Product data sheet

MICS3-AAUZ40AZ1P01

outdoorScan3

SAFETY LASER SCANNERS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
MICS3-AAUZ40AZ1P01	1094452

Other models and accessories ➜ www.sick.com/outdoorScan3

Detailed technical data

Features

Sub product family	outdoorScan3 Core I/O
Model	Sensor including system plug
Application	Outdoor [1]
Compressed air cleaning	Not possible
Protective field range	4 m
Warning field range	40 m
Number of simultaneously monitored fields	≤ 4 [2] [3]
Number of fields	8 [4]
Number of monitoring cases	2
Scanning angle	275°
Resolution (can be configured)	50 mm 70 mm
Angular resolution	0.39°
Response time	≥ 90 ms
Protective field supplement	65 mm

[1] The safety laser scanner is suitable for use in industrial environments (indoors and outdoors).
[2] Protection or warning fields.
[3] Please note the number of available OSSD pairs.
[4] Please note the number of available inputs and OSSD pairs.

Safety-related parameters

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

PFH_D (mean probability of a dangerous failure per hour)	8.0×10^{-8}
T_M (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	In each OSSD pair, at least one OSSD is in the OFF state.

Functions

Restart interlock	✓
External device monitoring (EDM)	✓
Multiple sampling	✓
Monitoring case switching	✓
Simultaneous monitoring	✓
Static protective field switching	✓
Integrated configuration memory	✓
Measured data output	None

Interfaces

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

Electrical data

Protection class	III (EN 61140)
Supply voltage V_S	24 V DC (16.8 V DC ... 30 V DC)
Power consumption typical	7 W (without output load)

Mechanical data

Dimensions (W x H x D)	114.6 mm x 135.1 mm x 114.6 mm
Weight	1.15 kg
Housing material	Aluminum
Housing color	RAL 2004 (pure orange), RAL 9005 (black)
Optics cover material	Polycarbonate
Optics cover surface finish	Outside with scratch-resistant coating

Ambient data

Enclosure rating	IP65 (IEC 60529)
Ambient light immunity	
Halogen light	≤ 12,000 lx (IEC 61496-3)
Sunlight	≤ 40,000 lx (IEC 61496-3)
Ambient operating temperature	–25 °C ... +50 °C
Storage temperature	–25 °C ... +70 °C

[1] More detailed data can be found in the operating instructions, chapter "Project planning".

Ambient conditions	
Rain	10 mm/h [1]
Snowfall	3 mm/h SWE, Snow Water Equivalent [1]
Fog	≥ 50 m (MOR, Meteorological Optical Range) [1]
Vibration resistance	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)
Shock resistance	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/s², 16 ms 150 m/s², 6 ms
EMC	IEC 61496-1, IEC 61000-6-2, IEC 61000-6-4

[1] More detailed data can be found in the operating instructions, chapter "Project planning".

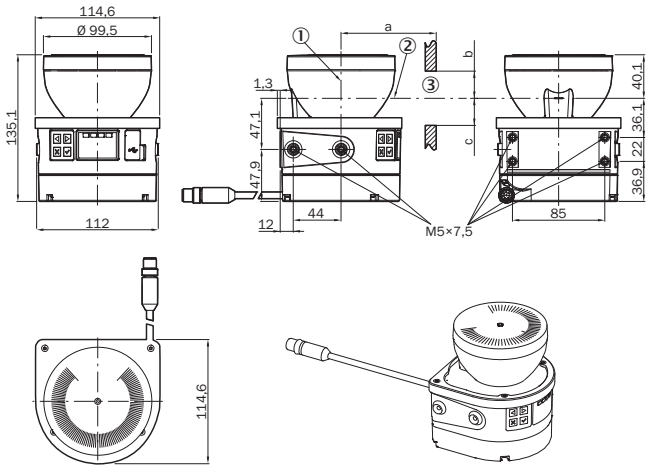
Other information

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

Classifications

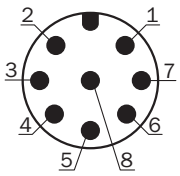
ECLASS 5.0	27272705
ECLASS 5.1.4	27272705
ECLASS 6.0	27272705
ECLASS 6.2	27272705
ECLASS 7.0	27272705
ECLASS 8.0	27272705
ECLASS 8.1	27272705
ECLASS 9.0	27272705
ECLASS 10.0	27272705
ECLASS 11.0	27272705
ECLASS 12.0	27272705
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
UNSPSC 16.0901	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.)

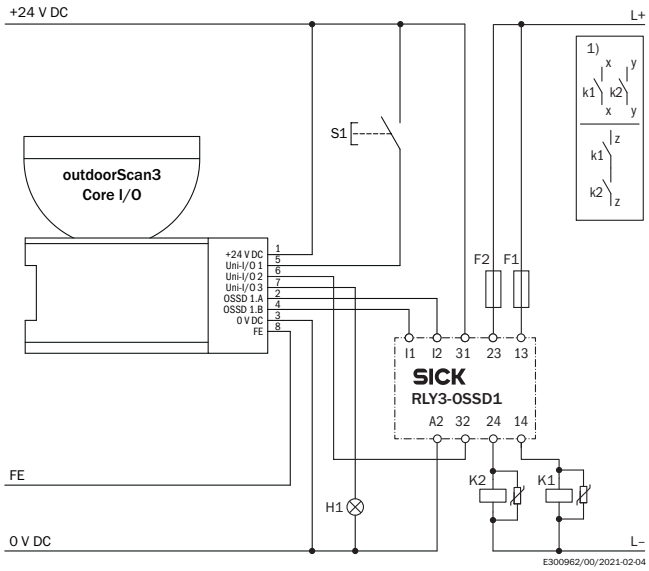
Pin assignment



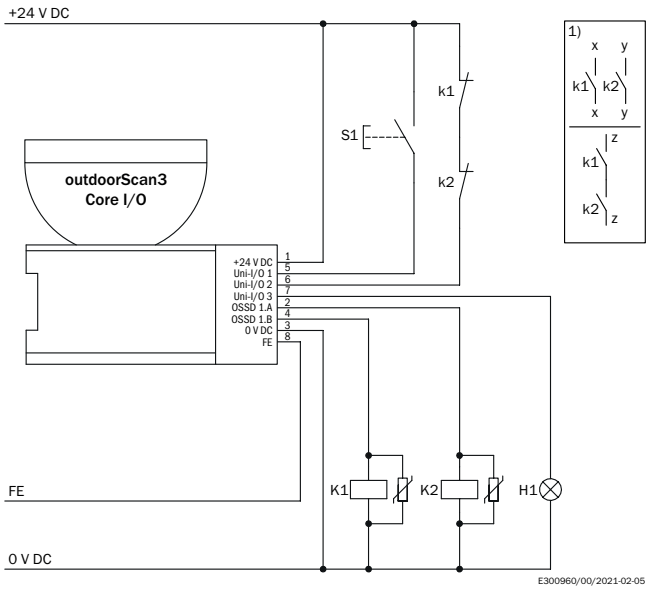
Pin	Designation	Description
1	+24 V DC	Supply voltage +24 V DC
2	OSSD 1.A	OSSD pair 1, OSSD A
3	0 V DC	Supply voltage 0 V DC
4	OSSD 1.B	OSSD pair 1, OSSD B
5	Uni-I/O 1	Universal I/O 1, configurable
6	Uni-I/O 2	Universal I/O 2, configurable
7	Uni-I/O 3	Universal I/O 3, configurable
8	FE	Functional earth/shielding
For details see operating instructions		

Connection diagram

outdoorScan3 Core I/O with restart interlock and external device monitoring at RLY3-OSSD1 safety relay



① Output circuits: These contacts must be incorporated into the control such that the dangerous state is brought to an end if the output circuit is open. For categories 4 and 3, they must be incorporated on dual-channels (x, y paths). Single-channel incorporation into the control (z path) is only possible with a single-channel control and taking the risk analysis into account.
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
outdoorScan3 Core I/O with restart interlock and external device monitoring



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Uni-I/O 1: configured as input reset
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Uni-I/O 3: configured as output reset required

Recommended accessories

Other models and accessories ➜ 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
Plug connectors and cables			
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 7-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant	YF2A68-020UA7XLEAX	2108120
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 20 m, 7-wire, PUR • **Description:** Sensor/actuator cable, shielded • **Application:** Zones with oils and lubricants, Outdoor, seawater resistant, cold bending resistant	YF2A68-200UA7XLEAX	2108133

Recommended services

Additional services ➜ www.sick.com/outdoorScan3

	Type	Part no.
Retrofit and upgrade services		
• **Product area:** outdoorScan3 • **Range of services:** Upgrading the outdoorScan3 with the airWiper, Firmware and hardware updates, Functional testing	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.”

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