



# M2C-ZA02500C10

deTem

**SAFETY MULTIBEAM SENSORS**

**SICK**  
Sensor Intelligence.



### Ordering information

deTem2 Core A/P

Scanning range	Number of beams	Beam separation	System part	Type	Part no.
8 m	2	500 mm	Active unit	M2C-ZA02500C10	1102646

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



### Detailed technical data

#### Features

<b>Application</b>	Normal industrial environment
<b>Functional principle</b>	Active/passive
<b>System part</b>	Active unit
<b>Scanning range</b>	8 m
<b>Dimension of the light path</b>	Typical 0.5 m ... 8 m
<b>Number of beams</b>	2
<b>Beam separation</b>	500 mm
<b>Response time</b>	20 ms
<b>Items supplied</b>	Active unit Safety instruction Mounting instructions Operating instructions for download

#### Safety-related parameters

<b>Type</b>	Type 2 (IEC 61496-1)
<b>Safety integrity level</b>	SIL 1 (IEC 61508)
<b>Category</b>	Category 2 (ISO 13849-1)
<b>Performance level</b>	PL c (ISO 13849-1)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	$5.3 \times 10^{-9}$
<b>T<sub>M</sub> (mission time)</b>	20 years (ISO 13849-1)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

#### Functions

<b>Protective operation</b>	✓
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#### Interfaces

<b>System connection</b>	Male connector M12, 5-pin
<b>Display elements</b>	LEDs

<b>Alignment aid</b>	Alignment quality via diagnostic LEDs
<b>Near Field Communication (NFC)</b>	✓

#### Electrical data

<b>Protection class</b>	III (IEC 61140) <sup>1)</sup>
<b>Supply voltage <math>V_S</math></b>	24 V DC (19.2 V DC ... 28.8 V DC) <sup>2)</sup>
<b>Residual ripple</b>	$\leq 10\%$ <sup>3)</sup>
<b>Power consumption typical</b>	2.4 W (DC)
<b>Output signal switching devices (OSSDs)</b>	2 PNP semiconductors, short-circuit protected, cross-circuit monitored <sup>4)</sup>
ON state, switching voltage HIGH	24 V DC ( $V_S - 2.25$ V DC ... $V_S$ )
OFF state, switching voltage LOW	$\leq 2$ V DC
Current-carrying capacity per OSSD	$\leq 500$ mA

<sup>1)</sup> SELV/PELV safety/protective extra-low voltage.

<sup>2)</sup> The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

<sup>3)</sup> Within the limits of  $V_S$ .

<sup>4)</sup> Applies to the voltage range between -30 V and +30 V.

#### Mechanical data

<b>Dimensions</b>	See dimensional drawing
<b>Housing cross-section</b>	31 mm x 34 mm
<b>Material</b>	
Housing	Aluminum extruded profile
Front screen	Polycarbonate, scratch-resistant coating
<b>Weight</b>	555 g ( $\pm 50$ g)
<b>Cable bend radius</b>	
Stationary position	$> 12$ x cable diameter
Flexible use	$> 15$ x cable diameter

#### Ambient data

<b>Enclosure rating</b>	IP65 (IEC 60529) IP67 (IEC 60529)
<b>Ambient operating temperature</b>	-30 °C ... +55 °C
<b>Storage temperature</b>	-30 °C ... +70 °C
<b>Air humidity</b>	15 % ... 95 %, Non-condensing
<b>Vibration resistance</b>	5 g, 10 Hz ... 55 Hz (IEC 60068-2-6)
<b>Shock resistance</b>	10 g, 16 ms (IEC 60068-2-27)

#### Other information

<b>Type of light</b>	Near-infrared (NIR), invisible
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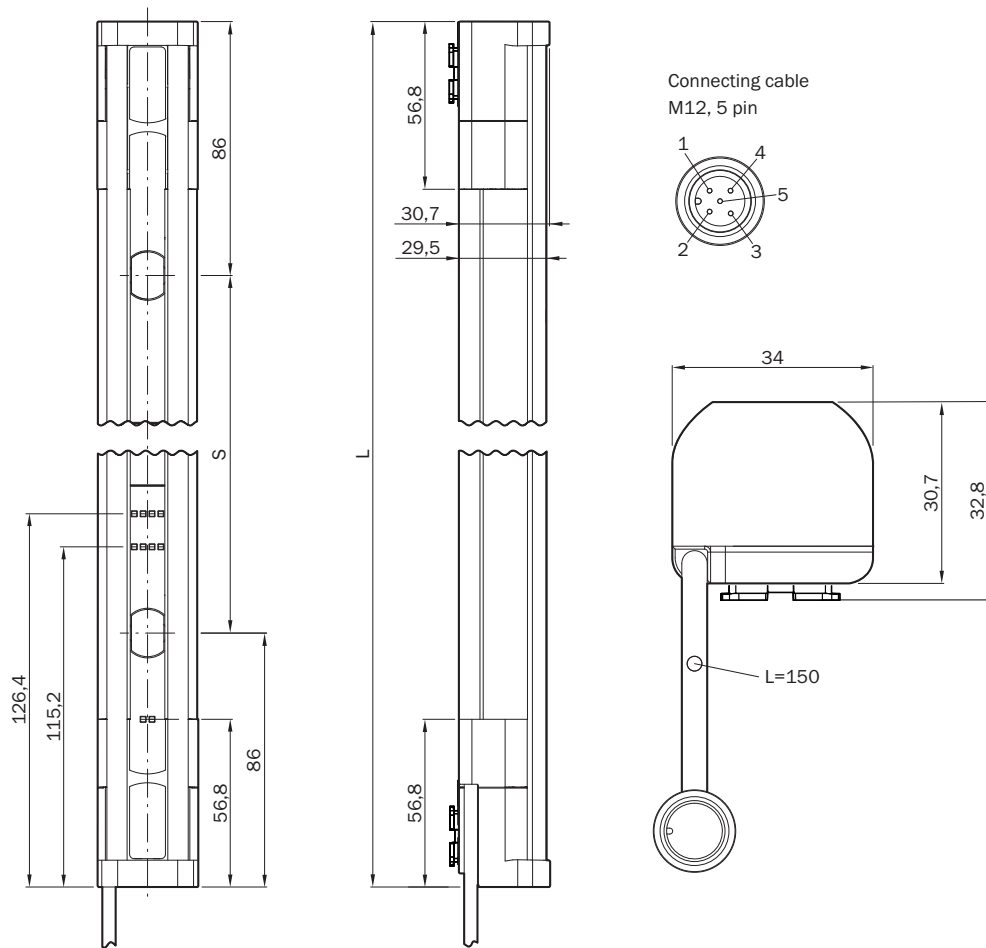
#### Classifications

<b>eCl@ss 5.0</b>	27272703
<b>eCl@ss 5.1.4</b>	27272703
<b>eCl@ss 6.0</b>	27272703
<b>eCl@ss 6.2</b>	27272703
<b>eCl@ss 7.0</b>	27272703

<b>eCl@ss 8.0</b>	27272703
<b>eCl@ss 8.1</b>	27272703
<b>eCl@ss 9.0</b>	27272703
<b>eCl@ss 10.0</b>	27272703
<b>eCl@ss 11.0</b>	27272703
<b>eCl@ss 12.0</b>	27272703
<b>ETIM 5.0</b>	EC001832
<b>ETIM 6.0</b>	EC001832
<b>ETIM 7.0</b>	EC001832
<b>ETIM 8.0</b>	EC001832
<b>UNSPSC 16.0901</b>	46171620

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

Active unit








- ① +24 V DC
- ② OSSD1
- ③ 0 V DC
- ④ OSSD2
- ⑤ Not assigned

Number of beams	Beam separation S	L
2	500	672
4	300	1072

## Recommended accessories

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

	Brief description	Type	Part no.
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A15-020UB5XLEAX	2095617
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 5 m	YF2A15-050UB5XLEAX	2095618
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 10 m	YF2A15-100UB5XLEAX	2095619
<b>Terminal and alignment brackets</b>			
	4 pieces, FlexFix bracket for 2 devices (e.g. sender and receiver), can be aligned ± 15°, including M5 screw, plastic	BEF-1SHABPKU4	2066614
	4 pieces, QuickFix bracket for 2 devices (e.g. sender and receiver), plastic	BEF-3SHABPKU4	2098710
<b>Safety switching amplifier</b>			
	<ul style="list-style-type: none"> <li><b>Applications:</b> Evaluation unit</li> <li><b>Compatible sensor types:</b> Safety sensors with OSSDs</li> <li><b>Connection type:</b> Front connector with spring terminals</li> <li><b>Restart interlock:</b> yes</li> <li><b>External device monitoring (EDM):</b> Integrated</li> <li><b>Outputs:</b> 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe)</li> <li><b>Housing width:</b> 18 mm</li> </ul>	RLY3-OSSD200	1085344
	<ul style="list-style-type: none"> <li><b>Applications:</b> Evaluation unit</li> <li><b>Compatible sensor types:</b> Safety sensors with OSSDs</li> <li><b>Connection type:</b> Front connector with spring terminals</li> <li><b>Restart interlock:</b> yes</li> <li><b>External device monitoring (EDM):</b> Integrated</li> <li><b>Outputs:</b> 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 1 test pulse output (not safe)</li> <li><b>Housing width:</b> 18 mm</li> </ul>	RLY3-OSSD300	1099969

## 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)