

S30A-6011BA

S3000 Standard

SAFETY LASER SCANNERS





Ordering information

Туре	Part no.
S30A-6011BA	1023546

The system plug has to be ordered separately. For details, see "Accessories".

Other models and accessories → www.sick.com/S3000_Standard

Illustration may differ



Detailed technical data

Features

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 5 4 1) Type of field set Triple field sets, dual field sets Number of fields sets 1 Number of monitoring cases 1 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 3) Protective field supplement 100 mm Number of multiple samplings 2 16, configurable Delay of automatic reset 2 s 60 s, configurable		
Protective field range Warning field range 49 m (20 m at 20 % reflectivity) Distance measuring range 49 m Number of simultaneously monitored protective fields Type of field set Number of field sets 1 Number of fields 4 2) Number of monitoring cases 1 Scanning angle Resolution (can be configured) Angular resolution Response time 60 ms 3) Protective field supplement Number of multiple samplings 2 16, configurable	Model	Sensor without system plug
Warning field range Distance measuring range 49 m 49 m Number of simultaneously monitored protective fields Type of field set Number of field sets 1 Number of fields 4 2 1 Number of fields 4 2 1 Number of monitoring cases 1 Scanning angle Resolution (can be configured) 30 mm, 40 mm, 50 mm, 70 mm, 150 mm Angular resolution Response time 60 ms 3 1 Protective field supplement 100 mm Number of multiple samplings 49 m (20 m at 20 % reflectivity) 49 m 54 11 54	Application	Indoor
Distance measuring range $49 \mathrm{m}$ Number of simultaneously monitored protective fields $\leq 4^{10}$ Type of field setTriple field setsNumber of fields 1 Number of fields 4^{20} Number of monitoring cases 1 Scanning angle 190° Resolution (can be configured) $30 \mathrm{mm}$, $40 \mathrm{mm}$, $50 \mathrm{mm}$, $70 \mathrm{mm}$, $150 \mathrm{mm}$ Angular resolution 0.5° , 0.25° , depending on range and resolutionResponse time $60 \mathrm{ms}^{30}$ Protective field supplement $100 \mathrm{mm}$ Number of multiple samplings $2 \dots 16$, configurable	Protective field range	5.5 m
Number of simultaneously monitored protective fields ≤ 4 ¹¹) Type of field set Triple field sets, dual field sets Number of fields 1 Number of monitoring cases 1 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 ³¹ Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Warning field range	49 m (20 m at 20 % reflectivity)
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Number of field sets 1 Number of fields 4 2) Number of monitoring cases 1 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 3) Protective field supplement 100 mm Number of multiple samplings 2 16, configurable		≤ 4 ¹⁾
Number of fields4 2)Number of monitoring cases1Scanning angle190°Resolution (can be configured)30 mm, 40 mm, 50 mm, 70 mm, 150 mmAngular resolution0.5°, 0.25°, depending on range and resolutionResponse time60 ms 3)Protective field supplement100 mmNumber of multiple samplings2 16, configurable	Type of field set	Triple field sets, dual field sets
Number of monitoring cases 1 Scanning angle Resolution (can be configured) Angular resolution Response time Protective field supplement Number of multiple samplings 10 100 100 100 100 100 100 10	Number of field sets	1
Scanning angle 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 ³⁾ Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Number of fields	4 ²⁾
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 ³) Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Number of monitoring cases	1
Angular resolution Response time 60 ms ³⁾ Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Scanning angle	190°
Response time 60 ms ³⁾ Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Resolution (can be configured)	30 mm, 40 mm, 50 mm, 70 mm, 150 mm
Protective field supplement 100 mm Number of multiple samplings 2 16, configurable	Angular resolution	0.5°, 0.25°, depending on range and resolution
Number of multiple samplings 2 16, configurable	Response time	60 ms ³⁾
	Protective field supplement	100 mm
Delay of automatic reset 2 s 60 s, configurable	Number of multiple samplings	2 16, configurable
	Delay of automatic reset	2 s 60 s, configurable

¹⁾ If several protective fields are monitored simultaneously, the shut-off signals must be connected to safe outputs on a Flexi Soft safety controller or routed via a safe EFI gateway.

 $^{^{\}rm 2)}$ Two simultaneous field sets with two fields each, output to Flexi Soft via EFI.

 $^{^{\}rm 3)}$ Depending on basic response time and multiple sampling.

Safety-related parameters

Туре	Type 3 (IEC 61496)
Safety integrity level	SIL2 (IEC 61508)
Category	Category 3 (EN ISO 13849)
Performance level	PL d (EN ISO 13849)
$\ensuremath{PFH_D}$ (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	At least one OSSD is in the OFF state.

Functions

Restart interlock	✓
External device monitoring (EDM)	✓
Multiple sampling	✓
Simultaneous monitoring	✓
Contour as a reference	✓
Integrated configuration memory	✓
Measured data output	Via RS-422
Safe SICK device communication via EFI	✓

Electrical data

Protection class	II (EN 50178)
Supply voltage V_s	24 V DC (16.8 V DC 28.8 V DC)
Power consumption	\leq 0.8 A $^{1)}$ \leq 2.3 A $^{2)}$
Outputs	
Output signal switching devices (OSSDs)	2 x 500 mA
Application diagnostic outputs	3 x 100 mA ³⁾

¹⁾ At 24 V DC without output load.

Mechanical data

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

²⁾ At 24 V DC including maximum output load.

³⁾ Freely programmable, e.g. warning field, contamination, reset required.

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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/s^2 , 11 ms 100 m/s^2 , 16 ms

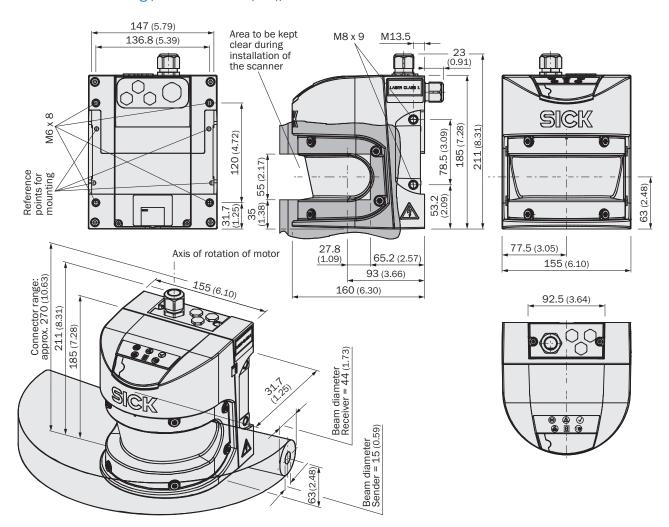
Other information

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

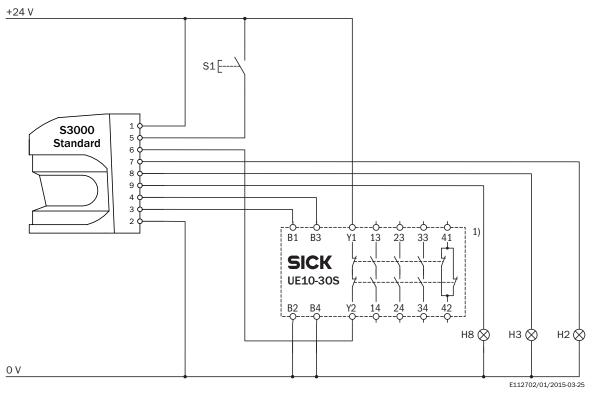
eCl@ss 5.0	27272705
eCl@ss 5.1.4	27272705
eCl@ss 6.0	27272705
eCl@ss 6.2	27272705
eCl@ss 7.0	27272705
eCl@ss 8.0	27272705
eCl@ss 8.1	27272705
eCl@ss 9.0	27272705
eCl@ss 10.0	27272705
eCl@ss 11.0	27272705
eCl@ss 12.0	27272705
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
UNSPSC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

Dimensional drawing (Dimensions in mm (inch))



Connection diagram

S3000 standard with restart interlock and external device monitoring at UE10-30S safety relay



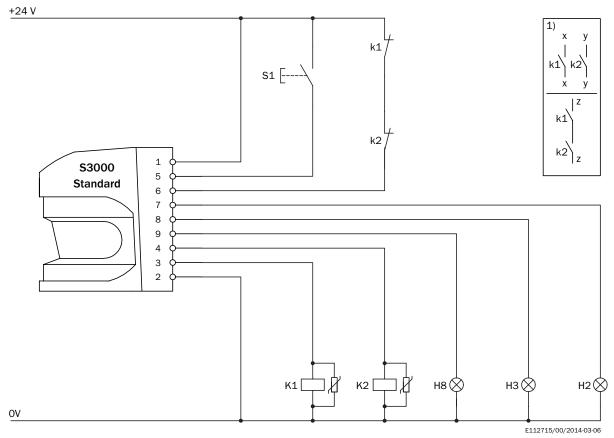
S3000 Standard in conjunction with UE10-30S

Operating mode: with restart interlock and external device monitoring (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.

S3000 Standard with restart interlock and external device monitoring



S3000 Standard in conjunction with relays/contactors

Operating mode: with restart interlock and external device monitoring (EDM)

Comments

Recommended accessories

Other models and accessories → www.sick.com/S3000_Standard

	Brief description	Туре	Part no.		
Mounting brad	Mounting brackets and plates				
	1 piece, Visor for heavy duty mounting kit (2080350), steel, painted (RAL 1021)	Heavy duty sight	2083733		
	1 piece, Mounting bracket, heavy-duty version, with protection cover, for floor mounting, adjustable longitudinal and lateral axes via alignment plate, height adjustment possible. Tilt angle $\pm5^\circ$. Additional mounting brackets are not required., steel, painted (RAL 1021)	Heavy-duty mounting kit	2080350		
	$\boldsymbol{1}$ piece, mounting bracket for direct mounting, from the rear, on wall or machine, not adjustable, Aluminum	Mounting kit 1	2015623		

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.

	Brief description	Туре	Part no.
	1 piece, mounting bracket for rear mounting on wall or machine, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1 (2015623), Aluminum $$	Mounting kit 2	2015624
111	1 piece, mounting bracket for rear mounting on wall, floor, or machine, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1 (2015623) and 2 (2015624), Aluminum $$	Mounting kit 3	2015625
Plug connecto	rs and cables		
	Head A: Flying leads Head B: Flying leads Cable: PVC, unshielded	Connecting cable	6022651
0	Head A: Flying leads Head B: Flying leads Cable: PVC, shielded Fitting for EFI connections	EFI connecting cable	6029448
60	Head A: system plug Cable: without cable Not for use of incremental encoders, integrated configuration storage	SX0A-A0000B	2023797
	Head A: system plug Cable: pre-assembled, Not for use of incremental encoders, integrated configuration storage, PVC, unshielded, 5 m	SX0A-B0905B	2027170
	Head A: system plug Cable: Pre-assembled, cable connection at the rear, Not for use of incremental encoders, integrated configuration storage, PVC, unshielded, 5 m	SX0A-B0905G	2049222
	Head A: system plug Cable: pre-assembled, Not for use of incremental encoders, integrated configuration storage, PVC, unshielded, 10 m	SX0A-B0910B	2027171
	Head A: system plug Cable: pre-assembled, Not for use of incremental encoders, integrated configuration storage, PVC, unshielded, 20 m	SX0A-B0920B	2027814
Others			
The state of the s	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 10 m		On request
	Head A: male connector, M8, 4-pin, straight Head B: male connector, USB-A, straight Cable: PVC, unshielded, 2 m		On request

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:

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