



# SG2-AAA00011CB0000

scanGrid2

SAFETY MULTIBEAM SCANNERS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
SG2-AAA00011CB0000	1109414

Other models and accessories → [www.sick.com/scanGrid2](http://www.sick.com/scanGrid2)



### Detailed technical data

#### Features

<b>Protective field range</b>	1.1 m (At a resolution of 70 mm)
<b>Warning field range</b>	4 m (At a resolution of 70 mm and a remission of 80%)
<b>Number of simultaneously monitored fields</b>	≤ 2 <sup>1)</sup>
<b>Number of fields</b>	16
<b>Number of monitoring cases</b>	8
<b>Scanning angle</b>	150°
<b>Resolution (can be configured)</b>	50 mm, 70 mm, 150 mm, 200 mm
<b>Angular resolution</b>	6°
<b>Response time</b>	≥ 63 ms
<b>Number of multiple samplings</b>	1 ... 4
<b>Protective field supplement</b>	100 mm
<b>Items supplied</b>	Safe multibeam scanner Safety instruction Mounting instructions Operating instructions for download

<sup>1)</sup> Protective and warning field.

#### Safety-related parameters

<b>Type</b>	Type 2 (IEC 61496-3)
<b>Safety integrity level</b>	SIL 1 (IEC 61508)
<b>Category</b>	Category 2 (ISO 13849-1)
<b>Performance level</b>	PL c (ISO 13849-1)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	1.3 × 10 <sup>-6</sup>
<b>T<sub>M</sub> (mission time)</b>	20 years (ISO 13849-1)
<b>Safe state in the event of a fault</b>	The state of the safety output transmitted via CANopen Safety is OFF and the transmitted statuses of the protective fields are "Interrupted". No safety-related data are transmitted via CANopen Safety.

#### Functions

<b>Restart delay</b>	✓
<b>Multiple sampling</b>	✓

<b>Monitoring case switching</b>	✓
<b>Switch-on delay for monitoring case switching</b>	✓
<b>Simultaneous monitoring</b>	✓
<b>Static protective field switching</b>	✓
<b>Integrated configuration memory</b>	✓
<b>Measured data output</b>	✓, via CANopen

## Interfaces

<b>Connection type</b>	Male connector, M12, 5-pin, A-coded
<b>Near Field Communication (NFC)</b>	✓
<b>Configuration method</b>	Via software
<b>Configuration and diagnostic software</b>	Safety Designer (software for configuring and diagnosing safety solutions from SICK AG) Safety Assistant (app for transferring configurations and diagnosing safety solutions from SICK AG)
<b>Configuration and diagnostics interface</b>	USB 2.0 type C (Safety Designer) NFC (Safety Assistant app)
<b>Fieldbus, industrial network</b>	CANopen
Protocol	CiA 301
Object types	PDO - Process Data Object SDO - Service Data Object
Safety protocol	CiA 304
Safety object types	SRDO - Safety Related Data Object
<b>Display elements</b>	LEDs

## Electrical data

<b>Protection class</b>	III (IEC 61140)
<b>Supply voltage <math>V_S</math></b>	24 V DC (8.4 V ... 30 V) <sup>1)</sup>
<b>Residual ripple</b>	≤ 10 % <sup>2)</sup>
<b>Power consumption</b>	≤ 3 W (DC)

<sup>1)</sup> SELV/PELV safety/protective extra-low voltage.

<sup>2)</sup> Within the limits of  $V_S$ .

## Mechanical data

<b>Dimensions (W x H x D)</b>	160 mm x 43 mm x 56 mm
<b>Weight</b>	170 g
<b>Housing material</b>	Durabio (front part, black) Polycarbonate (back part, colza yellow)
<b>Housing color</b>	RAL 9005 (black) RAL 1021 (yellow)

## Ambient data

<b>Enclosure rating</b>	IP65 (IEC 60529)
<b>Ambient light immunity</b>	≤ 10 klx
<b>Ambient operating temperature</b>	0 °C ... +50 °C
<b>Storage temperature</b>	-30 °C ... +70 °C
<b>Air humidity</b>	15 % ... 95 %, Non-condensing

<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)
Single shock	150 m/s <sup>2</sup> , 11 ms
Continuous shock	100 m/s <sup>2</sup> , 16 ms
<b>EMC</b>	IEC 61496-1, IEC 61000-6-2, IEC 61000-6-3

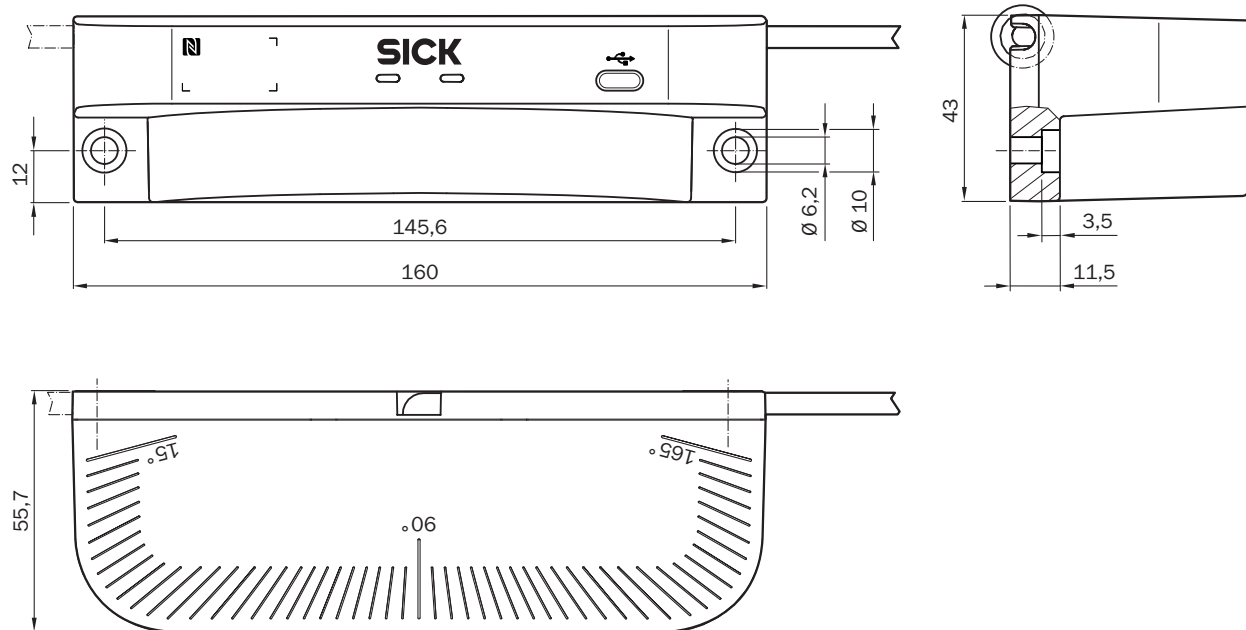
Other information

<b>Type of light</b>	Pulsed laser diode
<b>Wave length</b>	850 nm
<b>Detectable remission factor</b>	4% ... several 1,000%
<b>Laser class</b>	1

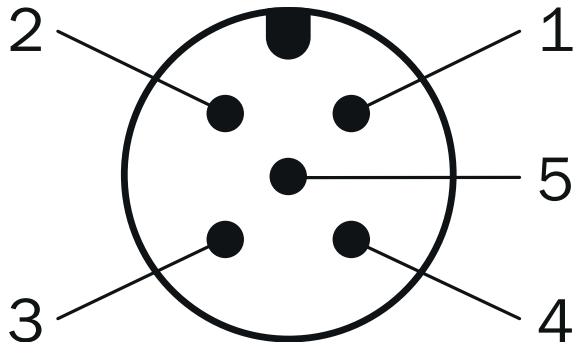
Classifications

<b>eCl@ss 5.0</b>	27272705
<b>eCl@ss 5.1.4</b>	27272705
<b>eCl@ss 6.0</b>	27272705
<b>eCl@ss 6.2</b>	27272705
<b>eCl@ss 7.0</b>	27272705
<b>eCl@ss 8.0</b>	27272705
<b>eCl@ss 8.1</b>	27272705
<b>eCl@ss 9.0</b>	27272705
<b>eCl@ss 10.0</b>	27272705
<b>eCl@ss 11.0</b>	27272705
<b>eCl@ss 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))



Pin assignment






Pin	Designation	Description
1	CAN shield	Shielding
2	+24 V DC	Supply voltage +24 V DC
3	0 V DC	Supply voltage 0 V DC
4	CAN high	CAN signal
5	CAN low	CAN signal

For details see operating instructions

### Recommended accessories

Other models and accessories → [www.sick.com/scanGrid2](http://www.sick.com/scanGrid2)

	Brief description	Type	Part no.
<b>Plug connectors and cables</b>			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Fieldbus, CANopen, DeviceNet™, PUR, halogen-free, shielded, 2 m	YF2A15-020C1BXLEAX	2106283
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Fieldbus, CANopen, DeviceNet™, PUR, halogen-free, shielded, 5 m	YF2A15-050C1BXLEAX	2106284
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Fieldbus, CANopen, DeviceNet™, PUR, halogen-free, shielded, 10 m	YF2A15-100C1BXLEAX	2106286
	Head A: male connector, USB-C, 4-pin, straight Head B: male connector, USB-A, 4-pin, straight Cable: PVC, 2 m	YMUSA4-020VG5MUSC4	2119989
<b>Terminal and alignment brackets</b>			
	Alignment bracket for scanGrid2, can be aligned ± 10°	BEF-1GHAHVKU1	2116913

## 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)