



DATA SHEET

S30A-4111DP

S3000 PROFINET IO Professional
Safety laser scanners

SICK

Sensor Intelligence



Illustration may differ

SAFETY LASER SCANNERS

S30A-4111DP

ORDERING INFORMATION

Type	part no.
S30A-4111DP	1045651

Further device versions and accessories at www.sick.com/S3000_PROFINET_IO_Professional



DETAILED TECHNICAL DATA

FEATURES

Usage	S3000 PROFINET IO does not have any local inputs or outputs and is only operated in a network with corresponding controller.
Model	Sensor without system plug
Application	Indoor
Protective field range	4 m
Warning field range	49 m (20 m at 20 % reflectivity)
Distance measuring range	49 m
Number of simultaneously monitored protective fields	2
Type of field set	Dual field sets
Number of field sets	8
Number of fields	16
Number of monitoring cases	16
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 ¹⁾
Protective field supplement	100 mm
Number of multiple samplings	2 ... 16, configurable
Delay of automatic reset	120 ms ... 4,920 ms, configurable

¹⁾ Depending on basic response time and multiple sampling.

SAFETY-RELATED PARAMETERS

Type	Type 3 (IEC 61496)
Safety integrity level	SIL 2 (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 x 10 ⁻⁸
Conformities	Conformance Class B
T _M (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	The safety-related data is logic 0.

FUNCTIONS

Restart interlock	✓
Multiple sampling	✓
Monitoring case switching	✓
Simultaneous monitoring	✓
Static protective field switching	✓
Contour as a reference	✓
Integrated configuration memory	✓
Measured data output	Via RS-422

INTERFACES

Connection type	Bus connection	Copper conductor (2 female connectors for RJ-45 push-pull plug)
	Supply connection	System plug with or without connecting cable
Configuration and diagnostics interface	RS-232	
	Transmission rate	9.6 kBaud, 19.2 kBaud, 38.4 kBaud
Fieldbus, industrial network	PROFINET PROFIsafe	
	Type of fieldbus integration	Integrated in the device
	Device properties	PROFINET IO device with 2-port real-time switch according to PROFINET specification V2.2
		PROFIsafe profile with 6-octet input and 6-octet output according to IEC 61784-3-3 V2.4
		Cycle time 4, 8, 16, 32 ms, etc.
	Switch properties	GSDML according to GSDML specification V2.25
		Filtering Data Base according to IEEE 802.1D
		6 prioritization levels for IEEE 802.1Q – Network prioritization
		64 KB SRAM memory for caching telegrams, managed in 768-byte segments
		Resource prioritization for network control and RTC2/3 frames
	Port properties	Telegram extension based on "Cut-through"
		Port status (Disabled, Blocking, Forwarding)
		Support for non-real-time and real-time data transfer
		Auto-negotiation
		Auto-crossover (MDIX)
		Auto-polarity
		100Base-TX
	Conformance	Conformance Class B
	Topology support	SNMP, MIB-2, LLDP according to IEEE 802.1AB
		MRP client support
	Diagnostics	Application-related manufacturer-specific channel diagnostics and channel diagnostics for the PROFIsafe profile, individually switchable
		Report system errors
		Cable diagnostics
		Neighborhood alerts
		Support for port statistics
	Interfaces	I&M support from I&M0 to I&M4
		TCP port 9000 and UDP port 30718
Functions that are not supported	RS-232	
	Multicast communication	
	Supervisor AR	
	MAC-pause mechanism in full duplex	
	Back-pressure in half duplex	
	Static learning	

	Broadcast Storm Control
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ELECTRONICS

Protection class	III (VDE 0106, EN 60950)
Supply voltage V _s	24 V DC (16.8 V DC ... 28.8 V DC)
Power consumption	0.8 A ¹⁾

¹⁾ At 24 V DC without output load.

MECHANICS

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

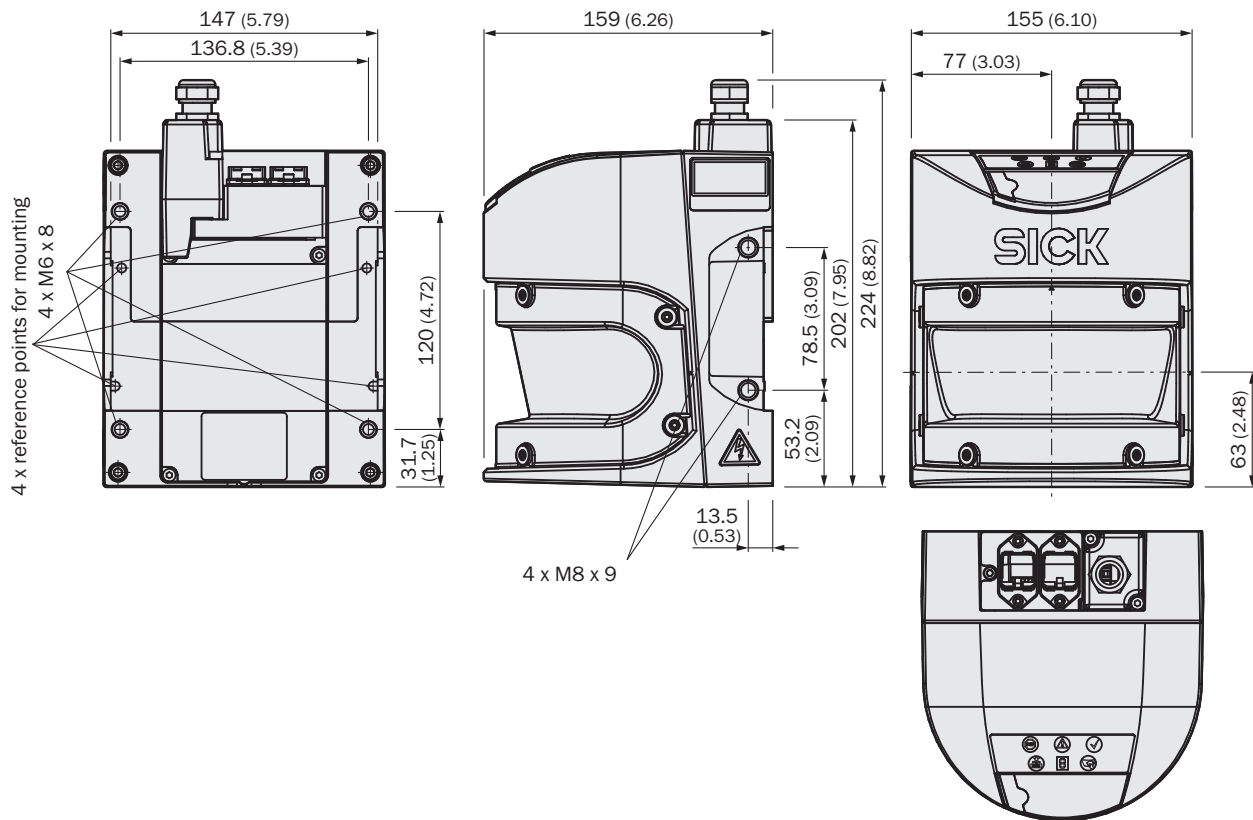
Enclosure rating	IP65 (EN 60529)
Ambient operating temperature	-10 °C ... +50 °C
Storage temperature	-25 °C ... +50 °C
Vibration resistance	IEC 60068-2-6, IEC 60068-2-64, IEC 60721-3-5, IEC TR 60721-4-5, IEC 61496-3
	Class 5M1 (IEC 60721-3-5)
Shock resistance	IEC 60068-2-27, IEC 60721-3-5, IEC TR 60721-4-5, 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)

CERTIFICATES

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

DIMENSIONAL DRAWING

Dimensions in mm (inch)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1045651



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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