



MICS3-CBAZ55PZ1

microScan3

SAFETY LASER SCANNERS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

| Integration in the control system | Sub product family | Protective field range | Number of fields | Number of monitoring cases | Connection type | Type | Part no. |
|-----------------------------------|------------------------------|------------------------|------------------|----------------------------|-----------------|---------------------|----------|
| PROFINET PROFIsafe | microScan3 Pro - PROFINET | 5.5 m | 128 | 128 | M12 | MICS3- CBAZ55PZ1 | 1092719 |

Replacement sensor without system plug; only functional in combination with system plug;

Replacement sensor for 1092721

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



Detailed technical data

Features

| | |
|--|--|
| Sub product family | microScan3 Pro - PROFINET |
| Model | Sensor without system plug |
| Application | Indoor |
| Protective field range | 5.5 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 |
| 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, 4-pin, A-coded |
| Fieldbus, industrial network | 2 x M12 female connectors, 4-pin, D-coded |
| 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) Auto-polarity |
| Diagnostics | I&M data sets 0 ... 5 PROFINET alarms |
| Additional services | PROFInergy F_iPar_CRC |

| | |
|-------------------------|--|
| | Acyclic read-/write services for communication via TCI SNTP (client and server) |
| Additional interfaces | TCP/IP communication via port 9000 |
| Display elements | Graphic color display, LEDs |

Electrical data

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|--|---------------------------------|
| 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 |

Mechanical data

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|------------------------------------|--|
| Dimensions (W x H x D) | 112 mm x 150.8 mm x 111.1 mm |
| 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 | $\leq 3,000$ lx (IEC 61496-3) |
| 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 |

Other information

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|------------------------------------|--|
| 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) |

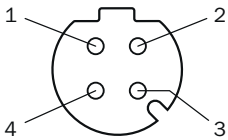
Classifications

| | |
|---------------------|----------|
| 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 |

Pin assignment

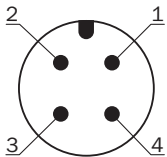
Ethernet (XF1, XF2)



| 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/microScan3

| | Brief description | Type | Part no. |
|---|---|--|----------|
| 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, 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. 4, steel, painted (RAL 1021) | Heavy-duty mounting kit for floor mounting | 2102289 |
|  | 1 piece, mounting bracket 150 mm for floor mounting of microScan3, stainless steel, Bracket and 4 x M5 screws for attaching the microScan3 | Mounting bracket 150 mm for floor mounting of microScan3 | 2112950 |
|  | 1 piece, mounting bracket 300 mm for floor mounting of microScan3, stainless steel, Bracket and 4 x M5 screws for attaching the microScan3 | Mounting bracket 300 mm for floor mounting of microScan3 | 2112951 |
|  | 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 |
| Plug connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-020UB3XLEAX | 2095607 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-050UB3XLEAX | 2095608 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-100UB3XLEAX | 2095609 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 20 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YF2A14-200UB3XLEAX | 2095611 |

| | Brief description | Type | Part no. |
|---|---|--------------------|----------|
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-020UB3XLEAX | 2095766 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-050UB3XLEAX | 2095767 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 10 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-100UB3XLEAX | 2095768 |
| | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 20 m, 4-wire, PUR, halogen-free • Description: Sensor/actuator cable, unshielded • Application: Zones with oils and lubricants, Drag chain operation, Robot | YG2A14-200UB3XLEAX | 2095770 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet • Cable: 20 m, 4-wire, CAT5, CAT5e, PUR, halogen-free • Description: Ethernet, shielded, Head A: male connector, M12, 4-pin, straight, D coded Head B: male connector, RJ45, 8-pin, straight Cable: PUR, halogen-free, shielded, 2 x 2 x 0.14 mm², Ø 6.4 mm | SSL-2J04-G20ME60 | 6063700 |
|  | <ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 4-pin, angled, D-coded • Connection type head B: Male connector, RJ45, 8-pin, straight • Signal type: Ethernet • Cable: 20 m, 4-wire, CAT5, CAT5e, PUR, halogen-free • Description: Ethernet, shielded, Head A: male connector, M12, 4-pin, angled, D coded Head B: male connector, RJ45, 8-pin, straight Cable: PUR, halogen-free, shielded, 2 x 2 x 0.14 mm², Ø 6.4 mm | SSL-2J04-H20ME | 6063701 |
| Others | | | |
|  | <ul style="list-style-type: none"> • Brief description: The software visualizes diagnostic and device information from safety laser scanners in real time, helping to identify error causes faster and reduce maintenance time. • Supported products: All microScan3 variants (except for microScan3 Core I/O variants), outdoorScan3 Pro - EtherNet/IP • Version: 1.0 • Note: With purchase, you accept the product description available under Downloads > Documentation in connection with the 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)., With purchase, you accept the product description available under Downloads > Documentation in connection with the 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). | SOW/VTL-LI007PCW10 | 1116788 |

SICK AT A GLANCE

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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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