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DATA SHEET

## S30A-6111CP

S3000 PROFINET IO Advanced  
Safety laser scanners

# SICK

Sensor Intelligence



Illustration may differ

SAFETY LASER SCANNERS

S30A-6111CP

ORDERING INFORMATION

| Type        | part no. |
|-------------|----------|
| S30A-6111CP | 1045652  |

Further device versions and accessories at [www.sick.com/S3000\\_PROFINET\\_IO\\_Advanced](http://www.sick.com/S3000_PROFINET_IO_Advanced)



DETAILED TECHNICAL DATA

FEATURES

|                                                      |                                                                                                                              |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Usage                                                | S3000 PROFINET IO does not have any local inputs or outputs and is only operated in a network with corresponding controller. |
| Model                                                | Sensor without system plug                                                                                                   |
| Application                                          | Indoor                                                                                                                       |
| Protective field range                               | 5.5 m                                                                                                                        |
| Warning field range                                  | 49 m (20 m at 20 % reflectivity)                                                                                             |
| Distance measuring range                             | 49 m                                                                                                                         |
| Number of simultaneously monitored protective fields | 2                                                                                                                            |
| Type of field set                                    | Dual field sets                                                                                                              |
| Number of field sets                                 | 4                                                                                                                            |
| Number of fields                                     | 8                                                                                                                            |
| Number of monitoring cases                           | 4                                                                                                                            |
| Scanning angle                                       | 190°                                                                                                                         |
| Resolution (can be configured)                       | 30 mm, 40 mm, 50 mm, 70 mm, 150 mm                                                                                           |
| Angular resolution                                   | 0.5°, 0.25°, depending on range and resolution                                                                               |
| Response time                                        | 60 ms <sup>1)</sup>                                                                                                          |
| Protective field supplement                          | 100 mm                                                                                                                       |
| Number of multiple samplings                         | 2 ... 16, configurable                                                                                                       |
| Delay of automatic reset                             | 120 ms ... 4,920 ms, configurable                                                                                            |

<sup>1)</sup> Depending on basic response time and multiple sampling.

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 <sub>D</sub> (mean probability of a dangerous failure per hour) | 8.0 x 10 <sup>-8</sup>              |
| Conformities                                                        | Conformance Class B                 |
| T <sub>M</sub> (mission time)                                       | 20 years (EN ISO 13849)             |
| Safe state in the event of a fault                                  | The safety-related data is logic 0. |

## FUNCTIONS

|                                   |            |
|-----------------------------------|------------|
| Restart interlock                 | ✓          |
| Multiple sampling                 | ✓          |
| Monitoring case switching         | ✓          |
| Simultaneous monitoring           | ✓          |
| Static protective field switching | ✓          |
| Contour as a reference            | ✓          |
| Integrated configuration memory   | ✓          |
| Measured data output              | Via RS-422 |

## INTERFACES

|                                         |                                  |                                                                                                                                          |
|-----------------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Connection type                         | Bus connection                   | Copper conductor (2 female connectors for RJ-45 push-pull plug)                                                                          |
|                                         | Supply connection                | System plug with or without connecting cable                                                                                             |
| Configuration and diagnostics interface | RS-232                           |                                                                                                                                          |
|                                         | Transmission rate                | 9.6 kBaud, 19.2 kBaud, 38.4 kBaud                                                                                                        |
| Fieldbus, industrial network            | Type of fieldbus integration     | PROFINET PROFIsafe                                                                                                                       |
|                                         | Device properties                | Integrated in the device                                                                                                                 |
|                                         | Switch properties                | PROFINET IO device with 2-port real-time switch according to PROFINET specification V2.2                                                 |
|                                         |                                  | PROFIsafe profile with 6-octet input and 6-octet output according to IEC 61784-3-3 V2.4                                                  |
|                                         |                                  | Cycle time 4, 8, 16, 32 ms, etc.                                                                                                         |
|                                         | Port properties                  | GSDML according to GSDML specification V2.25                                                                                             |
|                                         |                                  | Filtering Data Base according to IEEE 802.1D                                                                                             |
|                                         |                                  | 6 prioritization levels for IEEE 802.1Q – Network prioritization                                                                         |
|                                         |                                  | 64 KB SRAM memory for caching telegrams, managed in 768-byte segments                                                                    |
|                                         |                                  | Resource prioritization for network control and RTC2/3 frames                                                                            |
|                                         | Conformance                      | Telegram extension based on "Cut-through"                                                                                                |
|                                         |                                  | Port status (Disabled, Blocking, Forwarding)                                                                                             |
|                                         |                                  | Support for non-real-time and real-time data transfer                                                                                    |
|                                         |                                  | Auto-negotiation                                                                                                                         |
|                                         | Topology support                 | Auto-crossover (MDIX)                                                                                                                    |
|                                         |                                  | Auto-polarity                                                                                                                            |
|                                         | Diagnostics                      | 100Base-TX                                                                                                                               |
|                                         |                                  | Conformance Class B                                                                                                                      |
|                                         | Interfaces                       | SNMP, MIB-2, LLDP according to IEEE 802.1AB                                                                                              |
|                                         |                                  | MRP client support                                                                                                                       |
| Functions that are not supported        | Functions that are not supported | Application-related manufacturer-specific channel diagnostics and channel diagnostics for the PROFIsafe profile, individually switchable |
|                                         |                                  | Report system errors                                                                                                                     |
|                                         |                                  | Cable diagnostics                                                                                                                        |
|                                         |                                  | Neighborhood alerts                                                                                                                      |
|                                         |                                  | Support for port statistics                                                                                                              |
|                                         |                                  | I&M support from I&M0 to I&M4                                                                                                            |
|                                         |                                  | TCP port 9000 and UDP port 30718                                                                                                         |
|                                         |                                  | RS-232                                                                                                                                   |
|                                         |                                  | Multicast communication                                                                                                                  |
|                                         |                                  | Supervisor AR                                                                                                                            |
|                                         |                                  | MAC-pause mechanism in full duplex                                                                                                       |
|                                         |                                  | Back-pressure in half duplex                                                                                                             |
|                                         |                                  | Static learning                                                                                                                          |

|  |                         |
|--|-------------------------|
|  | Broadcast Storm Control |
|--|-------------------------|

ELECTRONICS

|                               |                                   |
|-------------------------------|-----------------------------------|
| Protection class              | III (VDE 0106, EN 60950)          |
| Supply voltage V <sub>s</sub> | 24 V DC (16.8 V DC ... 28.8 V DC) |
| Power consumption             | 0.8 A <sup>1)</sup>               |

<sup>1)</sup> At 24 V DC without output load.

MECHANICS

|                             |                                        |
|-----------------------------|----------------------------------------|
| Dimensions (W x H x D)      | 155 mm x 185 mm x 160 mm               |
| Weight                      | 3.3 kg                                 |
| Housing material            | Aluminum die cast                      |
| Housing color               | RAL 1021 (yellow)                      |
| Front screen material       | Polycarbonate                          |
| Front screen surface finish | Outside with scratch-resistant coating |

AMBIENT DATA

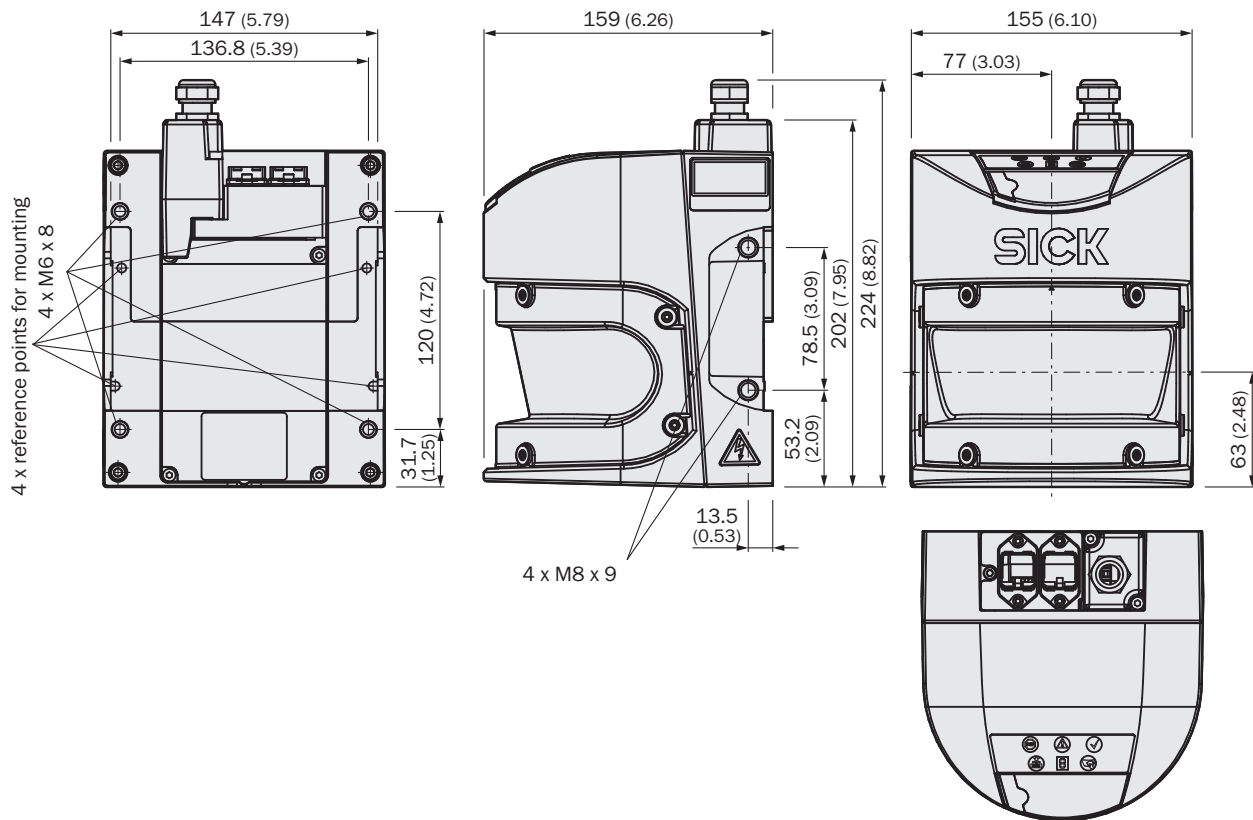
|                               |                                                                             |
|-------------------------------|-----------------------------------------------------------------------------|
| Enclosure rating              | IP65 (EN 60529)                                                             |
| Ambient operating temperature | -10 °C ... +50 °C                                                           |
| Storage temperature           | -25 °C ... +50 °C                                                           |
| Vibration resistance          | IEC 60068-2-6, IEC 60068-2-64, IEC 60721-3-5, IEC TR 60721-4-5, IEC 61496-3 |
|                               | Class 5M1 (IEC 60721-3-5)                                                   |
| Shock resistance              | IEC 60068-2-27, IEC 60721-3-5, IEC TR 60721-4-5, IEC 61496-3                |
|                               | Class 5M1 (IEC 60721-3-5)                                                   |
|                               | Continuous shock 50 m/s², 11 ms                                             |
|                               | 100 m/s², 16 ms                                                             |

OTHER INFORMATION

|                             |                                             |
|-----------------------------|---------------------------------------------|
| Type of light               | Pulsed laser diode                          |
| Wave length                 | 905 nm                                      |
| Detectable remission factor | 1.8 % ... > 1,000 %, reflectors             |
| 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                                                     | ✓ |
| Profinet certificate                                                  | ✓ |
| PROFIsafe certificate                                                 | ✓ |
| EC-Type-Examination approval                                          | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

**DIMENSIONAL DRAWING**

Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1045652](http://www.sick.com/1045652)



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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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