



# MICS3-AAAZ55AZ1P01

microScan3 Core

SAFETY LASER SCANNERS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
MICS3-AAZ55AZ1P01	1075843

Other models and accessories → [www.sick.com/microScan3\\_Core](http://www.sick.com/microScan3_Core)



### Detailed technical data

#### Features

<b>Protective field range</b>	5.5 m
<b>Warning field range</b>	40 m
<b>Number of simultaneously monitored protective fields</b>	≤ 4 <sup>1)</sup>
<b>Number of fields</b>	8 <sup>2)</sup>
<b>Number of monitoring cases</b>	2
<b>Scanning angle</b>	275°
<b>Resolution (can be configured)</b>	30 mm, 40 mm, 50 mm, 70 mm, 150 mm, 200 mm
<b>Angular resolution</b>	0.39°
<b>Response time</b>	≥ 70 ms
<b>Protective field supplement</b>	65 mm

<sup>1)</sup> Please note the number of available OSSD pairs.

<sup>2)</sup> Please note the number of available inputs and OSSD pairs.

#### Safety-related parameters

<b>Type</b>	Type 3 (IEC 61496)
<b>Safety integrity level</b>	SIL2 (IEC 61508) SILCL2 (EN 62061)
<b>Category</b>	Category 3 (EN ISO 13849)
<b>Performance level</b>	PL d (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	8.0 x 10 <sup>-8</sup> (EN ISO 13849)
<b>T<sub>M</sub> (mission time)</b>	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

#### Functions

<b>Restart interlock</b>	✓
<b>External device monitoring (EDM)</b>	✓
<b>Multiple sampling</b>	✓

<b>Monitoring case switching</b>	✓
<b>Simultaneous monitoring</b>	✓
<b>Static protective field switching</b>	✓
<b>Safe contour detection</b>	✓
<b>Contour as a reference</b>	✓
<b>Integrated configuration memory</b>	✓

### Interfaces

<b>Connection type</b>	Male connector, M12, 8 pin, A-coded (common male connector for power supply and inputs and outputs)
<b>Universal I/Os</b>	3
<b>Outputs</b>	
OSSD pairs	1
<b>Configuration method</b>	PC with Safety Designer (Configuration and Diagnostic Software)
<b>Configuration and diagnostics interface</b>	USB 2.0, Mini-USB
<b>Display elements</b>	Graphic color display, LEDs

### Electrical data

<b>Protection class</b>	III (EN 61140)
<b>Supply voltage <math>V_s</math></b>	24 V DC (16.8 V DC ... 30 V DC)
<b>Power consumption</b>	7 W (without output load)

### Mechanical data

<b>Dimensions (W x H x D)</b>	112 mm x 135 mm x 111 mm
<b>Weight</b>	1.15 kg
<b>Housing material</b>	Aluminum
<b>Housing color</b>	RAL 1021 (yellow), RAL 9005 (black)
<b>Optics cover material</b>	Polycarbonate
<b>Optics cover surface finish</b>	Outside with scratch-resistant coating

### Ambient data

<b>Enclosure rating</b>	IP65 (IEC 60529)
<b>Ambient light immunity</b>	≤ 3,000 lx (IEC 61496-3)
<b>Ambient operating temperature</b>	-10 °C ... +50 °C
<b>Storage temperature</b>	-25 °C ... +70 °C
<b>Vibration resistance</b>	0.35 mm, 10 Hz ... 60 Hz (IEC 60068-2-6, IEC 61496-1, IEC 61496-3) 5 g, 60 Hz ... 150 Hz (IEC 60068-2-6, IEC 61496-1, IEC 61496-3)
<b>Shock resistance</b>	
Continuous shock	10 g, 16 ms (IEC 60068-2-27, IEC 61496-3)
<b>EMC</b>	IEC 61496-1 IEC 61000-6-2 IEC 61000-6-4

### Other information

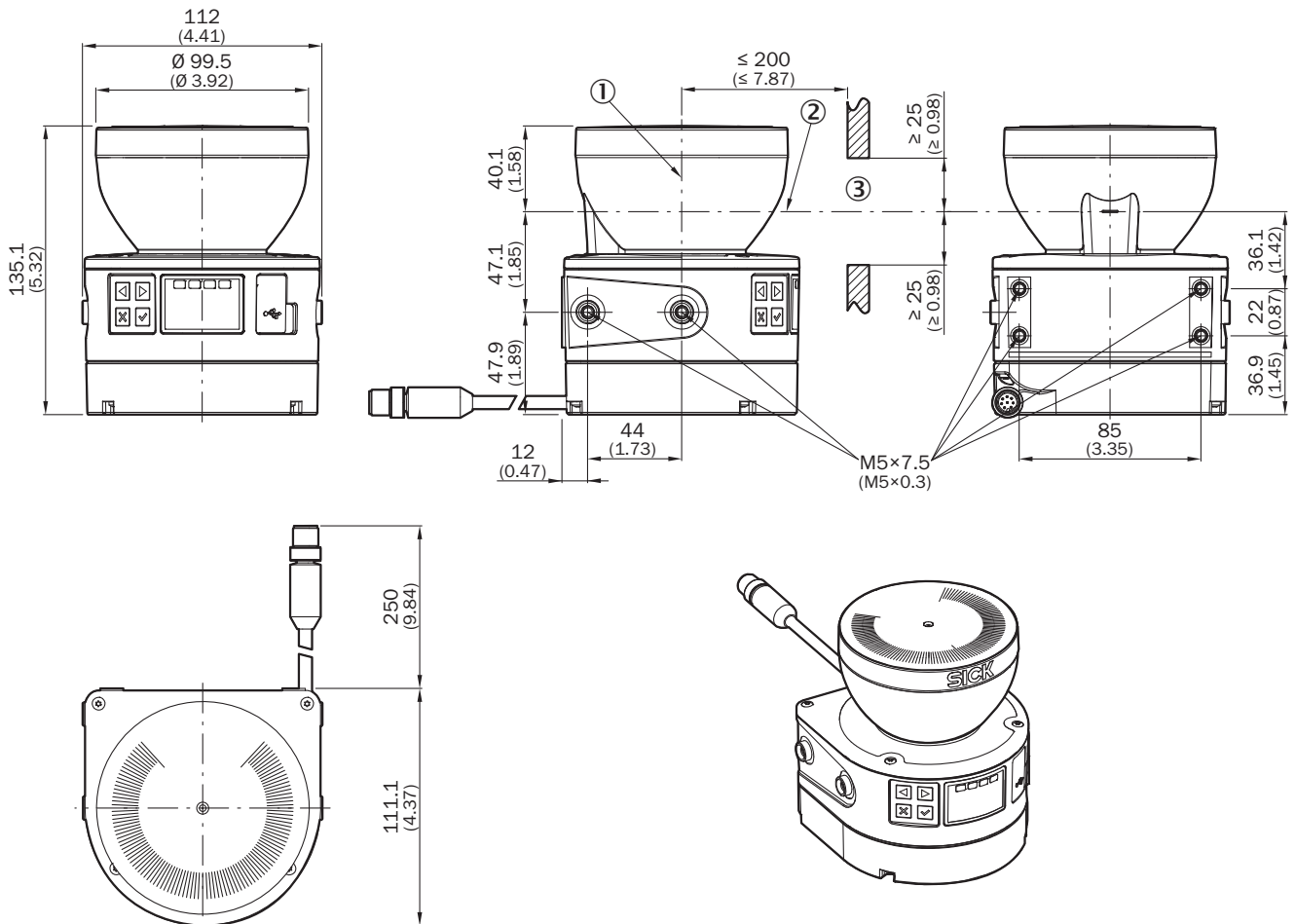
<b>Type of light</b>	Pulsed laser diode
<b>Wave length</b>	845 nm
<b>Detectable remission</b>	1.8% to several 1000%

<b>Laser class</b>	1M (21 CFR 1040.10 and 1040.11, IEC 60825-1)
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### Classifications

<b>ECl@ss 5.0</b>	27272705
<b>ECl@ss 5.1.4</b>	27272705
<b>ECl@ss 6.0</b>	27272705
<b>ECl@ss 6.2</b>	27272705
<b>ECl@ss 7.0</b>	27272705
<b>ECl@ss 8.0</b>	27272705
<b>ECl@ss 8.1</b>	27272705
<b>ECl@ss 9.0</b>	27272705
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>UNSPSC 16.0901</b>	39121528

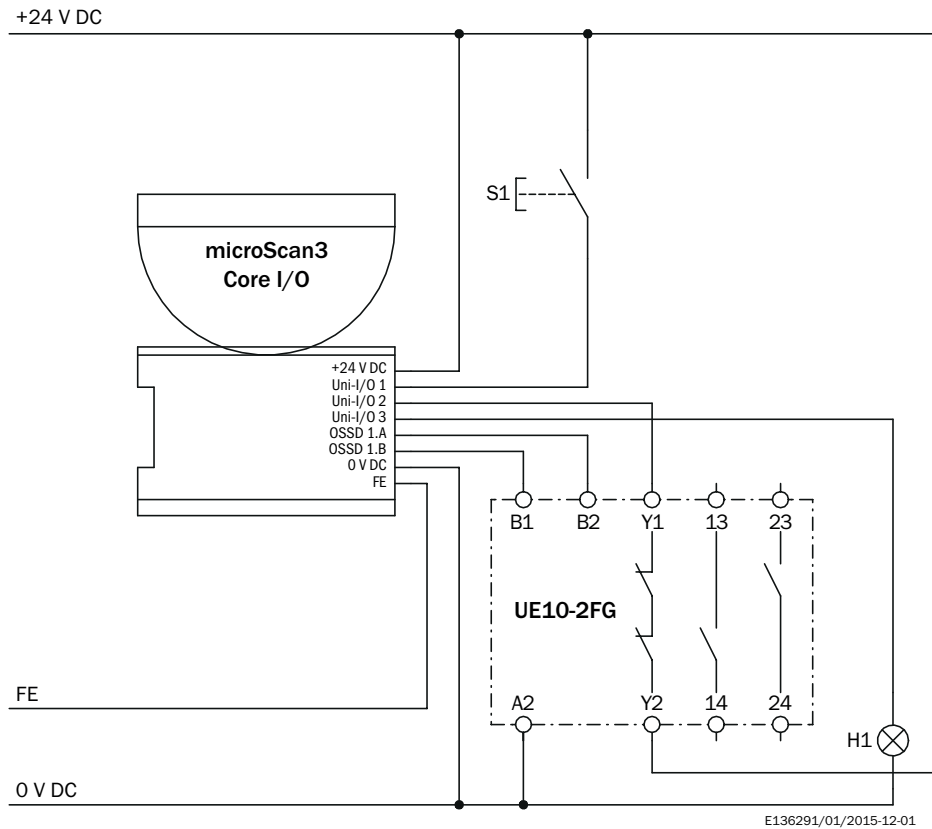
### Dimensional drawing (Dimensions in mm (inch))



- ① Mirror axis of rotation
- ② Scan plane
- ③ Required viewing slit

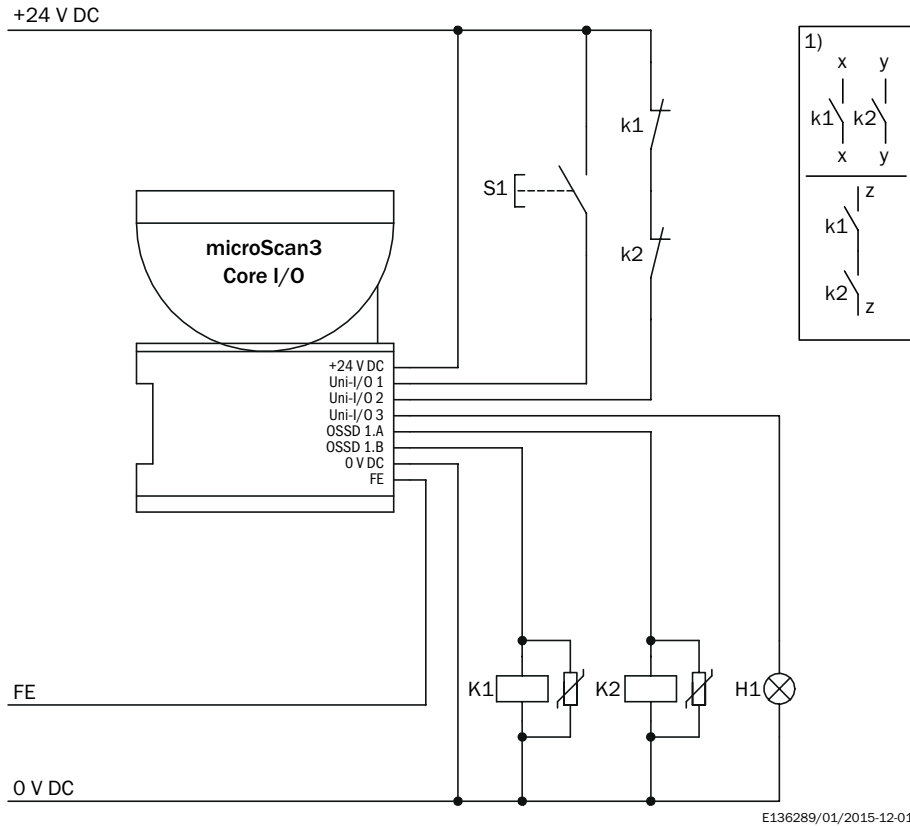
### Connection diagram

microScan3 Core I/O with restart interlock and external device monitoring at UE10-2FG safety relay



- Uni-I/O 1: configured as input reset
- Uni-I/O 2: configured as input external device monitoring (EDM)
- Uni-I/O 3: configured as output reset required

microScan3 Core I/O with restart interlock and external device monitoring







Uni-I/O 1: configured as input reset



Uni-I/O 2: configured as input external device monitoring (EDM)

Uni-I/O 3: configured as output reset required

### Recommended accessories

Other models and accessories → [www.sick.com/microScan3\\_Core](http://www.sick.com/microScan3_Core)

Brief description	Type	Part no.
<b>Mounting brackets and plates</b>		
 1 piece, mounting bracket, heavy-duty version, with protection cover, for floor mounting, height adjustment possible from 90 ... 310 mm, scanner tilt angle: ± 5°. Additional mounting brackets are not required., steel, painted (RAL 1021)	Heavy-duty mounting kit for floor mounting	2102289
 1 piece, mounting bracket	Mounting kit 1a	2073851
 1 piece, mounting bracket with protection of optics hood	Mounting kit 1b	2074242
 1 piece, alignment bracket, alignment with cross-wise axis and depth axis possible, distance between mounting surface and device: 22.3 mm, only in conjunction with mounting kit 1a (2073851) or 1b (2074242)	Mounting kit 2a	2073852

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: PUR, halogen-free, unshielded, 2 m	DOL-1208G02MD25KM1	2079314
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: PUR, halogen-free, unshielded, 5 m	DOL-1208G05MD25KM1	2079315
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: PUR, halogen-free, unshielded, 10 m	DOL-1208G10MD25KM1	2079316
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: PUR, halogen-free, unshielded, 20 m	DOL-1208G20MD25KM1	2092105
	Head A: female connector, M12, 8-pin, straight, A-coded Head B: Flying leads Cable: PUR, halogen-free, unshielded, 30 m	DOL-1208G30MD25KM1	2092106
	Head A: male connector, USB-A, straight Head B: male connector, Mini-USB, straight Cable: USB, shielded, 3 m For connecting the configuration connection to the USB interface on the PC	Connection cable (male connector- male connector)	6042517
	Head A: male connector, USB-A, straight Head B: male connector, Mini-USB, straight Cable: USB, shielded, 5 m For connecting the configuration connection to the USB interface on the PC	Connection cable (male connector- male connector)	6053566

## 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)