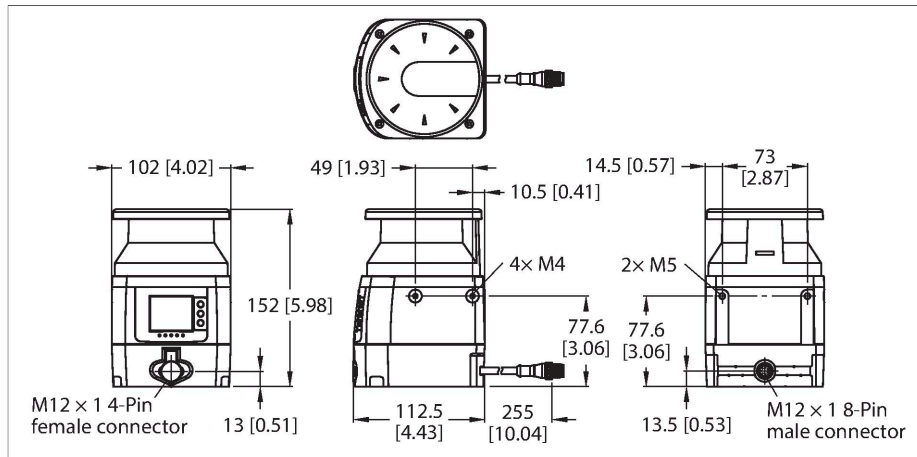


SX5-M70

Safety Laser Scanners – Master

Scan Angle 275° | Protection Field 5.5 m | 70 Zones



Technical data

Type	SX5-M70
ID	3807768
Function	Laser scanner
Light type	IR
Wavelength	905 nm
Laser class	▲ 1
Light spot diameter	20 mm
Optical resolution	30 mm
Range	100...40000 mm
Operating voltage	19.2...30 VDC
Residual ripple	< 5 % U _{ss}
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	6
Insulation 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



Features

- Parameterized via software
- Protective field up to 5.5 m
- Warning field up to 40 m
- Up to 70 zones can be defined
- Angular range max. 275°
- Angular resolution 0.1°
- Optical resolution: 30 mm, 40 mm, 50 mm, 70 mm, 150 mm
- Laser class 1 acc. to EN 60825-1
- Especially resistant to shock and vibrations
- Connection of up to three SX5-R remote units possible
- 3 x 2 OSSD outputs
- 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

Technical data

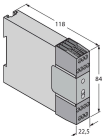
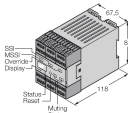
Electrical connection	Cable with connector, M12 × 1, 0.25 m
Ambient temperature	0...+50 °C
Storage temperature	-20...+70 °C
Relative humidity	95 %
Protection class	IP65
Special features	Laser
Switching state	LED, Green
Error indication	LED, red
Excess gain indication	LED, yellow
Tests/approvals	
Vibration 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)

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.

Accessories

Dimension drawing	Type	ID	
	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	
	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