388  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Protective film for adhesive tape, slip resistance class R10, protection against abrasion and moisture, width 3,5 cm, length 50 m</li> </ul>   | TAPE 250AS-35-50                | 5338386  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Scope of delivery: 1 x 90° arc, protective film for adhesive tape, slip resistance class R10, protection against abrasion and moisture, prepared as 90° arc with a radius of 500 mm</li> </ul>   | TAPE 250AS-500-35               | 5338389  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> Scope of delivery: 1 x 90° arc, protective film for adhesive tape, slip resistance class R10, protection against abrasion and moisture, prepared as 90° arc with a radius of 1,000 mm</li> </ul>   | TAPE 250AS-100-35               | 5338390  |
|  | <ul style="list-style-type: none"> <li><b>Product family:</b> Positioning codes</li> <li><b>Description:</b> 1D barcodes in 2/5 interleaved format, set of 108 barcodes, 9 A4 sheets of 12 barcodes each, luminescent PVC base material with protective film, codes 0109 ... 0218, neon orange. Supplement (subsequent codes) for <a href="https://www.sick.com/5338408">https://www.sick.com/5338408</a> target="_blank"&gt;BARCODE 7510-038-0001-0108&lt;/a&gt;.</li> </ul> | BARCODE<br>7510-038-0109-0218   | 5342395  |

|   | Brief description   | Type                              | part no. |
|---|---|-----------------------------------|----------|
| 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 mm<sup>2</sup></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  |
| 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  |
| network devices   |   |                                   |          |
|  |   | IOLA2US-01101<br>(SiLink2 Master) | 1061790  |

## 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:

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