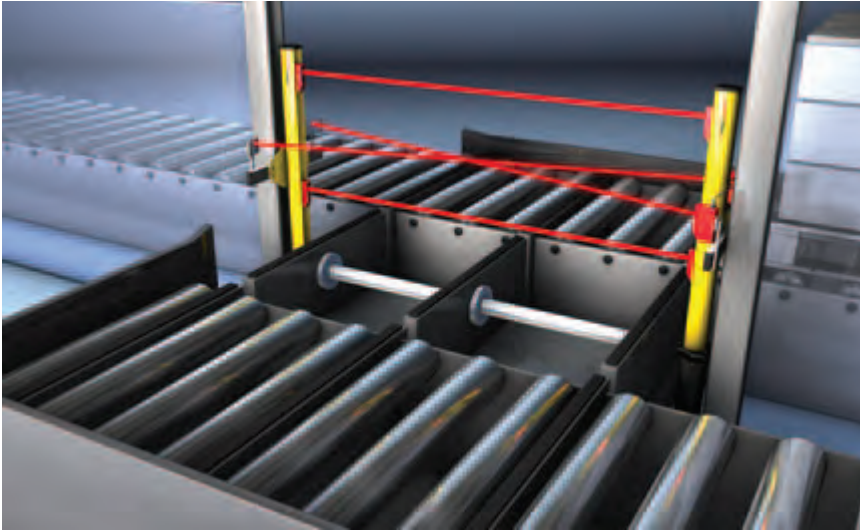


SINGLE LIGHT BEAM SAFETY DEVICES

SLS 96



Palettizer guarding with SLS 96 Single Light Beam Safety Devices



Foot area guarding on mobile racking and shelving

Single Light Beam Safety Devices that provide the most universal coverage possible for the most important requirements at point of operation and access guarding must combine the most diverse device features. The SLS 96 series was conceived to provide the design engineer with optimum integration and application in wide-ranging industrial use. The designer now has the choice between a robust metal housing with glass cover and a solid plastic housing, both with IP 67 protection rating. Furthermore they can also choose whether the connection is to be via M12 plug or via a terminal chamber. Red light and infrared light variants enable fault-free parallel operation of adjacent Light Beam Devices. The extensive range of accessories for this Light Beam Device rounds off the exceptional features of this series. Together with a Test Monitoring Unit such as TNT 35 or a configurable MSI Safety Relay, the SLS 96 forms a type 2 active opto-electronic protective device.

Typical areas of application

- Point of operation and access guarding in conveyor/storage systems, drinks industry and on packaging machinery

Important technical data, overview

Type in accordance with IEC/EN 61496	2
Category in accordance with EN ISO 13849	2
Operating range	0...50 m (infrared light) 0...30 m (red light)
Operating voltage, U _B	10... 30 V DC (incl. residual ripple)
Dimensions (WxHxD)	30 mm x 90 mm x 70 mm
Housing	Metal Plastic
Switching output	pnp transistor output
Connection system	Cable gland M12 round pin plug

Functions

LED display

Activation input for test and series connection

Function extension

With Safety Interface	Relay output	RES	EDM	Muting	Further details
TNT 35	●	●	●		p. 478
MSI-s	●	●	●		p. 450
MSI-sx	●	●	●		p. 450
MSI-m	●	●	●	●	p. 464

Special features

- High functional reserve in the visible red light and infrared light range
- Wide voltage range from 10 to 30 V with pnp transistor output for PLC applications
- 2 displays on transmitter and receiver for status display with start-up and running operation
- Optics heating for use with low temperatures (SLS 96 M/P-1071)
- Variants for multiple operation (SLS 96 K/P-1207)



Features



Further information	Page
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● Technical data	305
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SINGLE LIGHT BEAM SAFETY DEVICES

Ordering information

SLS 96, consisting of transmitter and receiver

Functions: Activation input for test and series connection

Art. no.	Article	Description	Connection system
50025215	SLSS 96M-1080-T2-45	Transmitter, metal, infrared light	M12 round pin plug, 4-pin
50025193	SLSE 96M/P-1070-T2-41	Receiver, metal, infrared light	M12 round pin plug, 4-pin
50080478	SLSS 96M-1090-T2-45	Transmitter, metal, infrared light, low temperature model	M12 round pin plug, 4-pin
50080479	SLSE 96M/P-1071-T2-41	Receiver, metal, infrared light, low temperature model	M12 round pin plug, 4-pin
50025213	SLSS 96M-1080-T2-24	Transmitter, metal, infrared light	Terminals
50025192	SLSE 96M/P-1070-T2-21	Receiver, metal, infrared light	Terminals
50029454	SLSS 96M-1090-T2-24	Transmitter, metal, infrared light, low temperature model	Terminals
50029455	SLSE 96M/P-1071-T2-21	Receiver, metal, infrared light, low temperature model	Terminals
50031249	SLSS 96M-1210-T2-45	Transmitter, metal, red light	M12 round pin plug, 4-pin
50031250	SLSE 96M/P-1200-T2-41	Receiver, metal, red light	M12 round pin plug, 4-pin
50025209	SLSS 96M-1210-T2-24	Transmitter, metal, red light	Terminals
50031562	SLSE 96M/P-1200-T2-21	Receiver, metal, red light	Terminals
50031559	SLSS 96K-1080-T2-45	Transmitter, plastic, infrared light	M12 round pin plug, 4-pin
50031561	SLSE 96K/P-1070-T2-41	Receiver, plastic, infrared light	M12 round pin plug, 4-pin
50028011	SLSS 96K-1210-T2-45	Transmitter, plastic, red light	M12 round pin plug, 4-pin
50028012	SLSE 96K/P-1200-T2-41	Receiver, plastic, red light	M12 round pin plug, 4-pin
50081292	SLSS 96K-1080-T2-24	Transmitter, plastic, infrared light	Terminals
50081293	SLSE 96K/P-1070-T2-21	Receiver, plastic, infrared light	Terminals
50028011	SLSS 96K-1210-T2-45	Transmitter, plastic, red light	M12 round pin plug, 4-pin
50041109	SLSE 96K/P-1207-T2-41	Receiver, plastic, red light with filter for multiple operation	M12 round pin plug, 4-pin
50028009	SLSS 96K-1210-T2-24	Transmitter, plastic, red light	Terminals
50028010	SLSE 96K/P-1200-T2-21	Receiver, plastic, red light	Terminals
50028009	SLSS 96K-1210-T2-24	Transmitter, plastic, red light	Terminals
50035078	SLSE 96K/P-1207-T2-21	Receiver, plastic, red light with filter for multiple operation	Terminals

You will find further information and ordering info in the Leuze electronic Opto-Electronic Sensors Catalog.

Electrical connection

See LS763 connection example, page 281.

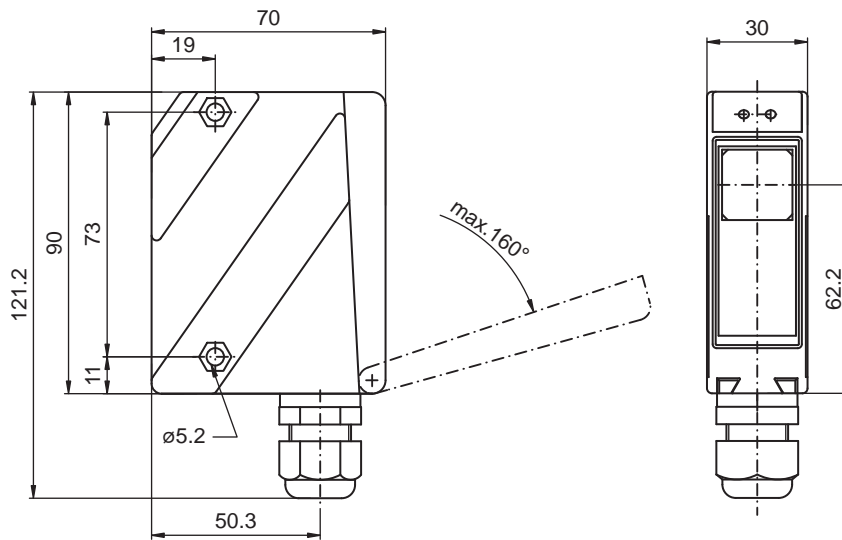
Technical data

General system data	
Type in accordance with IEC/EN 61496	2
Service life (T_M) in accordance with EN ISO 13849-1	20 years
Category in accordance with EN ISO 13849	2
Mean time to dangerous failure ($MTTF_d$) in accordance with EN ISO 13849-1	445.2 years
Operating range	0...50 m (infrared light) 0...30 m (red light)
Response time	1 ms
Operating voltage, U_B	10... 30 V DC (incl. residual ripple)
Safety class	II
Protection rating	IP 67
Ambient temperature, operation	-20...+60°C
Ambient temperature, storage	-40...+70°C
Dimensions (WxHxD)	30 mm x 90 mm x 70 mm
Housing	Metal Plastic
Weight (transmitter and receiver)	380 g (metal housing), 260 g (plastic housing)
Transmitter	
Current consumption	50 mA
Transmitter diodes, class in accordance with EN 60825	1
Light source	Infrared light Red light
Wavelength	880 nm (infrared light) 660 nm (red light)
Activation input for test and series connection	24 V DC Active ≥ 8 V Inactive ≤ 2 V
Connection system	Cable gland M12 round pin plug, 4-pin
Receiver	
Current consumption	50 mA without external load
Switching output	pnp transistor output
Switching voltage high active	Min. $U_v - 2$ V
Switching voltage low	Max. 2 V
Output current	Max. 100 mA
Connection system	Cable gland M12 round pin plug, 4-pin

Please note the additional information at www.leuze.com/sls.

Dimensional drawings

SLS 96 Single Light Beam Safety Device



Dimensions in mm

Accessories ordering information

Art. no.	Article	Description	Length, design
Connection cables			
50104545	K-D M12W-4P-5m-PVC	Connecting cable, 5 m, M12, 4-pin	Angled, PVC
50104544	K-D M12A-4P-5m-PVC	Connecting cable, 5 m, M12, 4-pin	Axial, PVC
Alignment aid			
50080502	ARH 96	Alignment aid for series 96 sensors	
Deflecting Mirror			
50000670	US 1	Deflecting Mirror	
50017434	US 2	Deflection mirror on mounting plate, can be turned by 90°	