



## MultiLine Sensor MultiTask photoelectric sensors

Twice the power in a mini format

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### Product description

The MultiLine sensor features two parallel lines of light, that means not only one but two light sensors work in tandem in the housing. And double detection detects significantly better, particularly when objects such as circuit boards have slots and openings and when blister packaging and soup sachets are glossy and very flat. Faulty switching when

an object passes the sensor is now a thing of the past. The double detection prevents faulty switching because the sensor only switches off when both light lines no longer detect the object. If the signal of one light line gets lost during the passage of an object, the output remains set.

### At a glance

- Two logical and intelligently linked sensors with background suppression in one miniature housing offer the highest ruggedness for object detection
- Consistent, reliable detection of structures and perforated objects such as e-cards
- Consistent, reliable detection of reflective and irregular objects such as blister packs and soup sachets on conveyor belts
- Maximum sensing range 120 mm
- Simple adjustment via teach-in button

### Your benefits

- The MultiLine sensor facilitates faster production sequences since the distances between objects can be reduced
- The sensor position no longer needs to be modified for format changes since the sensor is able to detect objects independently of their position. This saves time and money
- The reliable signal of the sensor from the arriving to the departing edge places less demands on the control software since it no longer needs to be debounced or evaluated
- The MultiLine sensor offers high process reliability because all objects are detected independently of their structure, geometry and surface properties
- And placing the sensor into operation is as easy as pressing a button. A fast and reliable commissioning without complicated operating algorithms is thus given

→ [www.mysick.com/en/WTB4-3\\_MultiLine](http://www.mysick.com/en/WTB4-3_MultiLine)

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



## Detailed technical data

### Features

<b>Sensor principle</b>	Photoelectric proximity sensor
<b>Detection principle</b>	Multi-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, Flat
<b>Sensing range max.</b>	5 mm ... 120 mm
<b>Sensing range</b>	15 mm ... 120 mm
<b>Type of light</b>	Visible red light
<b>Light source <sup>1)</sup></b>	PinPoint LED
<b>Light spot size (distance)</b>	3 mm x 25 mm (40 mm) 5 mm x 22 mm (40 mm) (depending on type)
<b>Wave length</b>	650 nm
<b>Sensitivity adjustment</b>	Teach-in button
<b>Teach-in</b>	Single teach-in button

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

### Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup> 10 V DC ... 30 V DC <sup>2)</sup> (depending on type)
<b>Residual ripple <sup>3)</sup></b>	< 5 V <sub>pp</sub>
<b>Power consumption <sup>4)</sup></b>	≤ 30 mA
<b>Output type</b>	NPN / PNP (depending on type)
<b>Output function</b>	Complementary
<b>Switching mode</b>	Light/dark-switching / Light-switching (depending on type)
<b>Output current I<sub>max</sub></b>	≤ 100 mA
<b>Response time <sup>5)</sup></b>	< 1.2 ms
<b>Switching frequency <sup>6)</sup></b>	400 Hz
<b>Connection type</b>	Cable, 2 m <sup>7)</sup> Connector <sup>7)</sup> (depending on type)
<b>Circuit protection</b>	A <sup>8)</sup> C <sup>9)</sup> D <sup>10)</sup>
<b>Protection class</b>	III
<b>Weight</b>	30 g
<b>Housing material</b>	ABS Plastic
<b>Optics material</b>	PMMA
<b>Enclosure rating</b>	IP 67 / IP 66
<b>Ambient operating temperature</b>	-40 °C ... +60 °C
<b>Ambient storage temperature</b>	-40 °C ... +75 °C

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

<sup>2)</sup> Limit values, operation in short-circuit protected network max. 8 A.

<sup>3)</sup> May not exceed or fall short of V<sub>S</sub> tolerances.

<sup>4)</sup> Without load.

<sup>5)</sup> Signal transit time with resistive load.

<sup>6)</sup> With light/dark ratio 1:1.

<sup>7)</sup> Do not bend below 0 °C.

- <sup>8)</sup> A =  $V_S$  connections reverse-polarity protected.  
<sup>9)</sup> C = interference suppression.  
<sup>10)</sup> D = outputs overcurrent and short-circuit protected.

## Ordering information

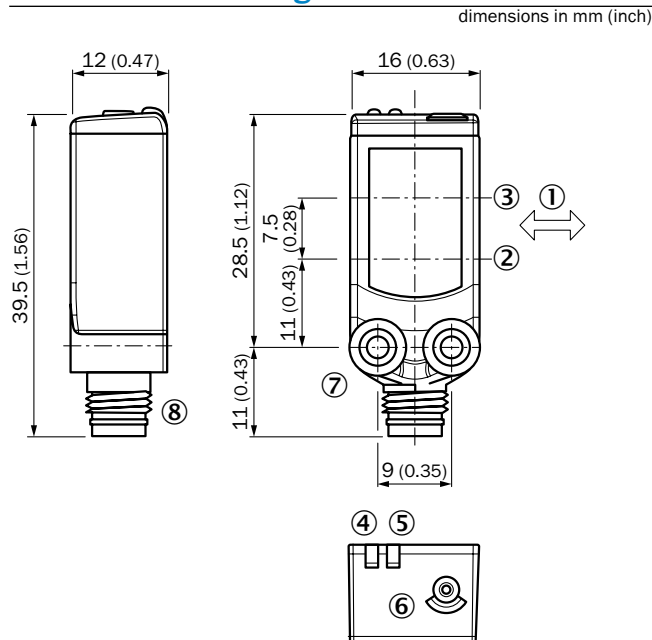
### Photoelectric proximity sensor

- **Detection principle:** multi-background suppression
- **Sensing range max.:** 5 mm ... 120 mm
- **Adjustment:** Teach-in button

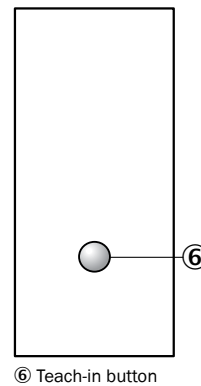
Output type	Switching mode	Connection	Connection diagram	Model name	Part no.
NPN	Light/dark-switching	Cable, 4-wire	Cd-094	WTB4-3N1192	1059272
PNP	Light-switching	Connector M8, 3-pin	Cd-043	WTB4-3P2192	1058268
	Light/dark-switching	Connector M8, 4-pin	Cd-084	WTB4-3P2292*	1062850*

\*available from february 2013

## Dimensional drawing



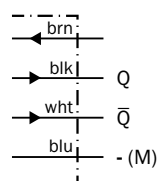
## Adjustments



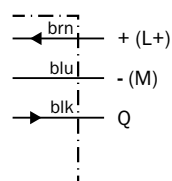
- ① Standard direction of the material being scanned  
 ② Optical axis sender  
 ③ Optical axis receiver  
 ④ Status indicator LED, yellow: Status of received light beam  
 ⑤ Status indicator LED green: power on  
 ⑥ Teach-in button  
 ⑦ Threaded mounting hole M3  
 ⑧ Connection

## Connection diagram

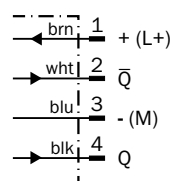
### Cd-094



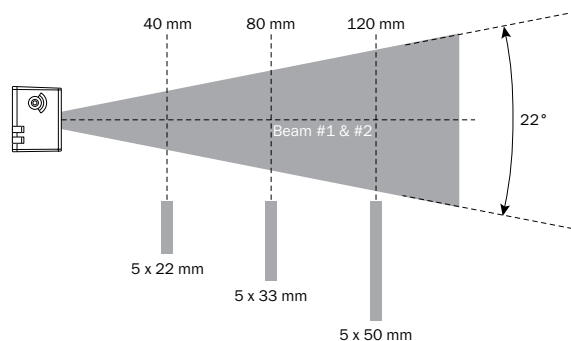
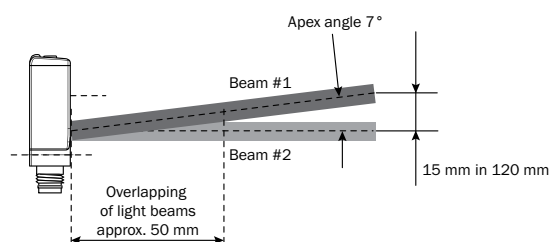
### Cd-043



### Cd-084



## Light spot size



## Recommended accessories

### Plug connectors and cables

- Enclosure rating: IP 67

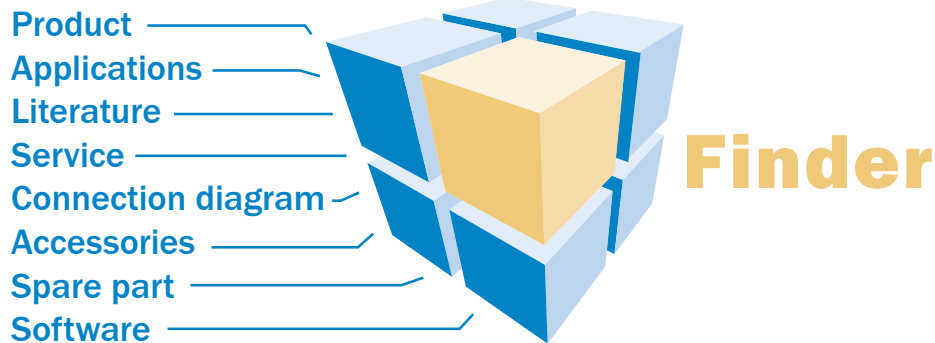
Connection type	Connector type	Configuration	Jacket material	Cable length	Model name	Part no.
Connector M8, 3-pin	Female connector	Straight	PVC	2 m	DOL-0803-G02M	6010785
				5 m	DOL-0803-G05M	6022009
				10 m	DOL-0803-G10M	6022011
				15 m	DOL-0803-G15M	6036472
		Angled	PVC	2 m	DOL-0803-W02M	6008489
				5 m	DOL-0803-W05M	6022010
				10 m	DOL-0803-W10M	6022012
				15 m	DOL-0803-W15M	6036473

Connection type	Connector type	Configuration	Jacket material	Cable length	Model name	Part no.
Connector M8, 4-pin	Female connector	Straight	PVC	2 m	DOL-0804-G02M	6009870
				5 m	DOL-0804-G05M	6009872
				10 m	DOL-0804-G10M	6010754
		Angled	PVC	2 m	DOL-0804-W02M	6009871
				5 m	DOL-0804-W05M	6009873
				10 m	DOL-0804-W10M	6010755
Connector M8, 3-pin	Female connector	Straight	PBT	–	DOS-0803-G	7902077
		Angled	PBT	–	DOS-0803-W	7902078
Connector M8, 4-pin	Female connector	Straight	–	–	DOS-0804-G	6009974
		Angled	–	–	DOS-0804-W	6009975
Connector M8, 3-pin	Connector	–	PBT	–	STE-0803-G	6037322
Connector M8, 4-pin	Connector	–	–	–	STE-0804-G	6037323

## Terminal and alignment brackets

Material	Model name	Part no.
Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	BEF-KHS-N05N	2051621
Zinc plated steel (sheet), Diecast zinc (clamp)	BEF-KHS-N08	2051607
Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)	BEF-KHS-N08N	2051616
Steel, zinc coated	BEF-MS12G-A	4056054
	BEF-MS12G-B	4056055
Stainless steel (1.4571)	BEF-MS12G-NA	4058914
	BEF-MS12G-NB	4058915
Steel, zinc coated	BEF-MS12L-A	4056052
	BEF-MS12L-B	4056053
Stainless steel (1.4571)	BEF-MS12L-NA	4058912

## Search online quickly and safely with the SICK „Finders“



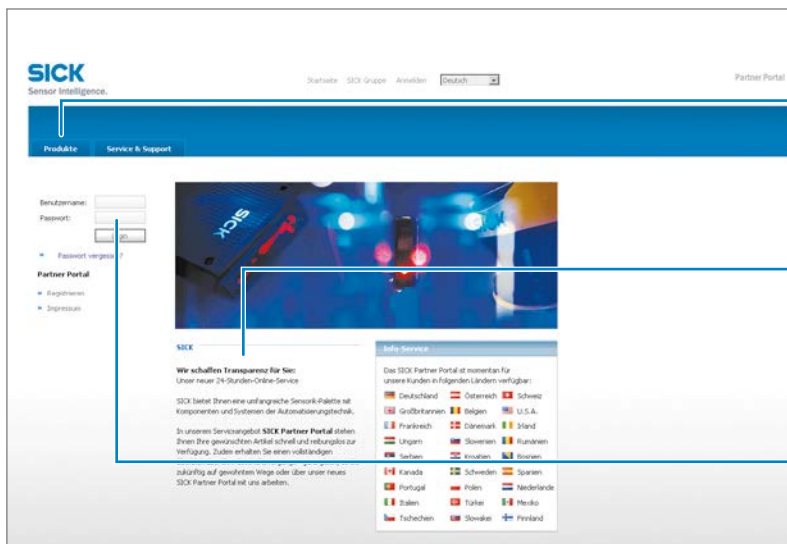
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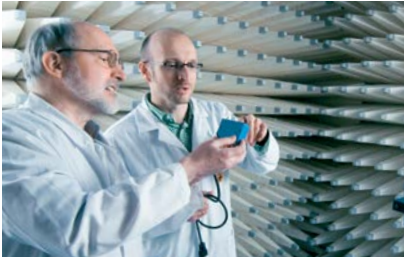
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## SICK at a glance



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With a staff of more than 5,000 and over 50 subsidiaries and representations worldwide, SICK is one of the leading and most successful manufacturers of sensor technology. The power of innovation and solution competency have made SICK the global market leader. No matter what the project and industry may be, talking with an expert from SICK will provide you with an ideal basis for your plans – there is no need to settle for anything less than the best.



### Unique product range

- Non-contact detecting, counting, classifying, positioning and measuring of any type of object or media
- Accident and operator protection with sensors, safety software and services
- Automatic identification with bar code and RFID readers
- Laser measurement technology for detecting the volume, position and contour of people and objects
- Complete system solutions for analysis and flow measurement of gases and liquids



### Comprehensive services

- SICK LifeTime Services – for safety and productivity
- Application centers in Europe, Asia and North America for the development of system solutions under real-world conditions
- E-Business Partner Portal [www.mysick.com](http://www.mysick.com) – price and availability of products, requests for quotation and online orders

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