



MICS3-CCAZ40PZ1P01

microScan3

SAFETY LASER SCANNERS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|--------------------|----------|
| MICS3-CCAZ40PZ1P01 | 1100390 |

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

Detailed technical data

Features

| | |
|--|---|
| Product version | microScan3 Pro - PROFINET |
| Model | Sensor including system plug (pre-mounted on the underside) |
| Application | Indoor |
| Protective field range | 4 m |
| Warning field range | 40 m |
| Number of simultaneously monitored fields | ≤ 8 ¹⁾ |
| Number of fields | 128 |
| Number of monitoring cases | 128 |
| 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 | 95 ms |
| Protective field supplement | 65 mm |

¹⁾ Protection, warning or contour detection fields.

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 x 10 ⁻⁸ |
| Conformities | Conformance Class C |
| T_M (mission time) | 20 years (EN ISO 13849) |
| Safe state in the event of a fault | The safety outputs via the network are logic 0. |

Functions

| | |
|--|--------------|
| Restart interlock | ✓ |
| Multiple sampling | ✓ |
| Monitoring case switching | ✓ |
| Simultaneous monitoring | ✓ |
| Static protective field switching | ✓ |
| Safe contour detection | ✓ |
| Contour as a reference | ✓ |
| Integrated configuration memory | ✓ |
| Measured data output | Via Ethernet |

Interfaces

| | | |
|--|------------------------------|---|
| Connection type | | |
| | Voltage supply | 1 x male connector, M12, 5-pin, L-coded |
| | Fieldbus, industrial network | 2 x female connector, RJ45 for push-pull male connector (copper) |
| Outputs | | |
| | OSSD pairs | 0 |
| | Safety outputs via network | 8 |
| Configuration method | | PC with Safety Designer (Configuration and Diagnostic Software) |
| Configuration and diagnostics interface | | USB 2.0, Mini-USB, Ethernet |
| Fieldbus, industrial network | | PROFINET |
| | Protocol | PROFIsafe |
| | Supported protocol versions | PROFINET specification V2.3 PROFIsafe profile in accordance with specification V2.6.1 PROFIsafe profile in accordance with specification V2.4 |
| | GSDML | According to GSDML specification V2.33 |
| | Cycle time | 1 ms, 2 ms, 4 ms, 8 ms, 16 ms ... |
| | Conformance | Conformance Class C |
| | Network management | SNMP MIB-2 LLDP in accordance with IEEE 802.1AB MRP client support |
| | Net load | Net load class III in accordance with security level 1 test |
| | Switch properties | 2 port real-time switch compliant with IEEE 802 |
| | Port properties | 100Base-TX Auto-negotiation Auto-crossover (MDIX) |

| | | |
|-------------------------|-------------|--|
| | Diagnostics | Auto-polarity |
| | | I&M data sets 0 ... 5 |
| Additional services | | PROFINET alarms |
| | | PROFenergy |
| | | F_iPar_CRC |
| Additional interfaces | | Acyclic read-/write services for communication via TCI |
| | | SNTP (client and server) |
| | | TCP/IP communication via port 9000 |
| 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 | 7.2 W |

Mechanics

| | |
|------------------------------------|--|
| Dimensions (W x H x D) | 112 mm x 163.1 mm x 111.1 mm (without system plug) |
| Weight | 1.65 kg |
| 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 | 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/s ² , 16 ms 150 m/s ² , 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) |

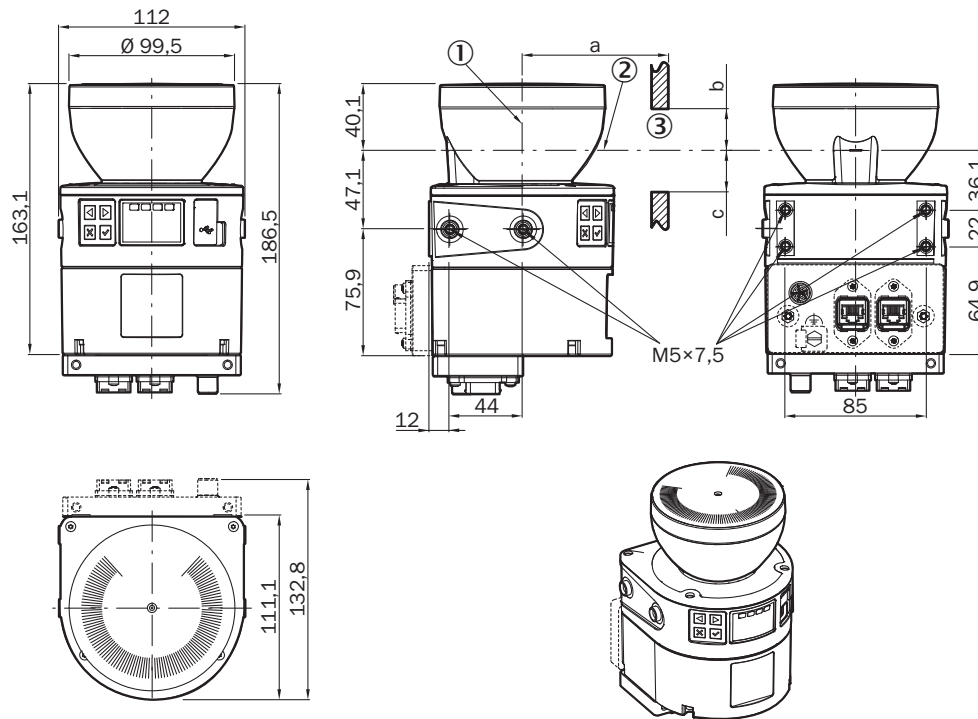
Certificates

| | |
|--|---|
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| Profinet certificate | ✓ |
| PROFIsafe certificate | ✓ |
| EC-Type-Examination approval | ✓ |
| China GB certificate | ✓ |
| PROFInergy 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 |

Dimensional drawing



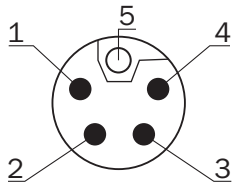
Dimensions in mm (inch)

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.)

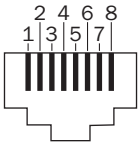
Pinouts Voltage supply



| 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 | n.c. | Not connected |
| 5 | FE | Functional earth/shielding |

For details see operating instructions

Pinouts Ethernet















| Pin | Designation | Description |
|---------|-------------|----------------|
| 1 | TX+ | Send data + |
| 2 | TX- | Send data - |
| 3 | RX+ | Receive data + |
| 4 | - | Reserved |
| 5 | - | Reserved |
| 6 | RX- | Receive data - |
| 7 | - | Reserved |
| 8 | - | Reserved |
| Housing | SH | Shielding |

For details see operating instructions

Recommended accessories

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

| | Brief description | Type | part no. |
|---|---|--|----------|
| Mounting systems | | | |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> 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 |
|  | <ul style="list-style-type: none"> Description: 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) 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 2b | 2074184 |

| | Brief description | Type | part no. |
|---|---|--------------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M12, 5-pin, straight, L-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 5-wire, PUR, halogen-free • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2L15-020UH1XLEAX | 2099599 |
|  | <ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M12, 5-pin, straight, L-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 5-wire, PUR, halogen-free • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2L15-050UH1XLEAX | 2099626 |
|  | <ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M12, 5-pin, straight, L-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 5-wire, PUR, halogen-free • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2L15-100UH1XLEAX | 2099627 |
|  | <ul style="list-style-type: none"> • Description: Sensor/actuator cable, unshielded • Connection type head A: Female connector, M12, 5-pin, straight, L-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 20 m, 5-wire, PUR, halogen-free • Application: Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation | YF2L15-200UH1XLEAX | 2099628 |
| system plugs and extension modules | | | |
|  | | Push-pull adapter | 2098095 |

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For us, that is “Sensor Intelligence.”

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