Product data sheet


# S32B-2011BA

## S300 Mini Standard

**SAFETY LASER SCANNERS**

SICK
Sensor Intelligence.


Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| S32B-2011BA | 1050932 |

Other models and accessories → www.sick.com/S300_Mini_Standard

## Detailed technical data

### Features

| | |
|---|---|
| **Application** | Indoor |
| **Protective field range** | 2 m |
| **Warning field range** | 8 m (at 15 % reflectivity) |
| **Distance measuring range** | 30 m |
| **Type of field set** | Triple field sets |
| **Number of field sets** | 1 |
| **Number of fields** | 3 |
| **Number of monitoring cases** | 1 |
| **Scanning angle** | 270° |
| **Resolution (can be configured)** | 30 mm, 40 mm, 50 mm, 70 mm |
| **Angular resolution** | 0.5° |
| **Response time** | 80 ms [1)] |
| **Protective field supplement** | 100 mm |
| **Number of multiple samplings** | 2 ... 16, configurable |
| **Delay of automatic reset** | 2 s ... 60 s, configurable |

[1)] Depending on basic response time and multiple sampling.

### Safety-related parameters

| | |
|---|---|
| **Type** | Type 3 (IEC 61496) |
| **Safety integrity level** | SIL2 (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)** | $8.0 \times 10^{-8}$ |
| **$T_M$ (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

| | |
|---|---|
| **Restart interlock** | ✓ |
| **External device monitoring (EDM)** | ✓ |
| **Multiple sampling** | ✓ |
| **Contour as a reference** | ✓ |
| **Measured data output** | None |

## Interfaces

| | |
|---|---|
| **Connection type** | Cable, 250 mm, with male connector M12, 8-pin |
| **Universal I/Os** | 2 |
| **Inputs** | |
| External device monitoring (EDM) | 1 [1] |
| Reset/restart | 1 [1] |
| Standby | 1 [1] |
| **Outputs** | |
| Output signal switching devices (OSSDs) | 2 |
| Outputs for warning field | 2 [1] |
| Reset required | 1 [1] |
| **Configuration method** | PC with CDS (Configuration and Diagnostic Software) |
| **Configuration and diagnostics interface** | RS-232 |
| Transmission rate | 38.4 kBaud |

[1] Availability depends on the configuration of the universal I/Os.

## Electrical data

| | |
|---|---|
| **Protection class** | III (EN 50178)<br>EN 60950 |
| **Supply voltage $V_S$** | 24 V DC (16.8 V DC ... 30 V DC) |
| **Power consumption** | ≤ 0.2 A [1]<br>≤ 1.35 A [2] |

[1] At 24 V DC without output load.
[2] At 24 V DC including maximum output load.

## Mechanical data

| | |
|---|---|
| **Dimensions (W x H x D)** | 102 mm x 116 mm x 105 mm |
| **Weight** | 0.8 kg, without connecting cables |
| **Housing material** | Aluminum die cast |
| **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 (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<br>100 m/s², 16 ms |

## Other information

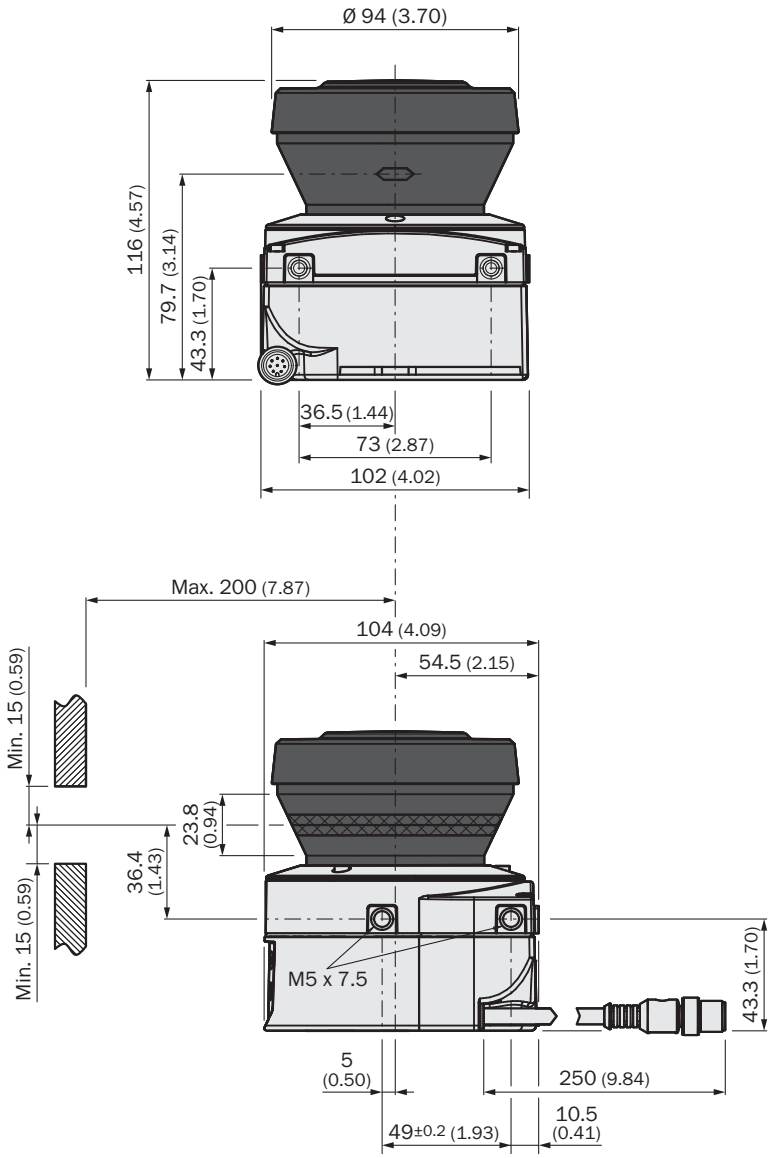
| | |
|---|---|
| **Type of light** | Pulsed laser diode |
| **Wave length** | 905 nm |
| **Detectable remission factor** | 1.8 % ... > 1,000 %, reflectors |
| **Laser class** | 1 (21 CFR 1040.10 and 1040.11, IEC 60825-1) |

## Classifications

| | |
|---|---|
| **eCl@ss 5.0** | 27272705 |
| **eCl@ss 5.1.4** | 27272705 |
| **eCl@ss 6.0** | 27272705 |
| **eCl@ss 6.2** | 27272705 |
| **eCl@ss 7.0** | 27272705 |
| **eCl@ss 8.0** | 27272705 |
| **eCl@ss 8.1** | 27272705 |
| **eCl@ss 9.0** | 27272705 |
| **eCl@ss 10.0** | 27272705 |
| **eCl@ss 11.0** | 27272705 |
| **eCl@ss 12.0** | 27272705 |
| **ETIM 5.0** | EC002550 |
| **ETIM 6.0** | EC002550 |
| **ETIM 7.0** | EC002550 |
| **ETIM 8.0** | EC002550 |
| **UNSPSC 16.0901** | 39121528 |

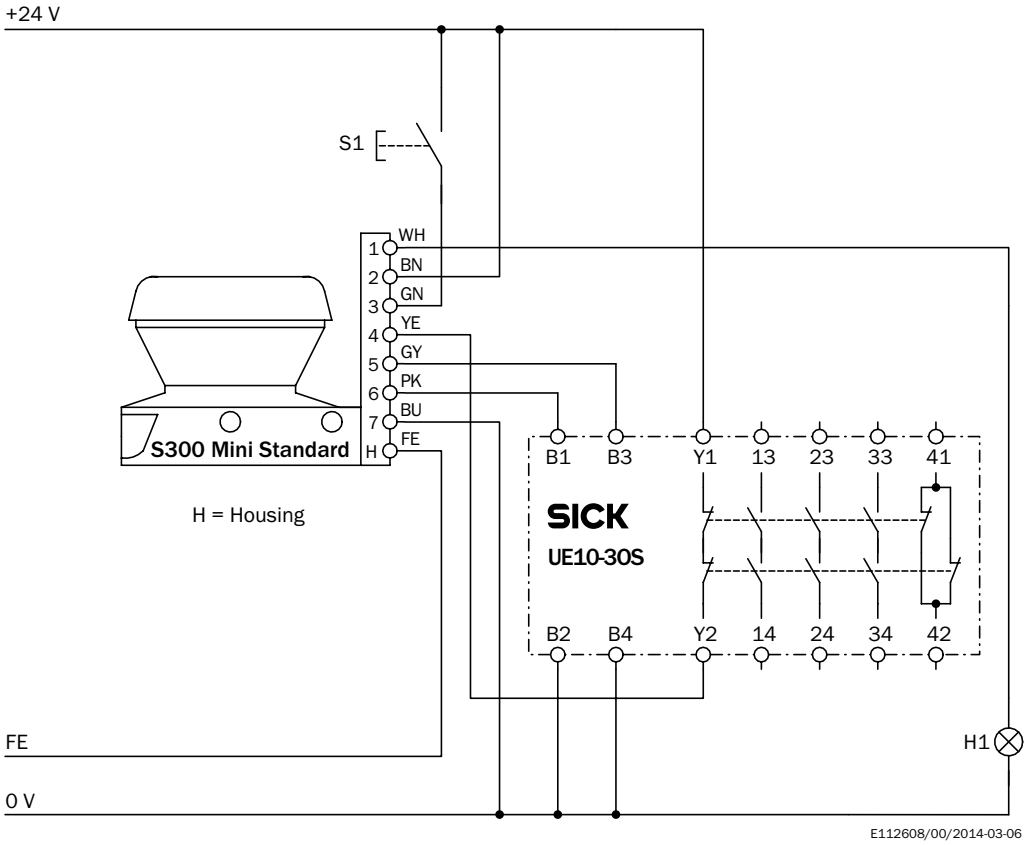
## Dimensional drawing (Dimensions in mm (inch))

Laser scanner



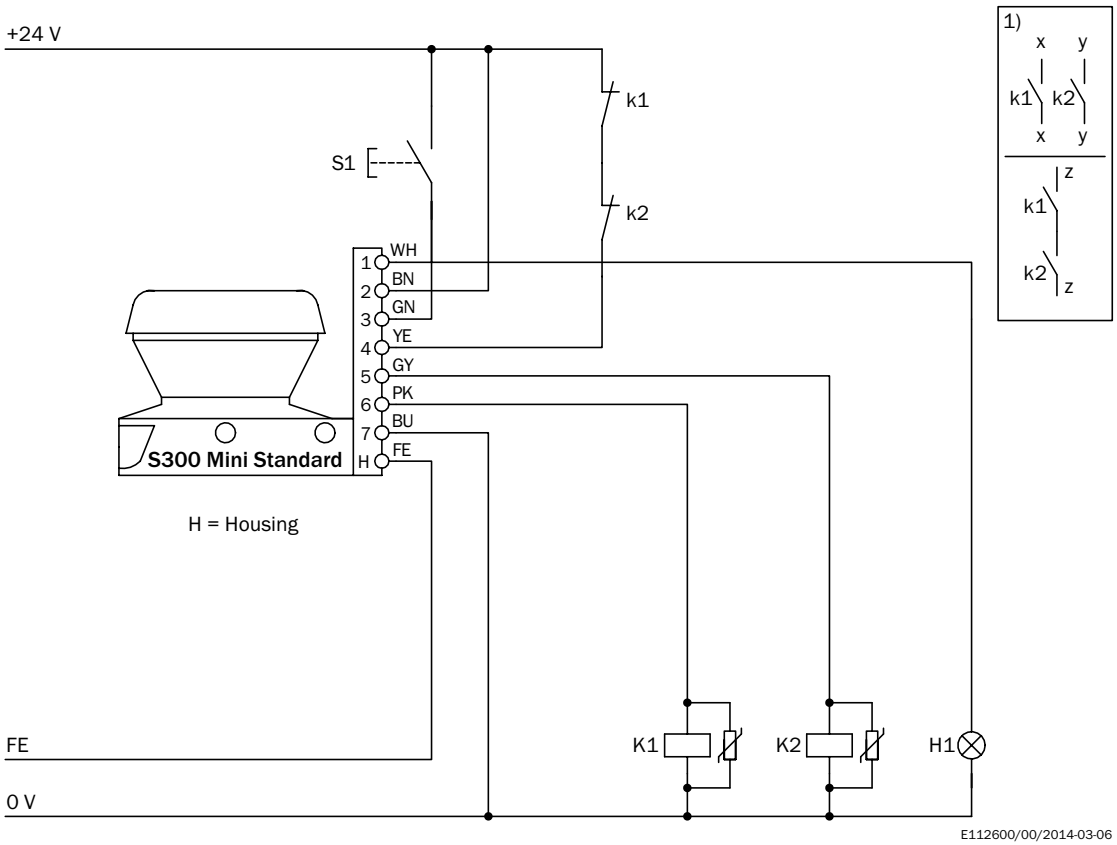
## Connection diagram

S300 mini standard to UE10-3OS safety relay




S300 Mini Standard on UE10-3OS safety relay
Operating mode: with restart interlock (universal I/O 1 must be configured as reset) and external device monitoring (universal I/O 2 must be configured as EDM)

S300 Mini Standard with restart interlock and external device monitoring




S300 Mini Standard in conjunction with relays/contactors
Operating mode: with restart interlock (universal I/O 1 must be configured as reset) and external device monitoring (universal I/O 2 must be configured as EDM)

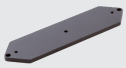
**Comments**

[1] Output circuits: These contacts are to be connected to the controller such that, with the output circuit open, the dangerous state is disabled. For categories 4 and 3, this integration must be dual-channel (x/y paths). Single-channel insertion in the control (z path) is only possible with a single-channel control and by taking the risk analysis into account.

## Recommended accessories

Other models and accessories ➜ www.sick.com/S300_Mini_Standard

| | Brief description | Type | Part no. |
|---|---|---|---|
| Mounting brackets and 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 |

| | Brief description | Type | Part no. |
|---|---|---|---|
|  | 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: female connector, M12, 8-pin, straight<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 2.5 m | DOL-127SG2M5E25KM0 | 2076540 |
|  | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded, 2 m | 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 | DSL-8U04G10M025KM1 | 6034575 |

# SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

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.”**

# WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com



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