Data sheet

MICS3-AAAZ40AZ1

microScan3

SAFETY LASER SCANNERS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
MICS3-AAAZ40AZ1	1067360

Other models and accessories ➜ www.sick.com/microScan3

Detailed technical data

Features

Product version	microScan3 Core I/O
Model	Sensor without system plug
Application	Indoor
Protective field range	4 m
Warning field range	40 m
Number of simultaneously monitored fields	≤ 4 [1) 2)]
Number of fields	8 [3)]
Number of monitoring cases	2
Scanning angle	275°
Resolution (can be configured)	30 mm 40 mm 50 mm 70 mm 150 mm 200 mm
Angular resolution	0.39°
Response time	70 ms
Protective field supplement	65 mm

[1)] Protection, warning or contour detection fields.
[2)] Please note the number of available OSSD pairs.
[3)] 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)
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	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	✓
Safe contour detection	✓
Contour as a reference	✓
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

Electronics

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)

Mechanics

Housing material	Aluminum
Housing color	RAL 1021 (yellow), 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	≤ 40 klx (IEC 61496-3) [1)]
Ambient operating temperature	–10 °C ... +50 °C
Storage temperature	–25 °C ... +70 °C

[1)] Typical ambient light immunity, for ambient light sources directly in the scan plane in accordance with IEC 61496-3: ≤ 3 klx.

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] Typical ambient light immunity, for ambient light sources directly in the scan plane in accordance with IEC 61496-3: ≤ 3 klx.

Other information

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

Certificates

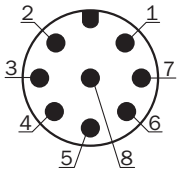
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
S Mark certificate	✓
EC-Type-Examination approval	✓
China GB certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

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

Pinouts



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 01	Universal I/O 1, configurable
6	Uni-I/O 02	Universal I/O 2, configurable
7	Uni-I/O 03	Universal I/O 3, configurable
8	FE	Functional earth/shielding
For details see operating instructions		

Recommended accessories

Other models and accessories ➜ www.sick.com/microScan3

	Brief description	Type	part no.
Mounting systems			
	• **Description:** 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. • **Dimensions (W x H x L):** 200 mm x 366 mm x 269 mm • **Material:** Steel • **Details:** Steel, painted (RAL 1021) • **Color:** RAL 1021 (yellow) • **Packing unit:** 1 piece	Heavy-duty mounting kit for floor mounting	2102289
	• **Description:** Mounting bracket with protection of optics hood • **Material:** Stainless steel • **Details:** Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A • **Color:** RAL 9005 (black) • **Packing unit:** 1 piece	1b mounting kit	2074242
	• **Description:** Mounting bracket • **Material:** Stainless steel • **Details:** Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A • **Color:** RAL 9005 (black) • **Packing unit:** 1 piece	Mounting kit 1a	2073851
	• **Description:** 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) • **Material:** Stainless steel • **Details:** Stainless steel V2A (1.4301), powder-coated IGP-DURA face 5803A • **Color:** RAL 9005 (black) • **Packing unit:** 1 piece	Mounting kit 2a	2073852
	• **Description:** Mounting bracket 150 mm for floor mounting of microScan3 • **Material:** Stainless steel • **Details:** Stainless steel • **Color:** Uncoated • **Packing unit:** 1 piece • **Items supplied:** Bracket and 4 x M5 screws for attaching the microScan3	Mounting bracket 150 mm for floor mounting of microScan3	2112950
	• **Description:** Mounting bracket 300 mm for floor mounting of microScan3 • **Material:** Stainless steel • **Details:** Stainless steel • **Color:** Uncoated • **Packing unit:** 1 piece • **Items supplied:** Bracket and 4 x M5 screws for attaching the microScan3	Mounting bracket 300 mm for floor mounting of microScan3	2112951

	Brief description	Type	part no.
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, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants, Drag chain operation	DOL-1208G02MD25KM1	2079314
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants, Drag chain operation	DOL-1208G05MD25KM1	2079315
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants, Drag chain operation	DOL-1208G10MD25KM1	2079316
	• **Connection type head A:** Male connector, USB-A, straight • **Connection type head B:** Male connector, Mini-USB, straight • **Signal type:** USB • **Cable:** 3 m, 4-wire • **Description:** USB, shielded • **Note:** For connecting the configuration connection to the USB interface on the PC	Connection cable (male connector-male connector)	6042517
	• **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, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants, Drag chain operation	DOL-1208G20MD25KM1	2092105
	• **Connection type head A:** Female connector, M12, 8-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 30 m, 8-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Connection systems:** Flying leads • **Application:** Zones with oils and lubricants, Drag chain operation	DOL-1208G30MD25KM1	2092106
	• **Connection type head A:** Male connector, USB-A, straight • **Connection type head B:** Male connector, Mini-USB, straight • **Signal type:** USB • **Cable:** 5 m, 4-wire • **Description:** USB, shielded • **Note:** For connecting the configuration connection to the USB interface on the PC	Connection cable (male connector-male connector)	6053566
system plugs and extension modules			
	• **Description:** Integrated configuration memory, system connection; cable 250 mm with M12 male connector, 8-pin	MICSX-ABIZZZZZ1	2073156

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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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