DATASENSING
easing automation challenges

NEW!

Certified by PI PROFIBUS • PROFINET

WEBSITE

Enhanced Laser Sentinel EVO

SAFETY LASER SCANNER FOR PROFINET AND PROFISAFE



Safety laser scanner based on Time of Flight measurement with command integration in Profinet/Profisafe fieldbus

- Type 3 / PL d / SIL 2
- Safety range : 5.5 m x 275°
- Profinet-Profisafe command integration
- Up to 8 simoultaneous controlled area
- Up to 70 switchable zone sets
- Easy and fast configuration by DLSentinel Gui, including off line emulator
- Enhanced series complete set of functions

CODE DESCRIPTION

SLS - M 5 - PP - BA

series	**SLS**	Enhanced laser Sentinel
model	**M**	Master, 10 zones sets
max safety range	**5**	5.5 m
Command integration	**PP**	Profinet - Profisafe
enhanced version	**BA**	Connector module on back
	BO	Connector module on bottom

TECHNICAL SPECIFICATIONS

	SLS-M5-PP-B*
FEATURES AND PERFORMANCES	
Detection capability	30/40/50/70/150 mm selectable
Angular resolution min	0.1 °
Safety range with detection capability = 30 mm	0.05 ... 2.5 m
Safety range with detection capability = 40 mm	0.05 ... 3m
Safety range with detection capability = 50 mm	0.05 ... 4 m
Safety range with detection capability = 70 mm	0.05 ... 5.5 m
Safety range with detection capability = 150 mm	0.05 ... 5.5 m
Max warning zone range	40 m
Detectable target remission	1,8% .. "1000%"
Max simultaneous safety zones	8
N°of simultaneous warning zone (max)	7
N°of zone set (max)	70
N°of reference point set (max)	70
Response time	94 ... 1750 ms (Fast Mode) 105 ms - 2065 ms (Standard Mode)
Tolerance zone	100 mm
Supplement for retroreflectors on scan plane in front of a safety zone	200 mm
ELECTRICAL DATA	
Power Supply	16.8 ... 28.8 Vdc
Power consumption	8.5 W @24 V, no digital I/O connected
VDE class protection	III (EN/IEC 61140)
CONFIGURABLE INPUT/ OUTPUT	
Configurable input max	5
COMMUNICATION	
Network Interface	10/100 Mbit/s Ethernet (3X)
PROFINET specification	V2.43
PROFIsafe specification	V2.6.1 & 2.4 (w/o iPar) / Conformance class B
GSDML specification	V2.43
CONNECTORS	
Power and I/0	M12 male type A connector - 8 poles
Ethernet to GUI / Data transmission	M12 male type D connector - 4 poles
Profinet / Profisafe	M12 male type D connector - 4 poles (2X)
HMI/UI	
Configuration and monitoring interfaces	DL Sentinel 4.0.x
LED indicators	safe/normal operation - Profinet
MECHANICAL DATA	
Dimensions	102 x 113 x 152 mm
Material	Metal - Aluminium / PMMA
Housing material	Painted alumininium / PC
Optic window material	PMMA
ENVIRONMENTAL DATA	
Humidity	95 non-condensing
Mechanical protection	IP 65 (EN 60529)
Operating Temperature	-10 ... 50 °C
Storage temperature max.	-20 ... 70 °C
Vibrations	According to IEC 61496-1 (4.3.3.1;4.3.3.2;5.4.4.1) Class 3M7 (Stationary Use) Class 5M1 (Ground vehicle Installation)
Shocks	According to IEC 61496-1 (4.3.3.1;4.3.3.3;5.4.4.2) IEC 61496-3 (5.4.4); IEC 60068-2-75 Class 3M7 (Stationary Use) Class 5M1 (Ground vehicle Installation)

TECHNICAL SPECIFICATIONS

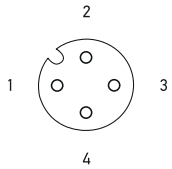
	SLS-M5-PP-B*
OPTICAL DATA	
Laser wavelength	905 nm
Laser Pulse duration	3 ns
Laser class	1 (EN 60825-1:2014)
SAFETY PARAMETERS	
Type	3
SIL	SIL 2 (IEC 61508)
Cat.	3 (EN ISO 13849-1)
PFHd	2.24 x 10-8
MTTFd	61 years
Mission Time (TM)	20 years (EN ISO 13849-1)
FUNCTIONS	
Generic Alarm	Available
Clean Window Alarm	Available
Muting enable	Availabe
Override	Available
Dust Filtering	Available
EDM (External Device Monitoring)	Not Available
Partial / dynamic Muting for first OSSD	Available
Pre-alarm (warning)	Available
Advanced data transfer protocol	Available
Reset (restart cycle)	Available
Shut off (mute)	Available
Manual / automatic restart	Available
Reference points	Available
Encoder input	Not Available

AVAILABLE MODELS

Description	Model
Profinet / Profisafe command integration, long range back connected	**SLS-M5-PP-BA** (958000012)
Profinet / Profisafe command integration, long range bottom connected	**SLS-M5-PP-BO** (958000013)

CONNECTIONS

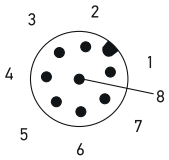
SLS-M5-PP-B*



FEMALE M12
4 pins Ethernet,
F, Key D

1	Transmit data+	
2	Receive data+	
3	Transmit data-	
4	Receive data-	

SLS-M5-PP-B*

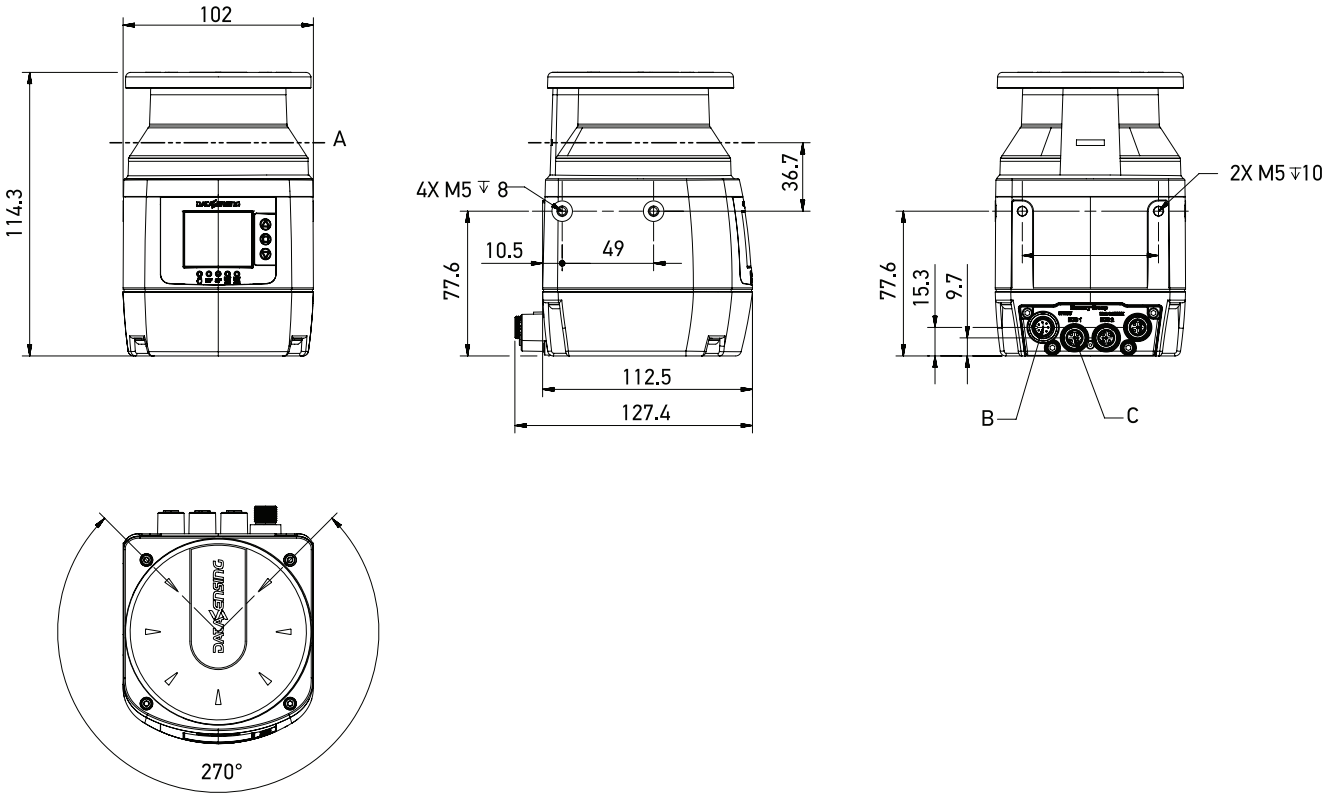


MALE
M12
8 pins Safety

1	White	24 Vdc
2	Brown	0 V
3	Green	SELECTABLE BY GUI
4	Yellow	SELECTABLE BY GUI
5	Grey	SELECTABLE BY GUI
6	Pink	SELECTABLE BY GUI
7	Blue	SELECTABLE BY GUI
8	Red	Functional earth

MECHANICAL DRAWINGS

SLS-M5-PP-BA

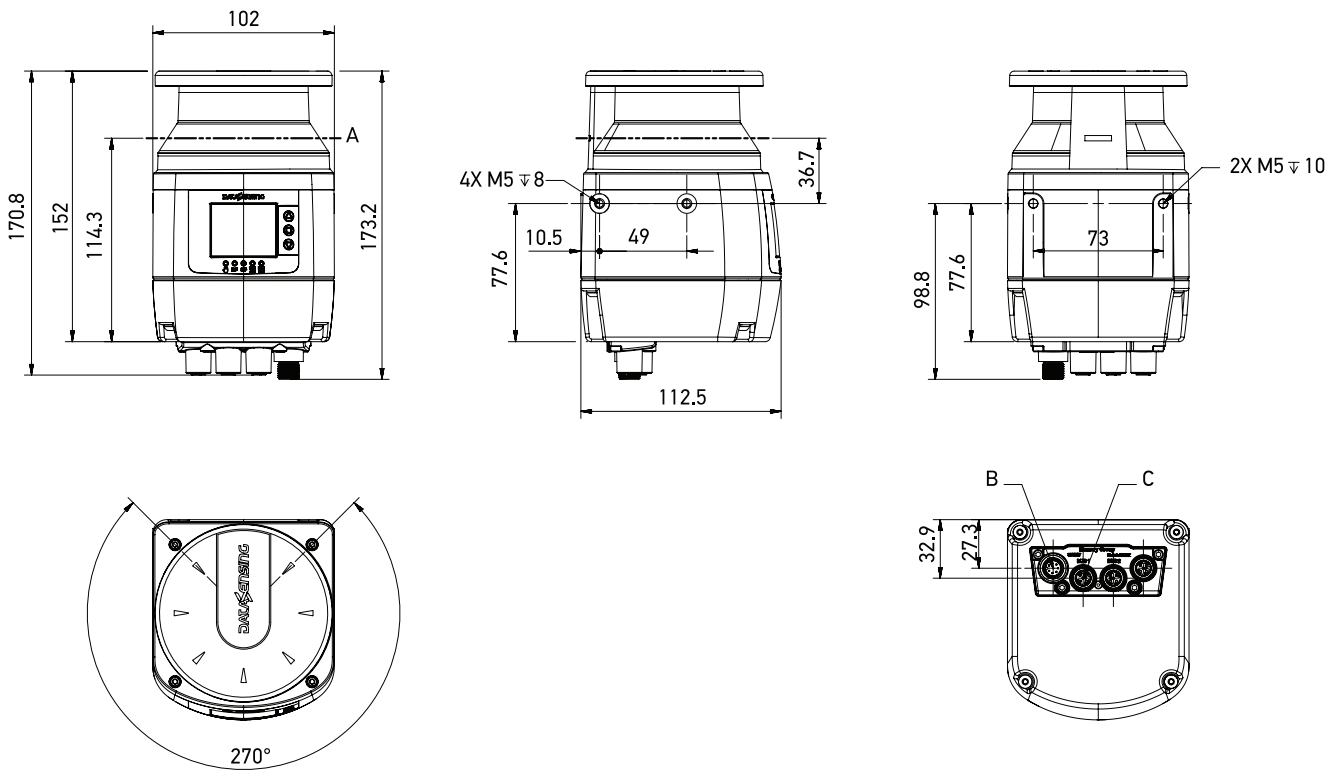


(mm)

Model	A	B	C
SLS-M5-PP-BA	Laser plane	M12 x 1 Male A-coded 8-poles	3X M12 x 1 Female D-Coded 5-poles

MECHANICAL DRAWINGS

SLS-M5-PP-B0



(mm)

Model	A	B	C
SLS-M5-PP-B0	Laser plane	M12 x 1 Male A-coded 8-poles	3X M12 x 1 Female D-Coded 5-poles

ACCESSORIES TO BE ORDERED SEPARATELY

	Model	Description	Article code
Cables	SLS-CABLE-R-5	M12-8p M to M12-8p M cable with 5 m length for master-remote and remote-remote connection	95ASE2890
	SLS-CABLE-R-10	M12-8p M to M12-8p M cable with 10 m length for master-remote and remote-remote connection	95ASE2900
	SLS-CABLE-R-20	M12-8p M to M12-8p M cable with 20 m length for master-remote and remote-remote connection	95ASE2910
	CS-A1-06-U-03	Cable M12 8 poles axial female unshielded 3m UL 2464	95ASE1220
	CS-A1-06-U-05	Cable M12 8 poles axial female unshielded 5m UL 2464	95ASE1230
	CS-A1-06-U-10	Cable M12 8 poles axial female unshielded 10m UL 2464	95ASE1240
	CS-A1-06-U-15	Cable M12 8 poles axial female unshielded 15m UL 2464	95ASE1250
	CS-A1-06-U-25	Cable M12 8 poles axial female unshielded 25m UL 2464	95ASE1260
	CAB-ETH-M01	M12-RJ45 IP67 ethernet cable 1m	93A051346
	CAB-ETH-M03	M12-RJ45 IP67 ethernet cable 3m	93A051347
	CAB-ETH-M05	M12-RJ45 IP67 ethernet cable 5m	93A051348
	CAB-ETH-M10	M12-RJ45 IP67 ethernet cable 10m	93A051391
Memory groups	SLS-MG-FBUS	Memory group fieldbus model	95ASE0105
Mounting brackets	SLS-BRACKET-A	SLS-BRACKET-A	95ASE2920
	SLS-BRACKET-B	SLS-BRACKET-B	95ASE2930
	SLS-BRACKET-C	SLS-BRACKET-C	95ASE2940
Protective windows	SLS-WINDOW	SLS-WINDOW	95ASE2971
Window cleaners	SLS-CLOTH	SLS-CLOTH	95ASE3000

The company endeavors to continuously improve and renew its products; for this reason the technical data and contents of this catalogue may undergo variations without prior notice. For correct installation and use, the company can guarantee only the data indicated in the instruction manual supplied with the products. Product and Company names and logos referenced may be either trademarks or registered trademarks of their respective companies. We reserve the right to make modifications and improvements.

Revision number: 1 - Revision date: 2025-03-17