



# S30A-6011CA

S3000 Advanced

SAFETY LASER SCANNERS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

Type	part no.
S30A-6011CA	1023547

Other models and accessories → [www.sick.com/S3000\\_Advanced](http://www.sick.com/S3000_Advanced)

### Detailed technical data

#### Features

<b>Model</b>	Sensor without system plug
<b>Application</b>	Indoor
<b>Protective field range</b>	5.5 m
<b>Warning field range</b>	49 m (20 m at 20 % reflectivity)
<b>Distance measuring range</b>	49 m
<b>Number of simultaneously monitored protective fields</b>	≤ 4 <sup>1)</sup>
<b>Type of field set</b>	Triple field sets, dual field sets
<b>Number of field sets</b>	4
<b>Number of fields</b>	12
<b>Number of monitoring cases</b>	4
<b>Scanning angle</b>	190°
<b>Resolution (can be configured)</b>	30 mm, 40 mm, 50 mm, 70 mm, 150 mm
<b>Angular resolution</b>	0.5°, 0.25°, depending on range and resolution
<b>Response time</b>	60 ms <sup>2)</sup>
<b>Protective field supplement</b>	100 mm
<b>Number of multiple samplings</b>	2 ... 16, configurable
<b>Delay of automatic reset</b>	2 s ... 60 s, configurable

<sup>1)</sup> 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.

<sup>2)</sup> Depending on basic response time and multiple sampling.

## Safety-related parameters

<b>Type</b>	Type 3 (IEC 61496)
<b>Safety integrity level</b>	SIL 2 (IEC 61508)
<b>Category</b>	Category 3 (EN ISO 13849)
<b>Performance level</b>	PL d (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	$8.0 \times 10^{-8}$
<b>T<sub>M</sub> (mission time)</b>	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

## Functions

<b>Restart interlock</b>	✓
<b>External device monitoring (EDM)</b>	✓
<b>Multiple sampling</b>	✓
<b>Monitoring case switching</b>	✓
<b>Simultaneous monitoring</b>	✓
<b>Static protective field switching</b>	✓
<b>Contour as a reference</b>	✓
<b>Integrated configuration memory</b>	✓
<b>Measured data output</b>	Via RS-422
<b>Safe SICK device communication via EFI</b>	✓

## Electronics

<b>Protection class</b>	II (EN 50178)
<b>Supply voltage V<sub>s</sub></b>	24 V DC (16.8 V DC ... 28.8 V DC)
<b>Power consumption</b>	0.8 A <sup>1)</sup> 2.3 A <sup>2)</sup>
<b>Outputs</b>	
Output signal switching devices (OSSDs)	2 x 500 mA
Application diagnostic outputs	3 x 100 mA <sup>3)</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. warning field, contamination, reset required.

## Mechanics

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

## Ambient data

<b>Enclosure rating</b>	IP65 (EN 60529)
<b>Ambient operating temperature</b>	-10 °C ... +50 °C

<b>Storage temperature</b>	-25 °C ... +50 °C
<b>Vibration resistance</b>	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)
<b>Shock resistance</b>	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 <sup>2</sup> , 11 ms
	100 m/s <sup>2</sup> , 16 ms

Other information

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

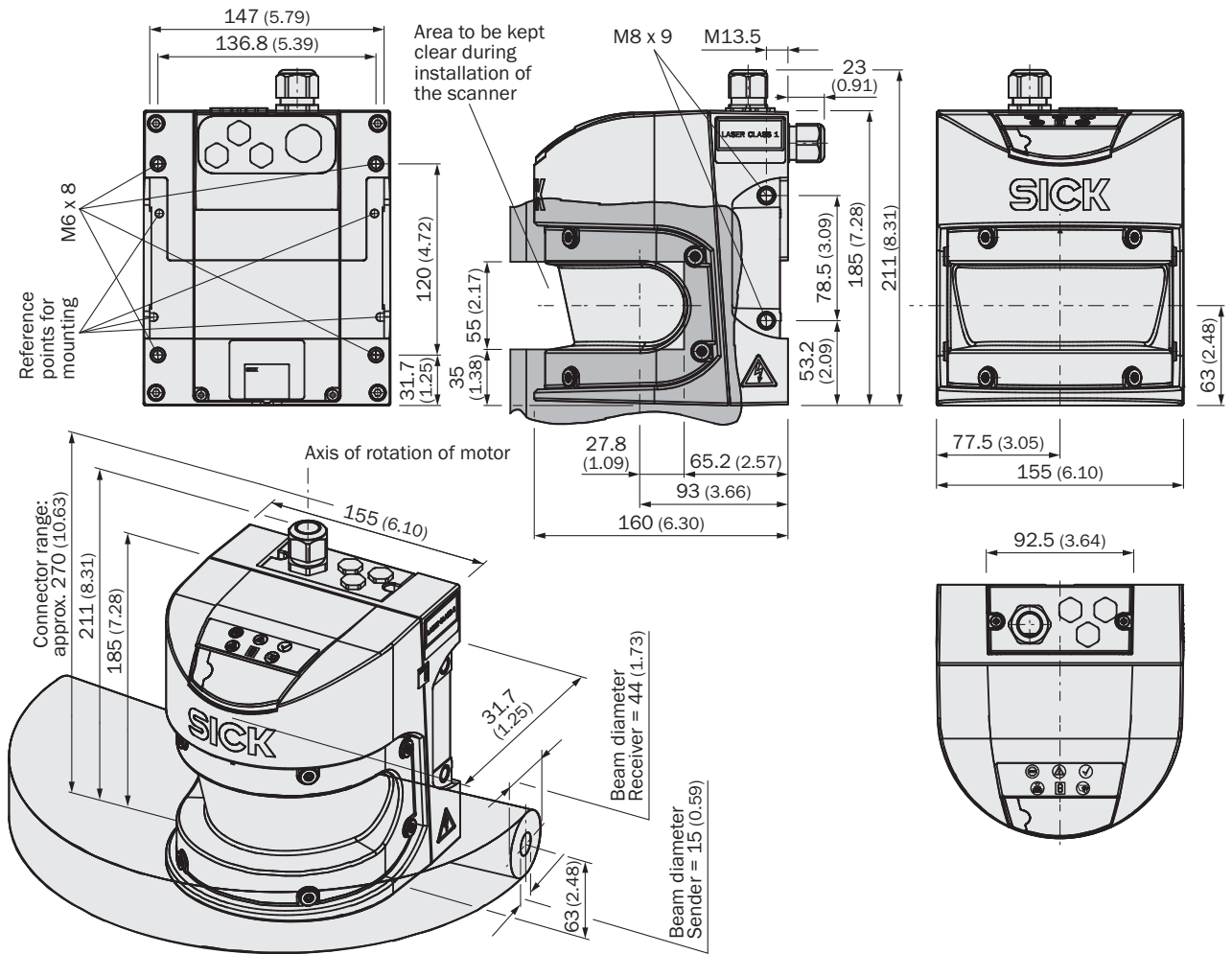
Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cULus certificate</b>	✓
<b>EC-Type-Examination approval</b>	✓
<b>China GB certificate</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

Classifications

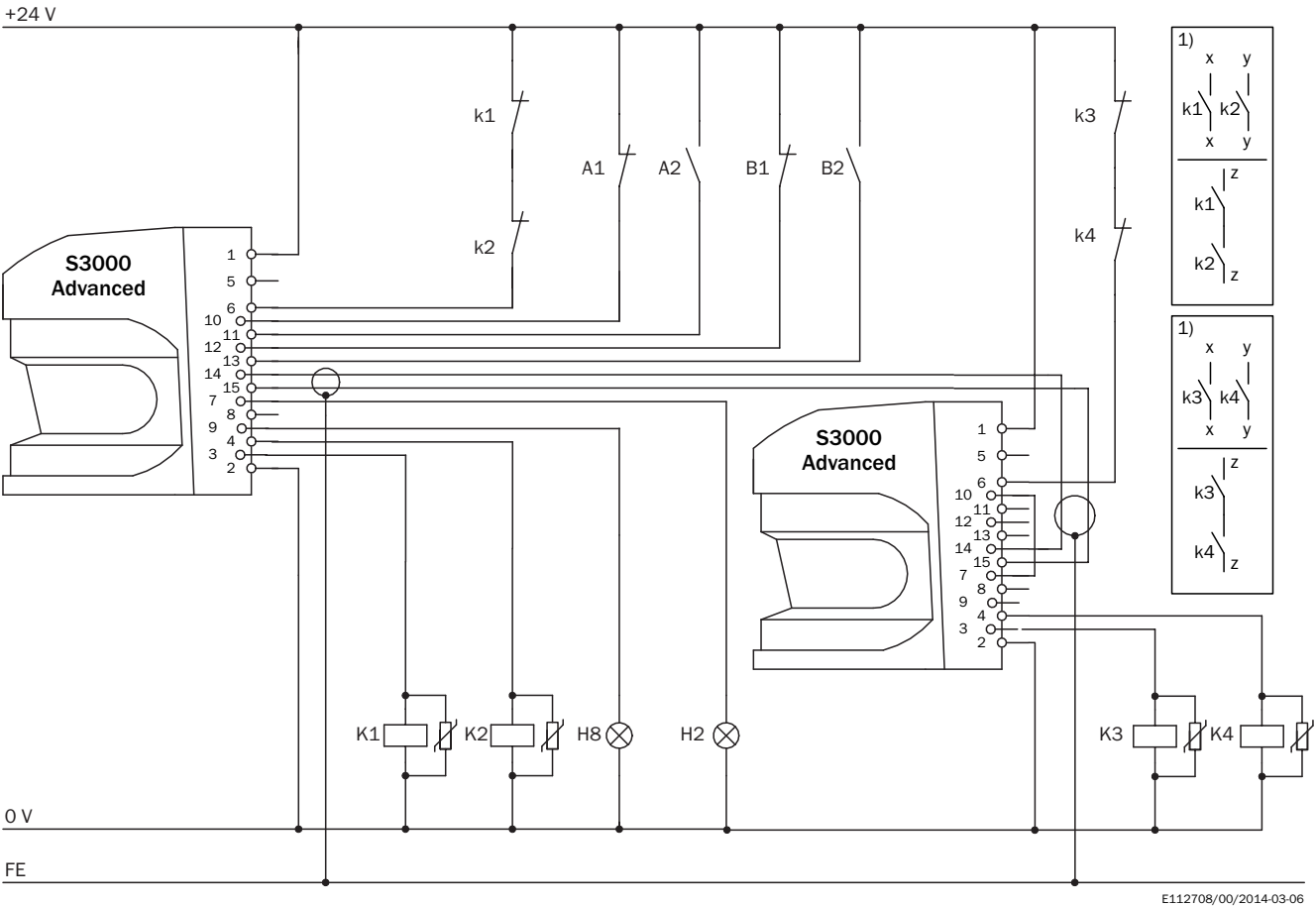
<b>ECLASS 5.0</b>	27272705
<b>ECLASS 5.1.4</b>	27272705
<b>ECLASS 6.0</b>	27272705
<b>ECLASS 6.2</b>	27272705
<b>ECLASS 7.0</b>	27272705
<b>ECLASS 8.0</b>	27272705
<b>ECLASS 8.1</b>	27272705
<b>ECLASS 9.0</b>	27272705
<b>ECLASS 10.0</b>	27272705
<b>ECLASS 11.0</b>	27272705
<b>ECLASS 12.0</b>	27272705
<b>ETIM 5.0</b>	EC002550
<b>ETIM 6.0</b>	EC002550
<b>ETIM 7.0</b>	EC002550
<b>ETIM 8.0</b>	EC002550
<b>UNSPSC 16.0901</b>	39121528

## Dimensional drawing



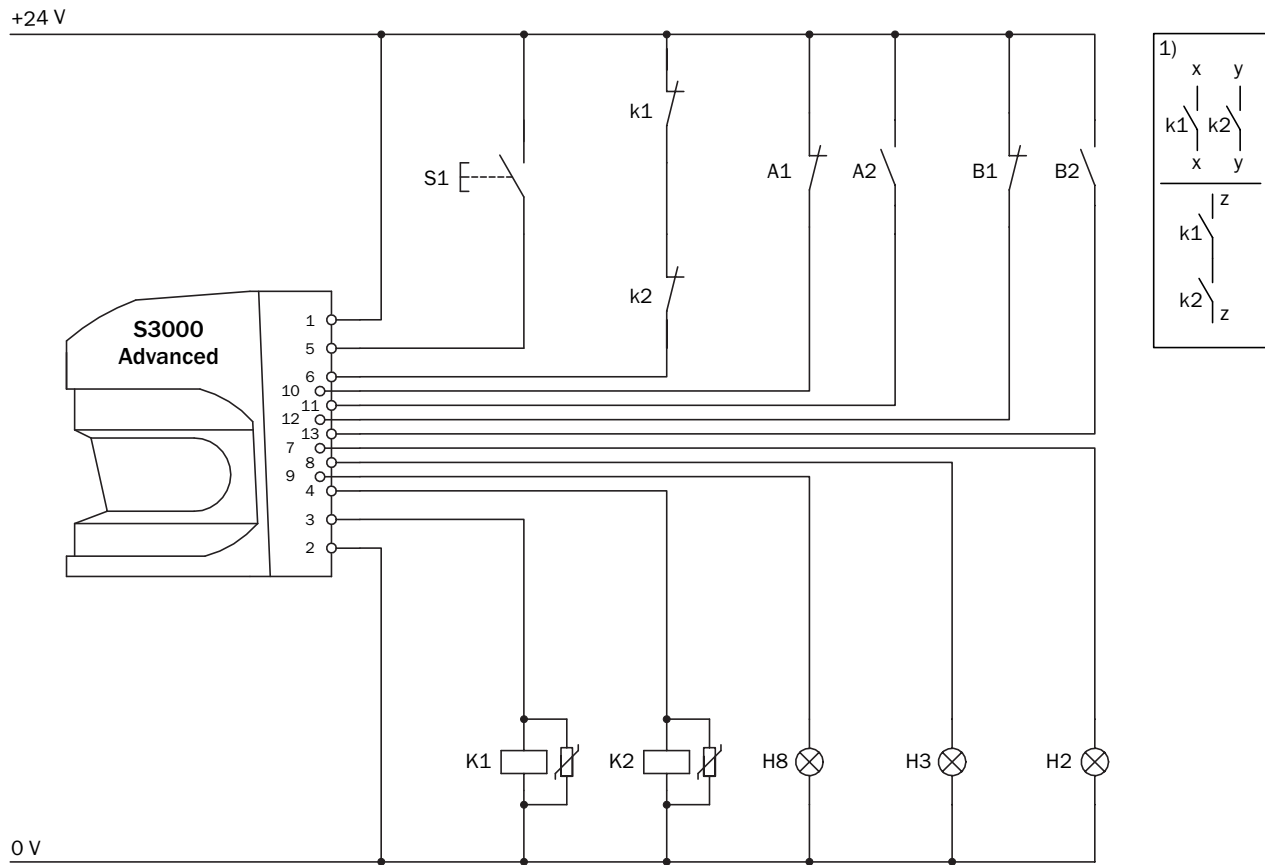
Dimensions in mm (inch)

Connection diagram



E112708/00/2014-03-06

## Connection diagram







E112707/00/2014-03-06

### Recommended accessories

Other models and accessories → [www.sick.com/S3000\\_Advanced](http://www.sick.com/S3000_Advanced)

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Visor for heavy duty mounting kit (2080350)</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, painted (RAL 1021)</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	Heavy duty sight	2083733
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket, heavy-duty version, with protection cover, for floor mounting, adjustable longitudinal and lateral axes via alignment plate, height adjustment possible. Tilt angle <math>\pm 5^\circ</math>. Additional mounting brackets are not required.</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, painted (RAL 1021)</li> <li><b>Color:</b> RAL 1021 (yellow)</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	Heavy-duty mounting kit	2080350
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for direct mounting, from the rear, on wall or machine, not adjustable</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	Mounting kit 1	2015623
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for rear mounting on wall or machine, adjustable longitudinal and lateral axes, only in conjunction with mounting kit 1 (2015623)</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	Mounting kit 2	2015624
	<ul style="list-style-type: none"> <li><b>Description:</b> 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)</li> <li><b>Material:</b> Aluminum</li> <li><b>Details:</b> Aluminum</li> <li><b>Packing unit:</b> 1 piece</li> </ul>	Mounting kit 3	2015625
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, USB-A, straight</li> <li><b>Cable:</b> 10 m, 4-wire, PVC</li> <li><b>Description:</b> Unshielded</li> </ul>	DSL-8U04G10M025KM:	6034575
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M8, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, USB-A, straight</li> <li><b>Cable:</b> 2 m, 4-wire, PVC</li> <li><b>Description:</b> Unshielded</li> </ul>	DSL-8U04G02M025KM:	6034574
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Flying leads</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Items supplied:</b> By the meter</li> <li><b>Cable:</b> 2-wire, twisted pair, 120 Ohm, PVC</li> <li><b>Description:</b> Shielded</li> <li><b>Note:</b> Fitting for EFI connections</li> </ul>	EFI connecting cable	6029448
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Flying leads</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Items supplied:</b> By the meter</li> <li><b>Cable:</b> 13-wire, AWG20, PVC</li> <li><b>Description:</b> Unshielded</li> </ul>	Connecting cable	6025729
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Flying leads</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Items supplied:</b> By the meter</li> <li><b>Cable:</b> 17-wire, AWG20, PVC</li> <li><b>Description:</b> Unshielded</li> </ul>	Connecting cable	6025730



	Brief description	Type	part no.
system plugs and extension modules			
	<ul style="list-style-type: none"> <li>• <b>Description:</b> Without cable, For S3000 Standard, Advanced, Remote, Professional and ExpertNot for use of incremental encoders, integrated configuration storage</li> </ul>	SX0A-A0000B	2023797
	<ul style="list-style-type: none"> <li>• <b>Cable:</b> 5 m, 13-wire, PVC</li> <li>• <b>Description:</b> Pre-assembled, unshielded, For S3000 AdvancedNot for use of incremental encoders, integrated configuration storage</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>	SX0A-B1305B	2027172
	<ul style="list-style-type: none"> <li>• <b>Cable:</b> 10 m, 13-wire, PVC</li> <li>• <b>Description:</b> Pre-assembled, unshielded, For S3000 AdvancedNot for use of incremental encoders, integrated configuration storage</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>	SX0A-B1310B	2027173
	<ul style="list-style-type: none"> <li>• <b>Cable:</b> 20 m, 13-wire, PVC</li> <li>• <b>Description:</b> Pre-assembled, unshielded, For S3000 AdvancedNot for use of incremental encoders, integrated configuration storage</li> <li>• <b>Connection systems:</b> Flying leads</li> </ul>	SX0A-B1320B	2027815

## 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](http://www.sick.com)