



MICS3-AAAZ90BZ1

microScan3

SAFETY LASER SCANNERS





Ordering information

| Туре | part no. |
|-----------------|----------|
| MICS3-AAAZ90BZ1 | 1089326 |

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

Illustration may differ



Detailed technical data

Features

| Product version | microScan3 Core I/O AIDA |
|---|---|
| Model | Sensor without system plug |
| Application | Indoor |
| Protective field range | 9 m |
| Number of simultaneously monitored fields | ≤ 4 ^{1) 2)} |
| Number of fields | 4 ³⁾ |
| Number of monitoring cases | 1 |
| Scanning angle | 275° |
| Resolution (can be configured) | 30 mm 40 mm 50 mm 60 mm 70 mm 150 mm 200 mm |
| Angular resolution | 0.1° |
| Response time | 90 ms |
| Protective field supplement | 100 mm |

 $^{^{1)}}$ Protection, warning or contour detection fields.

Safety-related parameters

| Туре | Type 3 (IEC 61496) |
|------------------------|--------------------|
| Safety integrity level | SIL 2 (IEC 61508) |

 $^{^{2)}}$ Please note the number of available OSSD pairs.

 $^{^{\}rm 3)}$ Please note the number of available inputs and OSSD pairs.

| Category | Category 3 (EN ISO 13849) |
|--|--|
| Performance level | PL d (EN ISO 13849) |
| $\mbox{PFH}_{\mbox{\scriptsize D}}$ (mean probability of a dangerous failure per hour) | 8.0 x 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

| Multiple sampling | ✓ |
|---------------------------------|------|
| Simultaneous monitoring | ✓ |
| Safe contour detection | ✓ |
| Contour as a reference | ✓ |
| Integrated configuration memory | ✓ |
| Measured data output | None |

Interfaces

| Connection type | $\label{eq:male_connector} \mbox{Male connector, M12, 5 pin, A-coded (common male connector for power supply and outputs, AIDA-compliant)}$ |
|---|---|
| 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 |
| Vibration resistance Class | IEC 60068-2-6, IEC 60068-2-64, IEC 60721-3-5, IEC TR 60721-4-3, IEC 61496-1, IEC 61496-3 |
| | s 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 |

 $^{^{(1)}}$ Typical ambient light immunity, for ambient light sources directly in the scan plane in accordance with IEC 61496-3: \leq 3 klx.

| Class Continuous shock | 5M1 (IEC 60721-3-5) |
|-------------------------|---|
| | 3M4 (IEC TR 60721-4-3) |
| | 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: \leq 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.B | OSSD pair 1, OSSD B | | |
| 3 | 0 V DC | Supply voltage 0 V DC | | |
| 4 | OSSD 1.A | OSSD pair 1, OSSD A | | |
| 5 | FE | Functional earth/shielding | | |
| Thread | FE | Functional earth/shielding | | |
| For details see operating instructions | | | | |

Recommended accessories

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

| | Brief description | Туре | part no. | | |
|------------------------------------|---|---|----------|--|--|
| Mounting systems | | | | | |
| TT. | 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 | | |
| A Party | 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 brack- et 150 mm for floor mounting of microScan3 | 2112950 | | |
| 80 | 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 brack- et 300 mm for floor mounting of microScan3 | 2112951 | | |
| connectors and cables | | | | | |
| | 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 ca- ble (male connec- tor-male connector) | 6042517 | | |
| 1 | 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 ca- ble (male connec- tor-male connector) | 6053566 | | |
| system plugs and extension modules | | | | | |
| | Description: Integrated configuration memory, system connection; cable 250 mm with M12 male connector, 5-pin | MICSX-ABHZZZZZ1 | 2087958 | | |
| | | | | | |

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