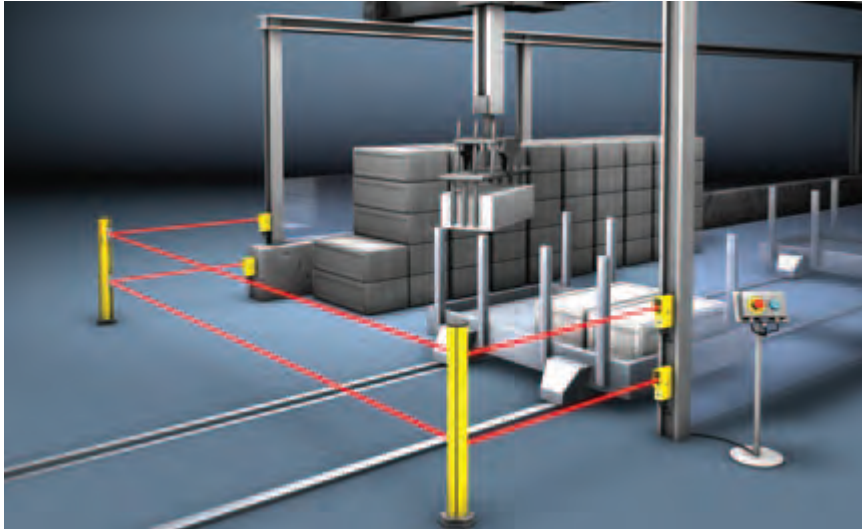
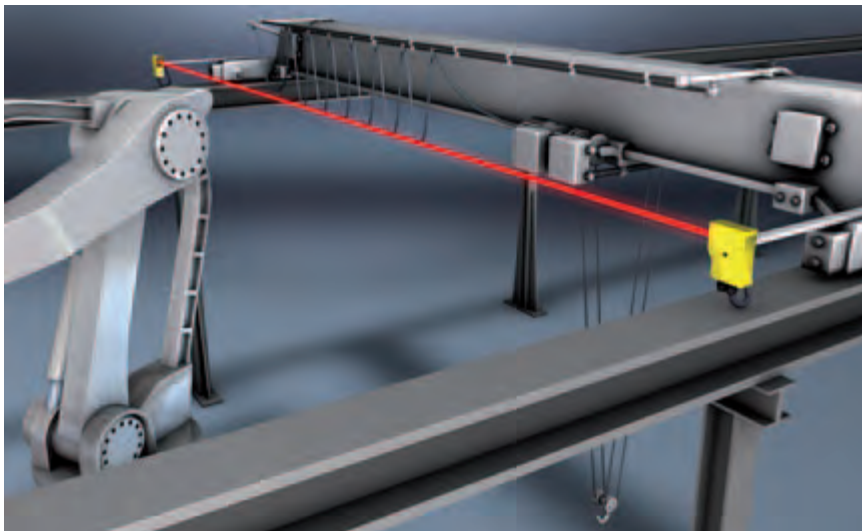


SINGLE LIGHT BEAM SAFETY DEVICES

SLS 78/R



A typical application of the SLS 78/R is the access guarding of danger zones in storage system technology



SLS78/R Single Light Beam Safety Device enables reliable lifting protection with cranes

If a Single Light Beam Safety Device of type 4 in accordance with IEC/EN 61496 is required for use in difficult industrial situations for the large range area from 0 to 60 m, the SLS 78/R is the right choice with numerous applications. Its functionality can be extended tailor-made with the intelligent MSI safety modules. This installation-friendly Safety Light Beam Device consists of transmitter and receiver and is especially suitable for access guarding danger zones. With Deflecting Mirrors multiple-side guarding can also be cost-effectively implemented. The number of beams and their distances depend on the risk assessment and the specifications of the individual machine.

Typical areas of application

- Conveyor and storage systems
- Processing machinery in metals industry
- Setting machines in the glass and ceramics industry
- Plastics and rubber industry
- Packaging, wood processing and construction material machinery

Important technical data, overview

Type in accordance with IEC/EN 61496	Type 4
Performance Level (PL) in accordance with EN ISO 13849-1	PL e
Category in accordance with EN ISO 13849	4
Operating range	0...60 m
Response time	20 ms
Operating voltage, U _B	24 V DC ± 15 %
Operating temperature	-25°C to +60°C
Dimensions (WxHxD)	38 mm x 127 mm x 99 mm
Housing	Metal
Safety-related switching outputs (OSSDs)	2 relay outputs
Connection system	Cable gland (PG11) Spring terminals Plug connection, DIN 43651

Functions

Operating mode, "Protective mode without start/restart interlock"
Ambient light suppression
Integrated optics heating

Function extension

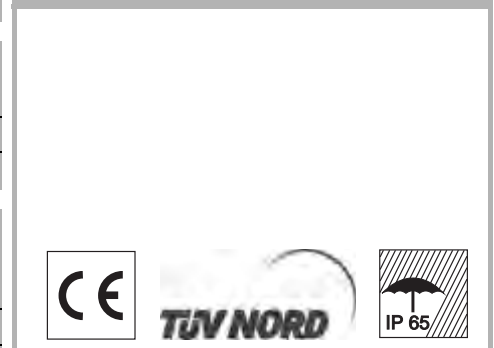
With Safety Relays	Relay output	RES	EDM	Muting	Further details
MSI-SR4	●	●	●		p. 436
MSI-s	●	●	●		p. 450
MSI-sx	●	●	●		p. 450
MSI-m	●	●	●	●	p. 464
MSI-mx	●	●	●	●	p. 464

Special features

- Range from 0 to 60 m
- Integrated dirt controls via LED displays
- Integrated optics heating enables use under extreme environmental conditions
- Operating temperature -25°C to +60°C
- High mechanical and chemical resistance



Features



Further information

Further information	Page
● Ordering information	274
● Electrical connection	274
● Technical data	275
● Dimensional drawings	276
● Dimensional drawings: Accessories	277
● Accessories ordering information	277

Machine Safety

Machine Safety Services

Safety Engineering Software

Safety Laser Scanners

Safety Light Curtains

Multiple Light Beam Safety Devices

Safety Sensor Sets

Single Light Beam Safety Devices

AS-Interface Safety at Work

PROFIsafe Sensors

SINGLE LIGHT BEAM SAFETY DEVICES

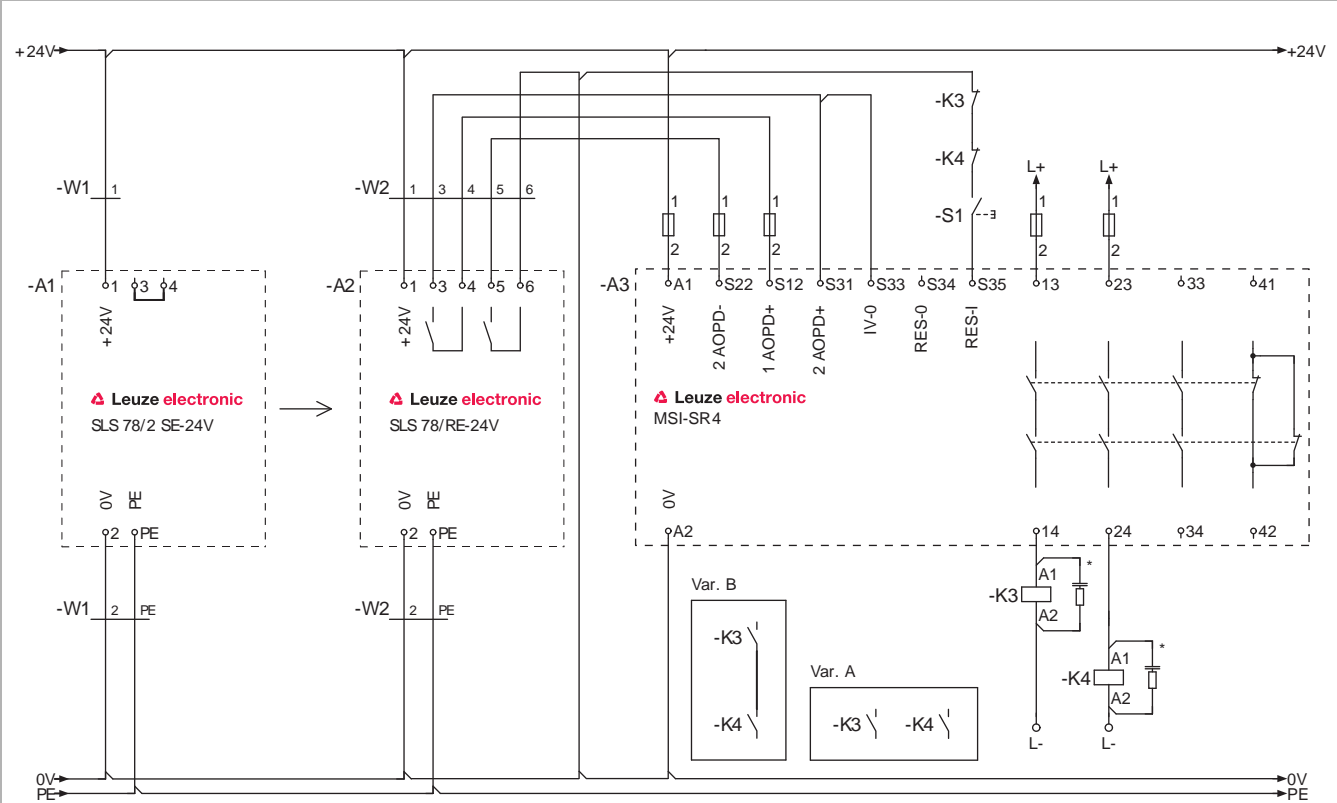
Ordering information

SLS 78/R, consisting of transmitter and receiver

Functions: Automatic start/restart

Art. no.	Article	Description	Connection system
50021208	SLS 78/2 SE-24 V	Transmitter	Cable gland
50021209	SLS 78/ RE-24V	Receiver	Cable gland

Electrical connection



*) Spark extinction circuit, supply suitable spark extinction

SLS 78/R in combination with a Safety Relay, MSI-SR4

! Please observe the operating instructions of the components!

Technical data

General system data		
Type in accordance with IEC/EN 61496	Type 4	
Performance Level (PL) in accordance with EN ISO 13849-1	PL e	
Probability of a failure to danger per hour (PFH _d) in accordance with the average number of annual nop activations (for the calculation formula, see EN ISO 13849-1:2008, chapter C.4.2 and C.4.3)	nop = 4,800	3.4 x 10 ⁻⁸ 1/h
	nop = 28,800	4.9 x 10 ⁻⁸ 1/h
	nop = 86,400	9.9 x 10 ⁻⁸ 1/h
Service life (T _M) in accordance with EN ISO 13849-1	20 years	
Number of cycles until 10 % of the components have a failure to danger (B _{10d})	With DC1 (ohmic load)	400,000
	With AC1 (ohmic load)	400,000
	With DC13 (inductive load)	400,000
	With AC15 (inductive load)	400,000
	Low load (20% nominal load)	20,000,000
Category in accordance with EN ISO 13849	4	
Operating range	0...60 m	
Response time	20 ms	
Operating voltage, U _B	24 V DC ± 15 %	
Connection cable length	Max. 100 m with 0.25 mm ²	
Safety class	I	
Protection rating	IP 65	
Ambient temperature, operation	-25...+60 °C	
Ambient temperature, storage	-25...+70 °C	
Relative humidity	95 %	
Dimensions (WxHxD)	38 mm x 127 mm x 99 mm	
Housing	Aluminum diecast	
Weight	580 g (transmitter), 600 g (receiver)	
Transmitter		
Transmitter diodes, class in accordance with EN 60825	1	
Light source	Infrared light	
Wavelength	880 nm	
Current consumption	100 mA	
Connection system	Cable gland (PG11) Spring terminals Plug connection, DIN 43651	

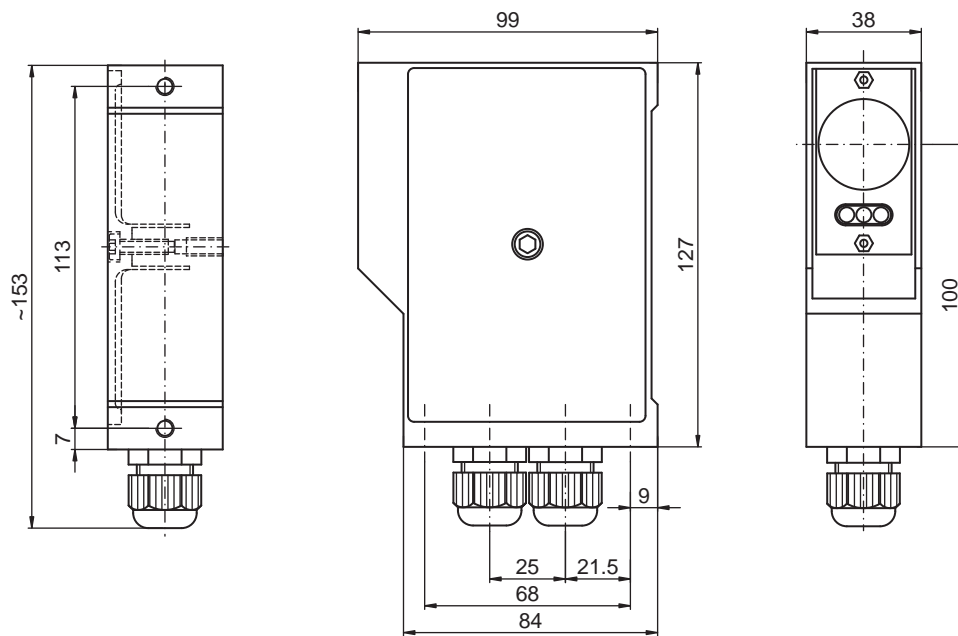
SINGLE LIGHT BEAM SAFETY DEVICES

Technical data

Receiver	
Current consumption	250 mA
Safety-related switching outputs (OSSDs)	2 relay outputs (NO)
Switching current	Max. 2 A, AC-1/DC-1
Switching voltage	Max. 250 V AC
Connection system	Cable gland (PG11) Spring terminals Switching connection DIN 43651

Please note the additional information in the SLS 78/R connecting and operating instructions at www.leuze.com/sls.

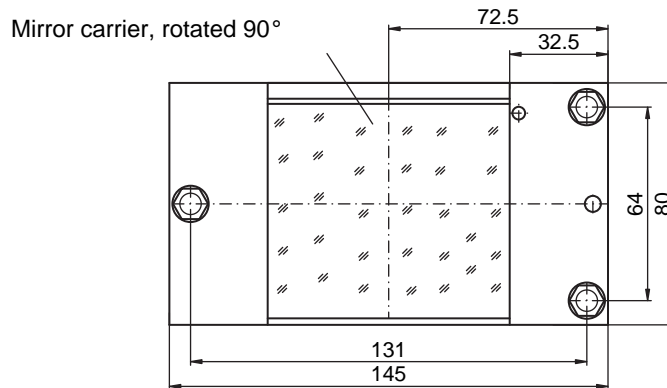
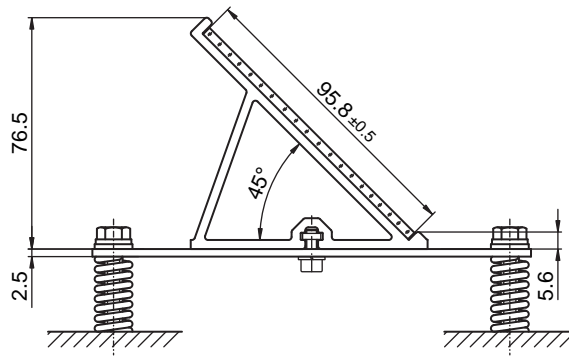
Dimensional drawings



SLS 78/R with cable gland, PG11

Dimensions in mm

US2 Deflecting Mirror complete with mounting panel, mirror carrier rotates



Accessories ordering information

Art. no.	Article	Description
Installation accessories		
50003374	BT 78	Mounting bracket BT 78-100
Laser Alignment Aids		
549000	LA-78	Laser Alignment Aid for frontal mounting
Connection system		
50021778	AS 78-01	Plug set for SLS 78 a. AMI42, DIN 43651, incl. cable socket
50021779	AS 78-02	Plug set for SLS 78, DIN 43651, incl. cable socket
See chapter Safety Relays and Interfaces		