



# S30B-2011BA

S300 Standard

SAFETY LASER SCANNERS

**SICK**  
Sensor Intelligence.



## Ordering information

| Type        | Part no. |
|-------------|----------|
| S30B-2011BA | 1026820  |

Other models and accessories → [www.sick.de/S300\\_Standard](http://www.sick.de/S300_Standard)



## Detailed technical data

## Features

|                              |                                          |
|------------------------------|------------------------------------------|
| Protective field range       | 2 m                                      |
| Warning field range          | 8 m (at 30 % reflectivity)               |
| Distance measuring range     | 30 m                                     |
| Type of field set            | Triple field sets                        |
| Number of field sets         | 1                                        |
| Number of monitoring cases   | 1                                        |
| Scan angle                   | 270°                                     |
| Resolution                   | 30 mm, 40 mm, 50 mm, 70 mm, configurable |
| Angular resolution           | 0.5°                                     |
| Response time                | 80 ms <sup>1)</sup>                      |
| Protective field supplement  | 100 mm                                   |
| Number of multiple samplings | 2 ... 16, configurable                   |
| Delay of automatic reset     | 2 s ... 60 s, configurable               |

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

## Safety-related parameters

|                                                         |                                        |
|---------------------------------------------------------|----------------------------------------|
| Type                                                    | Type 3 (IEC 61496)                     |
| Safety integrity level                                  | SIL2 (IEC 61508)<br>SILCL2 (EN 62061)  |
| Category                                                | Category 3 (EN ISO 13849)              |
| Performance level                                       | PL d (EN ISO 13849)                    |
| PFHd (mean probability of a dangerous failure per hour) | $8.0 \times 10^{-8}$ (EN ISO 13849)    |
| T <sub>M</sub> (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                          | ✓ |
| Contour as a reference                     | ✓ |
| Integrated configuration memory            | ✓ |
| Measured data output                       | ✓ |
| Safe SICK device communication via EFI/SDL | ✓ |

## Interfaces

|                                            |                                                                                               |
|--------------------------------------------|-----------------------------------------------------------------------------------------------|
| Connection type                            | System plug with or without connecting cable                                                  |
| Configuration method                       | PC with CDS (Configuration and Diagnostic Software)                                           |
| Configuration and diagnostics interface    | RS-232                                                                                        |
| Transmission rate                          | 38.4 kBaud                                                                                    |
| Data interface                             | RS-422                                                                                        |
| Transmission rate                          | ≤ 500 kBaud                                                                                   |
| Safe SICK device communication via EFI/SDL |                                                                                               |
| Transmission rate                          | ≤ 500 kBaud                                                                                   |
| Cable length                               | ≤ 50 m                                                                                        |
| Conductor cross-section                    | 0.22 mm²                                                                                      |
| Fieldbus, industrial network               |                                                                                               |
| Integration via EFI gateways               | CANopen, Ethernet TCP/IP, PROFIBUS DP, PROFIBUS PROFI-safe, PROFINET PROFI-safe <sup>1)</sup> |

<sup>1)</sup> For a suitable EFI-gateway see modules and gateways in the accessory section of connection systems.

## Electrical data

|                                  |                                                 |
|----------------------------------|-------------------------------------------------|
| Protection class                 | II (EN 50178)                                   |
| Supply voltage V <sub>s</sub>    | 24 V DC (16.8 V DC ... 30 V DC)                 |
| Power consumption                | ≤ 0.33 A <sup>1)</sup><br>≤ 1.7 A <sup>2)</sup> |
| Universal I/Os                   | 5 <sup>3)</sup>                                 |
| Inputs                           |                                                 |
| External device monitoring (EDM) | 1 <sup>4)</sup>                                 |
| Reset/restart                    | 1 <sup>4)</sup>                                 |
| Standby                          | 1                                               |
| Outputs                          |                                                 |
| Safety outputs (OSSD)            | 2 x 250 mA                                      |
| Diagnostic outputs               | 3 x 100 mA <sup>5)</sup>                        |

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

<sup>2)</sup> At 24 V DC including maximum output load.

<sup>3)</sup> Freely programmable, e.g., input external device monitoring, input reset, contamination warning, reset required.

<sup>4)</sup> Availability depends on the configuration of the universal I/Os.

<sup>5)</sup> Freely programmable, e.g. warning field, contamination, reset required.

## Mechanical data

|                        |                          |
|------------------------|--------------------------|
| Dimensions (W x H x D) | 102 mm x 152 mm x 106 mm |
|------------------------|--------------------------|

|                                    |                                        |
|------------------------------------|----------------------------------------|
| <b>Weight</b>                      | 1.2 kg                                 |
| <b>Housing material</b>            | Aluminum die cast                      |
| <b>Housing color</b>               | RAL 1021 (yellow)                      |
| <b>Optics cover material</b>       | Polycarbonat                           |
| <b>Optics cover surface finish</b> | Outside with scratch-resistant coating |

## Ambient data

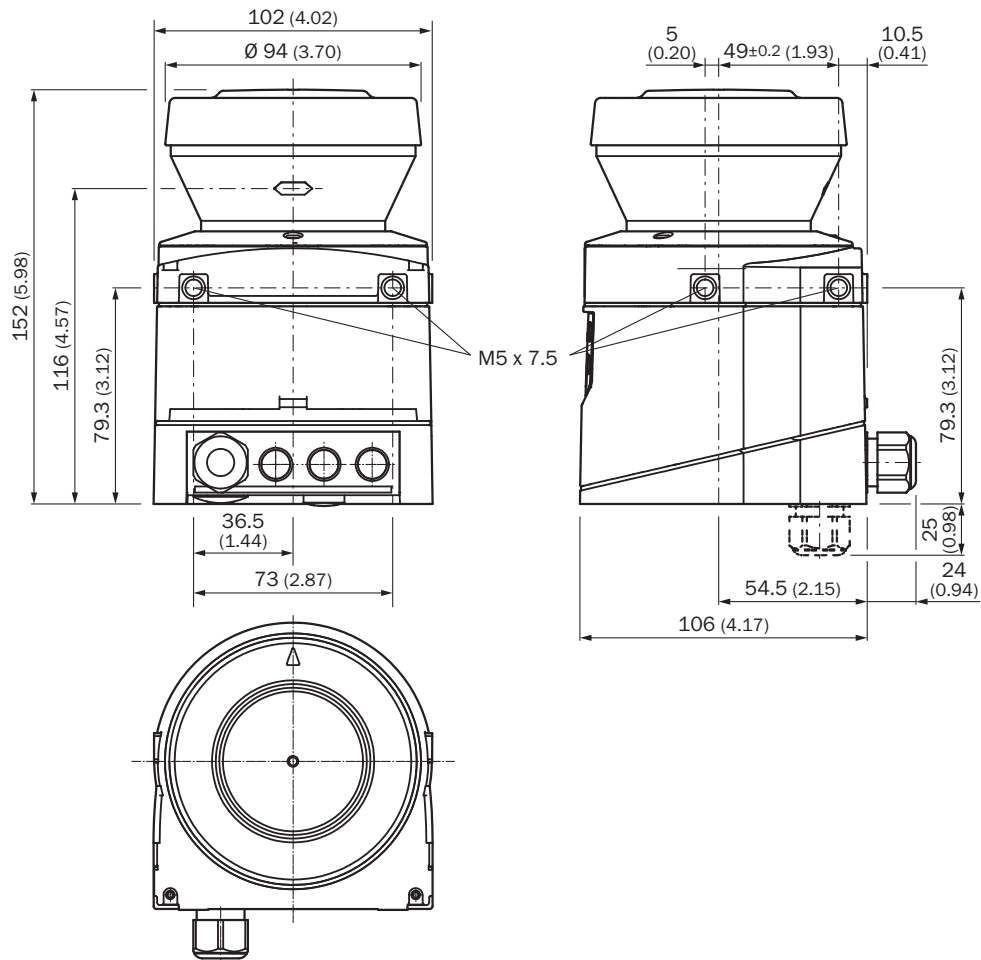
|                                      |                                                    |
|--------------------------------------|----------------------------------------------------|
| <b>Enclosure rating</b>              | IP 65 (EN 60529)                                   |
| <b>Ambient operating temperature</b> | -10 °C ... +50 °C                                  |
| <b>Storage temperature</b>           | -25 °C ... +50 °C                                  |
| <b>Vibration resistance</b>          | 5 g, 10 Hz ... 150 Hz (EN 61496-1, CLC/TS 61496-3) |
| <b>Shock resistance</b>              | 10 g, 16 ms (EN 61496-1, CLC/TS 61496-3)           |

## Other information

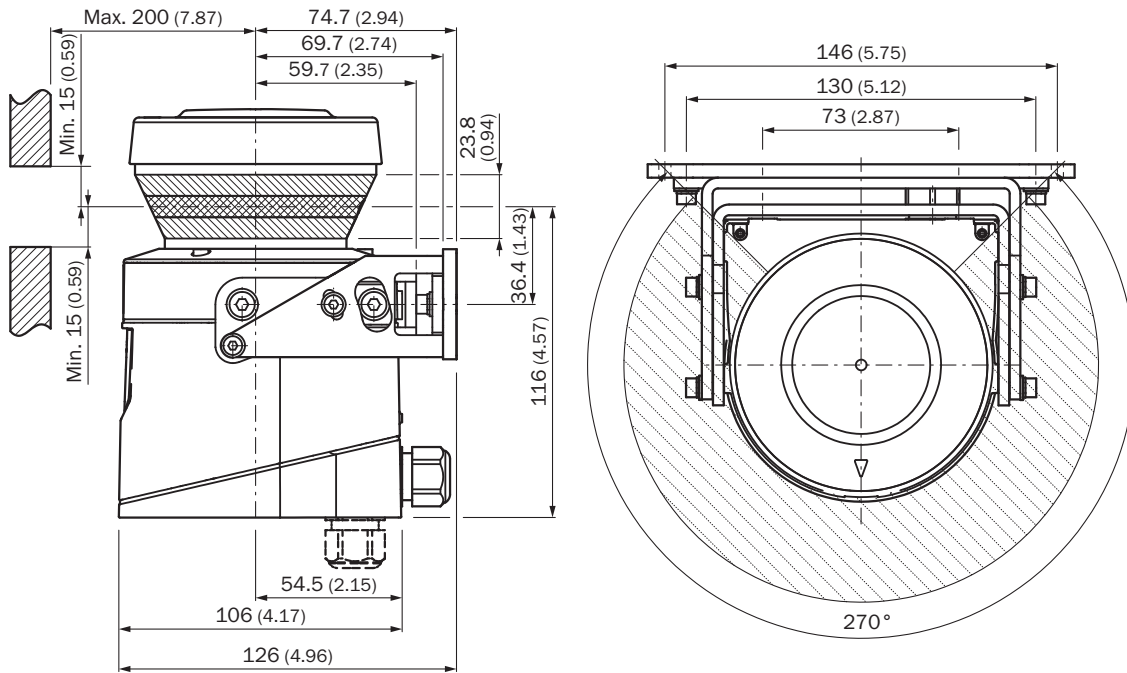
|                      |                                             |
|----------------------|---------------------------------------------|
| <b>Type of light</b> | Pulsed laser diode                          |
| <b>Wave length</b>   | 905 nm                                      |
| <b>Reflectivity</b>  | 1.8 % ... > 1,000 %, reflectors             |
| <b>Laser class</b>   | 1 (21 CFR 1040.10 and 1040.11, IEC 60825-1) |

**Dimensional drawing** (dimensions in mm (inch))

Laser scanner

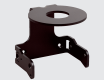


Scan plane origin



### Recommended accessories

Other models and accessories → [www.sick.de/S300\\_Standard](http://www.sick.de/S300_Standard)

| Brief description                                                                   |                                                                                                                        | Type                 | Part no. |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------|----------|
| Mounting brackets and mounting plates                                               |                                                                                                                        |                      |          |
|  | 1 piece, mounting bracket for rear mounting on wall or machine                                                         | Mounting kit 1a      | 2034324  |
|  | 1 piece, mounting bracket for rear mounting on wall or machine with protection of optics hood                          | Mounting kit 1b      | 2034325  |
|  | 1 piece, mounting bracket, adjustable lateral axis, only in conjunction with mounting kit 1a (2034324) or 1b (2034325) | Mounting kit 2       | 2039302  |
|  | 1 piece, mounting plate, adjustable longitudinal axis, only in conjunction with mounting kit 2 (2039302)               | Mounting kit 3       | 2039303  |
| Plug connectors and cables                                                          |                                                                                                                        |                      |          |
|  | Head A: Cable<br>Head B: Cable<br>Cable: PVC, unshielded<br>On 100 m reel                                              | Connecting cable     | 6030795  |
|  | Head A: Cable<br>Head B: Cable<br>Cable: PVC, shielded<br>Fitting for EFI connections                                  | EFI connecting cable | 6029448  |

|                                                                                                                                                                                                                                                                     | Brief description                                                                                                                                                                                    | Type               | Part no. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| <br><br><br><br> | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded, 2 m<br>For connecting the configuration connection to the USB interface on the PC  | DSL-8U04G02M025KM1 | 6034574  |
|                                                                                                                                                                                                                                                                     | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded, 10 m<br>For connecting the configuration connection to the USB interface on the PC | DSL-8U04G10M025KM1 | 6034575  |
|                                                                                                                                                                                                                                                                     | Head A: system plug<br>Cable: without cable<br>Not for use with incremental encoders, integrated configuration memory                                                                                | SX0B-A0000G        | 2032807  |
|                                                                                                                                                                                                                                                                     | Head A: system plug<br>Cable: pre-assembled, PVC, unshielded, 5 m<br>Not for use with incremental encoders, integrated configuration memory                                                          | SX0B-B1105G        | 2032859  |
|                                                                                                                                                                                                                                                                     | Head A: system plug<br>Cable: pre-assembled, PVC, unshielded, 10 m<br>Not for use with incremental encoders, integrated configuration memory                                                         | SX0B-B1110G        | 2032860  |
|                                                                                                                                                                                                                                                                     | Head A: system plug<br>Cable: pre-assembled, PVC, unshielded, 14 m<br>Not for use with incremental encoders, integrated configuration memory                                                         | SX0B-B1114G        | 2047875  |
|                                                                                                                                                                                                                                                                     | Head A: system plug<br>Cable: pre-assembled, PVC, unshielded, 20 m<br>Not for use with incremental encoders, integrated configuration memory                                                         | SX0B-B1120G        | 2032861  |

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)