



# WTB4-3P3192

MultiLine

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

| Type        | part no. |
|-------------|----------|
| WTB4-3P3192 | 1067833  |

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

### Detailed technical data

#### Features

|                                        |                                                                                                  |
|----------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Functional principle</b>            | Photoelectric proximity sensor                                                                   |
| <b>Functional principle detail</b>     | Background suppression                                                                           |
| <b>Dimensions (W x H x D)</b>          | 16 mm x 39.5 mm x 12 mm                                                                          |
| <b>Housing design (light emission)</b> | Rectangular                                                                                      |
| <b>Sensing range max.</b>              | 5 mm ... 120 mm <sup>1)</sup>                                                                    |
| <b>Sensing range</b>                   | 40 mm ... 120 mm <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>      | 5 mm x 22 mm (40 mm) <sup>3)</sup>                                                               |
| <b>Wave length</b>                     | 650 nm                                                                                           |
| <b>Adjustment</b>                      | Single teach-in button                                                                           |
| <b>Special feature</b>                 | Line-shaped light spot                                                                           |
| <b>Special applications</b>            | Detecting perforated objects, Detecting uneven, shiny objects, Detecting objects wrapped in film |
| <b>Special features</b>                | Multi-background suppression                                                                     |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

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

<sup>3)</sup> Two parallel line-shaped light spots.

#### Mechanics/electronics

|                       |                                   |
|-----------------------|-----------------------------------|
| <b>Supply voltage</b> | 10 V DC ... 30 V DC <sup>1)</sup> |
|-----------------------|-----------------------------------|

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

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

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

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> Do not bend below 0 °C.

<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

|                                       |                                                       |
|---------------------------------------|-------------------------------------------------------|
| <b>Ripple</b>                         | < 5 V <sub>pp</sub> <sup>2)</sup>                     |
| <b>Current consumption</b>            | 30 mA <sup>3)</sup>                                   |
| <b>Switching output</b>               | PNP                                                   |
| <b>Switching mode</b>                 | Light switching                                       |
| <b>Output current I<sub>max</sub></b> | ≤ 100 mA                                              |
| <b>Response time</b>                  | < 1.2 ms <sup>4)</sup>                                |
| <b>Switching frequency</b>            | 400 Hz <sup>5)</sup>                                  |
| <b>Connection type</b>                | Cable with connector M8, 3-pin, 100 mm <sup>6)</sup>  |
| <b>Cable material</b>                 | PVC                                                   |
| <b>Circuit protection</b>             | A <sup>7)</sup><br>C <sup>8)</sup><br>D <sup>9)</sup> |
| <b>Protection class</b>               | III                                                   |
| <b>Weight</b>                         | 30 g                                                  |
| <b>Housing material</b>               | Plastic, ABS                                          |
| <b>Optics material</b>                | Plastic, PMMA                                         |
| <b>Enclosure rating</b>               | IP67<br>IP66                                          |
| <b>Special feature</b>                | Line-shaped light spot                                |
| <b>Ambient operating temperature</b>  | -40 °C ... +60 °C                                     |
| <b>Ambient temperature, storage</b>   | -40 °C ... +75 °C                                     |
| <b>UL File No.</b>                    | NRKH.E181493 & NRKH7.E181493                          |

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

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

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

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> Do not bend below 0 °C.

<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>8)</sup> C = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

## Safety-related parameters

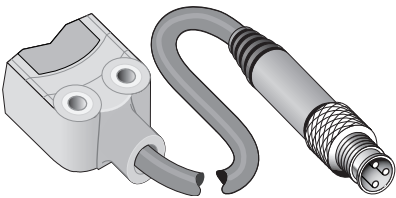
|                                     |           |
|-------------------------------------|-----------|
| <b>MTTF<sub>D</sub></b>             | 460 years |
| <b>DC<sub>avg</sub></b>             | 0 %       |
| <b>T<sub>M</sub> (mission time)</b> | 20 years  |

## Classifications

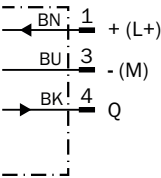
|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270904 |
| <b>ECLASS 5.1.4</b> | 27270904 |
| <b>ECLASS 6.0</b>   | 27270904 |
| <b>ECLASS 6.2</b>   | 27270904 |
| <b>ECLASS 7.0</b>   | 27270904 |
| <b>ECLASS 8.0</b>   | 27270904 |
| <b>ECLASS 8.1</b>   | 27270904 |

|                |          |
|----------------|----------|
| ECLASS 9.0     | 27270904 |
| ECLASS 10.0    | 27270904 |
| ECLASS 11.0    | 27270904 |
| ECLASS 12.0    | 27270903 |
| ETIM 5.0       | EC002719 |
| ETIM 6.0       | EC002719 |
| ETIM 7.0       | EC002719 |
| ETIM 8.0       | EC002719 |
| UNSPSC 16.0901 | 39121528 |

Connection type

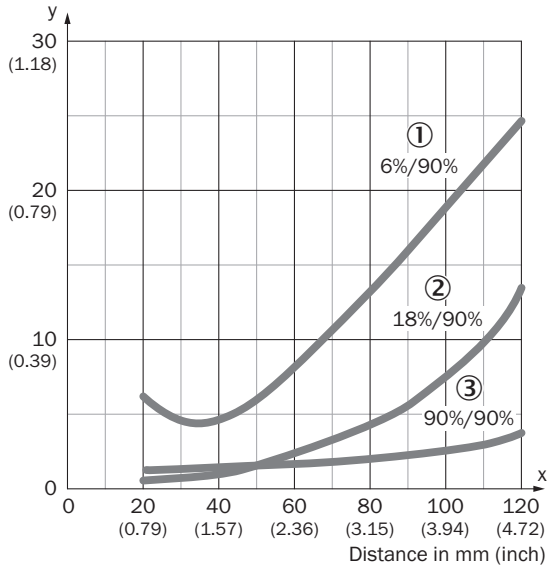


Connection diagram Cd-045



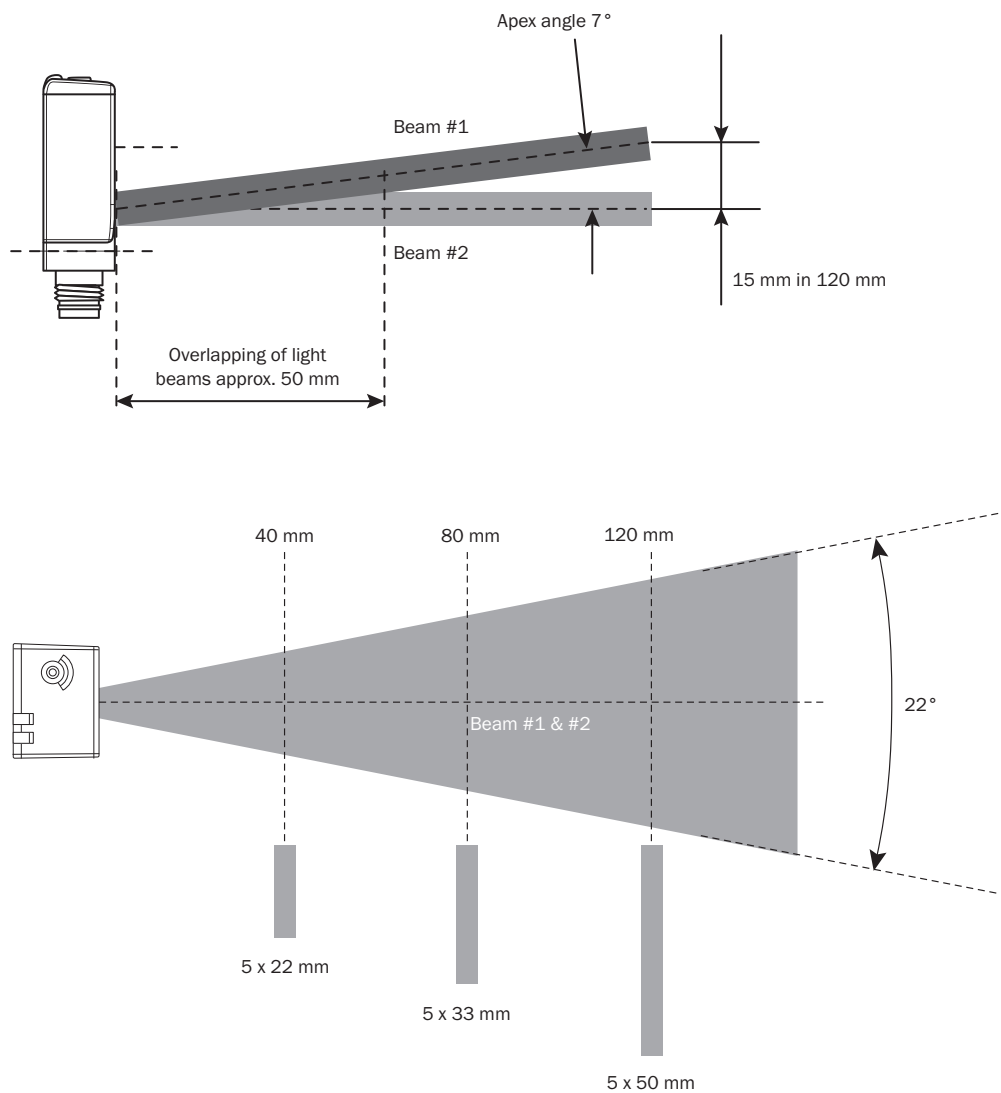
## Characteristic curve

Minimum distance in mm (y) between the set sensing range and white background (90 % remission)

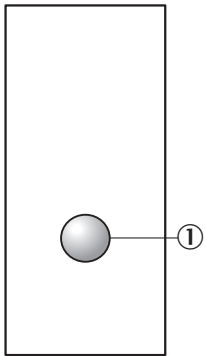


- ① Black object, 6% remission factor
- ② Gray object, 18% remission factor
- ③ White object, 90% remission factor

Light spot size

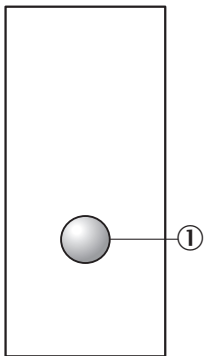


## Adjustments



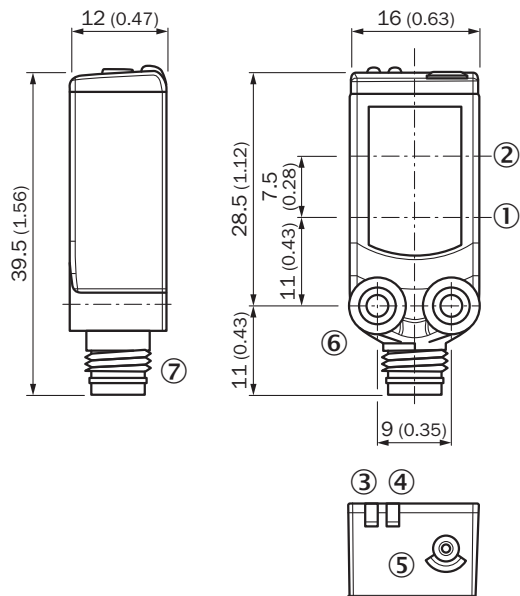
① Teach-in button

## Adjustments Teach-in button



① Teach-in button

## Dimensional drawing

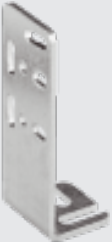


Dimensions in mm (inch)

- ① optical axis, sender
- ② optical axis, receiver
- ③ LED indicator yellow: Status of received light beam
- ④ LED indicator green: Supply voltage active
- ⑤ Teach-in button
- ⑥ Threaded mounting hole M3
- ⑦ Connection

### Recommended accessories

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

|                                                                                     | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Type         | part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|
| Mounting systems                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |          |
|    | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for floor mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W4S, W4F, W4S</li> </ul>                                                                                                                                                                                                                                     | BEF-W4-B     | 2051630  |
|   | <ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for wall mounting</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571</li> <li><b>Items supplied:</b> Mounting hardware included</li> <li><b>Suitable for:</b> W4S, W4F, W4S</li> </ul>                                                                                                                                                                                                                                      | BEF-W4-A     | 2051628  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Plate N08 for universal clamp bracket</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> W100, W150, W4S, W4F, W8, W9-3, W8G, W8 Laser, W8 Inox, G6, W100 Laser, W100-2, W10, G6 Inox, RAY10, W4SLG-3, W9, GR18, MultiPulse, Reflex Array, MultiLine, LUT3, KT5, KT8, KT10, CS8</li> </ul> | BEF-KHS-N08  | 2051607  |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Plate N11N for universal clamp bracket</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li> <li><b>Items supplied:</b> Universal clamp (5322627), mounting hardware</li> <li><b>Usable for:</b> DeltaPac, Glare, WTD20E</li> </ul>                                                                                                                                                                | BEF-KHS-N11N | 2071081  |

|                                                                                   | Brief description                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Type               | part no. |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 3-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> 0.14 mm² ... 0.5 mm²</li> </ul>                                                                                                                                                                                    | STE-0803-G         | 6037322  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 3-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, 3-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>                                                      | YF8U13-050VA1XLEAX | 2095884  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 3-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, 3-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF8U13-050UA1XLEAX | 2094788  |

## 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)