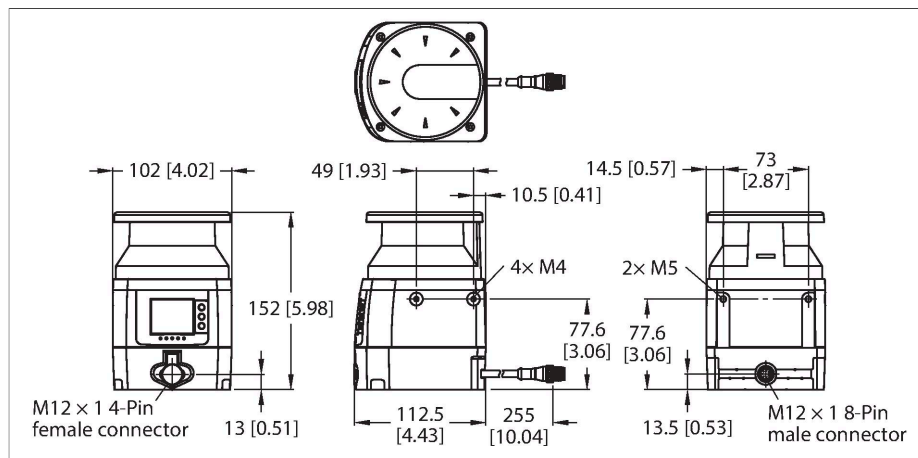


# SX5-B

## Safety Technology – Laser Scanner



### Technical data

Type	SX5-B
ID no.	3806006
Function	Laser scanner
Light type	IR
Wavelength	905 nm
Laser class	▲ 1
Light spot diameter	20 mm
Optical resolution	40 mm
Range	0.1...40
Operating voltage	19.2...30 VDC
Residual ripple	< 5 % U <sub>ss</sub>
DC rated operational current	≤ 200 mA
Current consumption non-actuated	≤ 300 mA
Actuated current consumption	≥ 1100 mA
Max. current safe output	250 mA
Current output	250 mA
Number of safe semiconductor outputs	2
Protection class	III
Readiness delay	≤ 40 s
Response time typical	< 62 ms
Blanking function	yes
Max. DC switching capacity	24 W
Design	Rectangular
Dimensions	112.5 x 102 x 152 mm
Housing material	Aluminium, AL, Yellow
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M12 × 1, 0.25 m



### Features

- Parametrized via software
- Protective field up to 5.5 m
- Warning field up to 40 m
- Up to 6 zones can be defined
- Angular range max. 275°
- Angular resolution 0.1°
- Optical resolution: 40 mm, 70 mm
- Laser class 1 acc. to EN 60825-1
- Especially resistant to shock and vibrations
- Protection class IP65
- PL d in accordance with EN ISO 13849-1
- Category 3 in accordance with EN ISO 13849-1
- SIL 2 to IEC 61508

### Functional principle

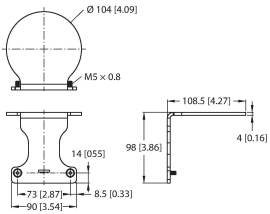
The SX5-B safety laser scanner is a contactless protective device. The invisible laser beam generates a two-dimensional protective field that must be crossed to access danger zones within a plant. This protective field allows any dangerous machine movements to be stopped before a person enters the danger zone. The beam is emitted at intervals in short pulses and is reflected off objects within the protective field. The laser scanner calculates the distance to the object by measuring the time interval between sending the pulse and receiving it back again (in line with the time-of-flight principle). The protective field is scanned using a mirror that rotates to deflect the light pulses across the 275° area around the laser scanner at a constant speed. This method allows all opaque objects of a specific size to be detected within the protective field. Two areas within the detection range of the scanner can be monitored simultaneously: the protective field (of up to 5.5 m) for entering a danger zone, and the warning field (of up to 40 m) for approaching a danger zone. The software provided allows users to customize the configuration of the protective field and warning field.

Technical data

Ambient temperature	0...+50 °C
Storage temperature	-20...+70 °C
Relative humidity	0...95 %
Protection class	IP65
Special features	Laser
Switching state	LED, Green
Error indication	LED, red
Excess gain indication	LED, yellow
Tests/approvals	
Vibration resistance	In accordance with IEC 61496-1; IEC 60068-2-6 (10 to 55 Hz, scan speed 1 octave/min, range: 0.35 mm ± 0.05 mm)
Shock test	In accordance with IEC 61496-1; IEC 60068-2-2-29 (10 g; pulse duration: 16 ms; number of shocks: 1000 ± 10 along the XYZ axis)

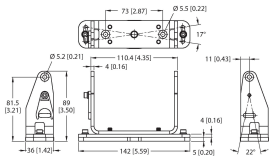
Accessories

SXA-MBK-23806732



Mounting bracket, protective housing

SXA-MBK-13806734

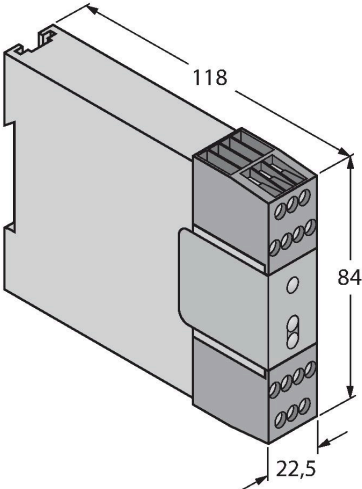
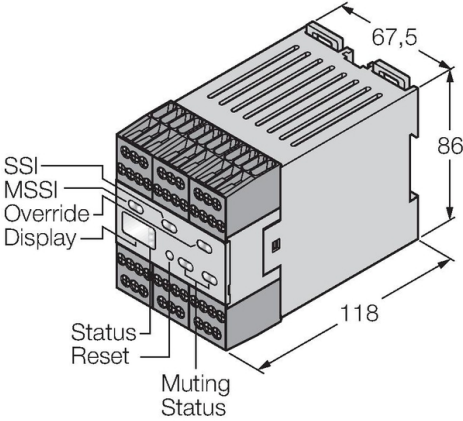


Mounting bracket, adjustable tilt and roll

Accessories

Dimension drawing	Type	ID no.	
Keine Maßzeichnung vorhanden! No drawing available!	STP-M12D-415	3806415	Ethernet cable, M12 to RJ45, 4-pin, 4.57 m long
	SXA-815D	3806308	M12 connection cable, 8-pin, female connector, 4.57 m long
Keine Maßzeichnung vorhanden! No drawing available!	AG4-CPD15-5	3082142	Connection cable, 5 m, SUB-D 15-pin on open cable end
	AG4-CPD15-25	3082144	Connection cable, 25 m, SUB-D 15-pin on open cable end
	AG4-PCD9-3	3082147	Extension cable, 3 m SUB-D, 9-pin
	AG4-PCD9USB-1	3010717	Extension cable, 1 m, male SUB-D 9-pin on male USB type A

Accessories

Dimension drawing	Type	ID no.	
	UM-FA-11A	3081228	Safety module, 3 NC outputs, 1 NO auxiliary output, 7 A max., 25 ms response time
	MMD-TA-12B	3075091	Muting module, 2 PNP OSSD outputs, 1 PNP auxiliary output, 0.5 A output current, 10 ms response time