



# MICS3-CBUZ40IZ1P01

outdoorScan3

SAFETY LASER SCANNERS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	Part no.
MICS3-CBUZ40IZ1P01	1094472

The system plug is pre-assembled on the underside. It can either be mounted on the rear side or the underside.

Other models and accessories → [www.sick.com/outdoorScan3](http://www.sick.com/outdoorScan3)

### Detailed technical data

#### Features

<b>Sub product family</b>	outdoorScan3 Pro - EtherNet/IP
<b>Model</b>	Sensor including system plug (pre-mounted on the underside)
<b>Application</b>	Outdoor <sup>1)</sup>
<b>Compressed air cleaning</b>	Not possible
<b>Protective field range</b>	4 m
<b>Warning field range</b>	40 m
<b>Number of simultaneously monitored fields</b>	≤ 8 <sup>2)</sup>
<b>Number of fields</b>	128
<b>Number of monitoring cases</b>	128
<b>Scanning angle</b>	275°
<b>Resolution (can be configured)</b>	50 mm 70 mm
<b>Angular resolution</b>	0.39°
<b>Response time</b>	115 ms
<b>Protective field supplement</b>	65 mm

<sup>1)</sup> The safety laser scanner is suitable for use in industrial environments (indoors and outdoors).

<sup>2)</sup> Protection or warning fields.

#### Safety-related parameters

<b>Type</b>	Type 3 (IEC 61496)
<b>Safety integrity level</b>	SIL 2 (IEC 61508)
<b>Category</b>	Category 3 (EN ISO 13849)
<b>Performance level</b>	PL d (EN ISO 13849)
<b>Performance class SRS/SRSS</b>	Performance class D (IEC/TS 62998)

<b>PFH<sub>D</sub></b> (mean probability of a dangerous failure per hour)	8.0 x 10 <sup>-8</sup>
<b>T<sub>M</sub></b> (mission time)	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	The safety outputs via the network are logic 0.

### Functions

<b>Restart interlock</b>	✓
<b>Multiple sampling</b>	✓
<b>Monitoring case switching</b>	✓
<b>Simultaneous monitoring</b>	✓
<b>Static protective field switching</b>	✓
<b>Integrated configuration memory</b>	✓
<b>Measured data output</b>	Via Ethernet

### Interfaces

<b>Connection type</b>	
Voltage supply	1 x male connector, M12, 4-pin, A-coded
Fieldbus, industrial network	2 x M12 female connectors, 4-pin, D-coded
<b>Outputs</b>	
OSSD pairs	0
Safety outputs via network	8
<b>Configuration method</b>	PC with Safety Designer (Configuration and Diagnostic Software)
<b>Configuration and diagnostics interface</b>	USB 2.0, Mini-USB, Ethernet
<b>Fieldbus, industrial network</b>	EtherNet/IP™
Supported protocol versions	Common Industrial Protocol: The CIP Networks Library Volume 1, Edition 3.20 EtherNet/IP™: The CIP Networks Library Volume 2, Edition 1.26 CIP Safety™: The CIP Networks Library Volume 5, Edition 2.13
Topology support	DLR (Device Level Ring)
<b>Display elements</b>	Graphic color display, LEDs

### Electrical data

<b>Protection class</b>	III (EN 61140)
<b>Supply voltage V<sub>s</sub></b>	24 V DC (16.8 V DC ... 30 V DC)
<b>Power consumption typical</b>	7.2 W

### Mechanical data

<b>Dimensions (W x H x D)</b>	114.6 mm x 150.7 mm x 114.6 mm (without system plug)
<b>Weight</b>	1.45 kg
<b>Housing material</b>	Aluminum
<b>Housing color</b>	RAL 2004 (pure orange), 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)
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<sup>1)</sup> More detailed data can be found in the operating instructions, chapter "Project planning".

<b>Ambient light immunity</b>		
	Halogen light	12,000 lx (IEC 61496-3)
	Sunlight	40,000 lx (IEC 61496-3)
<b>Ambient operating temperature</b>		-25 °C ... +50 °C
<b>Storage temperature</b>		-25 °C ... +70 °C
<b>Ambient conditions</b>		
	Rain	10 mm/h <sup>1)</sup>
	Snowfall	3 mm/h SWE, Snow Water Equivalent <sup>1)</sup>
	Fog	50 m (MOR, Meteorological Optical Range) <sup>1)</sup>
<b>Vibration resistance</b>		IEC 60068-2-6, IEC 60068-2-64, IEC 60721-3-5, IEC TR 60721-4-3, IEC 61496-1, IEC 61496-3
	Class	5M1 (IEC 60721-3-5) 3M4 (IEC TR 60721-4-3)
<b>Shock resistance</b>		IEC 60068-2-27, IEC 60721-3-5, IEC TR 60721-4-3, IEC 61496-1, IEC 61496-3
	Class	5M1 (IEC 60721-3-5) 3M4 (IEC TR 60721-4-3)
	Continuous shock	100 m/s <sup>2</sup> , 16 ms 150 m/s <sup>2</sup> , 6 ms
<b>EMC</b>		IEC 61496-1, IEC 61000-6-2, IEC 61000-6-4

<sup>1)</sup> More detailed data can be found in the operating instructions, chapter "Project planning".

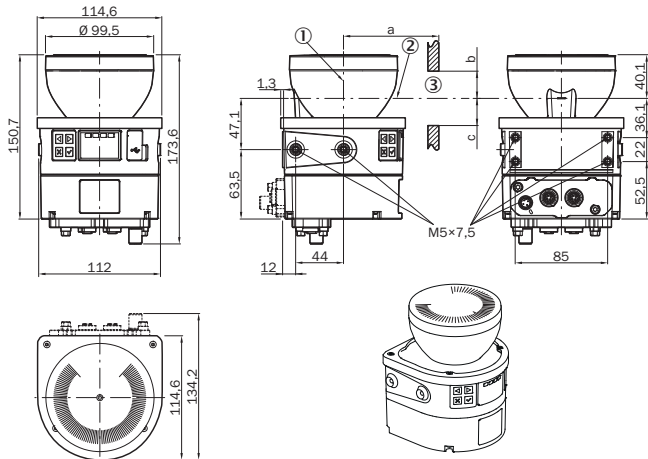
### Other information

<b>Type of light</b>	Pulsed laser diode
<b>Wave length</b>	845 nm
<b>Detectable remission factor</b>	1.8% to several 1000%
<b>Laser class</b>	1 (21 CFR 1040.10 and 1040.11, IEC 60825-1)

### Classifications

<b>ECLASS 5.0</b>	27272705
<b>ECLASS 5.1.4</b>	27272705
<b>ECLASS 6.0</b>	27272705
<b>ECLASS 6.2</b>	27272705
<b>ECLASS 7.0</b>	27272705
<b>ECLASS 8.0</b>	27272705
<b>ECLASS 8.1</b>	27272705
<b>ECLASS 9.0</b>	27272705
<b>ECLASS 10.0</b>	27272705
<b>ECLASS 11.0</b>	27272705
<b>ECLASS 12.0</b>	27272705
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550
<b>ETIM 8.0</b>	EC002550
<b>UNSPSC 16.0901</b>	39121528

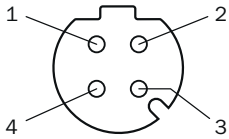
Dimensional drawing (Dimensions in mm (inch))



- ① Mirror axis of rotation
- ② Scan plane
- ③ Required viewing slit (a: length of the viewing slit, b: minimum height above the scan plane, c: minimum height below the scan plane. See the operating instructions for details.)

Pinouts

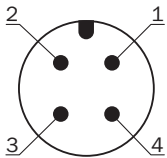
Ethernet (XF1, XF2)



Pin	Designation	Description
1	TX+	Send data +
2	RX+	Receive data +
3	TX-	Send data -
4	RX-	Receive data -
Thread	SH	Shielding

For details see operating instructions

Voltage supply (XD1)







Pin	Designation	Description
1	+24 V DC	Supply voltage +24 V DC
2	n.c.	Not connected
3	0 V DC	Supply voltage 0 V DC
4	FE	Functional earth/shielding

For details see operating instructions

### Recommended accessories

Other models and accessories → [www.sick.com/outdoorScan3](http://www.sick.com/outdoorScan3)

	Brief description	Type	Part no.
Device protection (mechanical)			
	1 piece, Splash guard, only in conjunction with mounting kit 3 (2103049)	Splash guard	2123205
	1 piece, weather hood (only in conjunction with mounting kit 3)	Weather hood	2103050
Mounting brackets and plates			
	1 piece, mounting bracket with protection of optics hood, Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A	1b mounting kit	2074242
	1 piece, mounting bracket, Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A	Mounting kit 1a	2073851
	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), Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A	Mounting kit 2a	2073852
	1 piece, Alignment bracket, alignment with cross-wise axis and depth axis possible, distance between mounting surface and device: 52.3 mm, only in conjunction with mounting kit 1a (2073851) or 1b (2074242), Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A	Mounting kit 2b	2074184
	1 piece, Alignment bracket with protection for the optics cover, alignment with cross-wise axis and depth axis possible	Mounting kit 3	2103049
Other mounting accessories			
	For loosening and tightening M12 plug connectors to the system plug with defined torque (0,4 Nm)	Torque screwdriver with attachment for M12 plug connector	2081618
Others			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, angled, 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> 2 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant</li> </ul>	YG2A64-020UE1XLEAX	2108122
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, angled, 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> 10 m, 4-wire, PUR, halogen-free</li> <li>• <b>Description:</b> Sensor/actuator cable, shielded</li> <li>• <b>Application:</b> Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant</li> </ul>	YG2A64-100UE1XLEAX	2108123

	Brief description	Type	Part no.
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> PROFINET</li> <li>• <b>Cable:</b> 2 m, 4-wire, CAT5, PUR</li> <li>• <b>Description:</b> PROFINET, shielded</li> <li>• <b>Application:</b> Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant</li> </ul>	YN2D34-020PN4MRJA4	2108116
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M12, 4-pin, angled, D-coded</li> <li>• <b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li>• <b>Signal type:</b> Ethernet</li> <li>• <b>Cable:</b> 10 m, 4-wire, CAT5, PUR</li> <li>• <b>Description:</b> Ethernet, shielded</li> <li>• <b>Application:</b> Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant</li> </ul>	YN2D34-100PN4MRJA4	2108141
	<ul style="list-style-type: none"> <li>• <b>Brief description:</b> The software visualizes diagnostic and device information from safety laser scanners in real time, helping to identify error causes faster and reduce maintenance time.</li> <li>• <b>Supported products:</b> All microScan3 variants (except for microScan3 Core I/O variants), outdoorScan3 Pro - EtherNet/IP</li> <li>• <b>Version:</b> 1.0</li> <li>• <b>Note:</b> With purchase, you accept the product description available under Downloads &gt; Documentation in connection with the <a href="https://www.sick.com/tools/tac/en/General-Terms-Conditions-Supply-Software-Products-AVB-Software-SICK.pdf" target="_blank">General Terms and Conditions for the Supply of Software Products (AVB Software SICK)</a>. With purchase, you accept the product description available under Downloads &gt; Documentation in connection with the <a href="https://www.sick.com/tools/tac/en/General-Terms-Conditions-Supply-Software-Products-AVB-Software-SICK.pdf" target="_blank">General Terms and Conditions for the Supply of Software Products (AVB Software SICK)</a>.</li> </ul>	SOW/VTL-LI007PCWIO	1116788
AGV Dynamic Weather Assist			
	<ul style="list-style-type: none"> <li>• <b>Product type:</b> Software</li> <li>• <b>Items supplied:</b> Software (Safety Designer project file with functional logic) as well as operating instructions</li> </ul>	SOW/DWA-FX00402010	1615375

## Recommended services

Additional services → [www.sick.com/outdoorScan3](http://www.sick.com/outdoorScan3)

	Type	Part no.
Retrofit and upgrade services		
<ul style="list-style-type: none"> <li>• <b>Product area:</b> outdoorScan3</li> <li>• <b>Range of services:</b> Upgrading the outdoorScan3 with the airWiper, Firmware and hardware updates, Functional testing</li> </ul>	outdoorScan3 Upgrade airWiper	1615642

## 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)