

SLD – safety light grid



Personal protection function

The SLD safety light grids are especially suitable for the contactless safeguarding of hazardous areas and for personal protection on machines and equipment.

Advantages

Faster during commissioning, operation and service

- The integrated laser alignment aid (optional) permits precise mounting and reduces the startup times of the SLD system
- Robust device columns with spring-loaded base mounting and integrated alignment aid are available for the free-standing implementation
- Muting applications can be easily implemented with **samos**® or **samos**® PRO

Applications

- Access security (personal protection)
- Safeguarding of hazardous areas

Features

- Safety light grid AOPD type 4
- 2-, 3- and 4-beam resolutions
- Also available as an universal system, i.e. transmitter/receiver in a single unit
- High ranges up to 70 m can be implemented
- Extensive accessories

Integrated laser alignment aid



Increased reliability

- Robust aluminum housing in IP67
- Operating temperature range -30 °C to 55 °C permits implementation even in the harshest environments
- Multi-beam scanning avoids unwanted shutdown
- Mutual interference is avoided through the adjustable range reduction when implementing multiple systems
- Parameterization without PC or DIP switch through simple wiring in the control cabinet

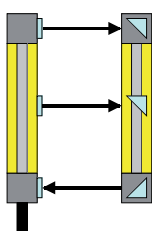
Function overview	SLD Standard	SLD Select	SLD Universal Standard	SLD Universal Select
LED display	√	√	√	√
Multi-scan technology	√	√	√	√
Range reduction	√	√		
Laser alignment aid (optional)	√	√		
Automatic start	√	√	√	√
Manual start / restart interlock		√		√
External device monitoring (EDM)		√		√
Transceiver system			√	√

SLD – safety light grid

Technical data

Function		safety light grid
Function display		LED
Power supply circuit		
Rated voltage U_N		24 V DC
Current consumption (transmitter)		50 mA
Current consumption, no load (receiver/transceiver)		150 mA
Operating voltage range U_B		0.8 - 1.2 x U_N
Electrical isolation supply circuit - control circuit		no
Protection field data		
	Beams	Range
	2	0.5 - 50 m / 20 - 70 m / 0.5 - 8 m
	3	0.5 - 50 m / 20 - 70 m / 0.5 - 6 m
	4	0.5 - 50 m / 20 - 70 m
Output circuit OSSD		
Number		2
Type		Transistor outputs PNP
Short-circuit monitoring		ja
Switching current (max., per output)		380 mA
Leakage current (max.)		200 μ A
Switching voltage, high active ($U_B - 1V$)		18.0 - 27.8 V
Switching voltage, low		0 - 2,5 V
Line resistance / line length		< 200 Ω
Response time		25 ms
General data		
Creepage distances and clearances between the circuits		EN 60664-1
Protection degree according to EN 60529		IP67
Ambient temperature / storage temperature		-30 °C - +55 °C / -40 °C - + 75 °C
Connection		M12 (5 pole / 8 pole) device-dependent
Weight		1.4 - 2.2 kg, device-dependent
Standards		EN 61496, EN ISO 13849-1, EN 62061
Approvals		TÜV, c-CSA-us

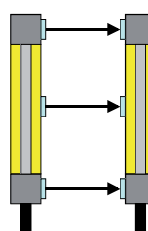
Note: For the connection of safety light grids SLD shielded cables are mandatory.



SLD Universal – Less cabling expenditure

The safety light grids consist of an integrated SLD universal transmitter/receiver unit and a passive reflector unit without electrical connection.

- 2- and 3-beam systems
- Range 0.5 to 8 m



SLD Standard / SLD Select

The safety light grid and SLD Standard and SLD Select each consist of a transmitter and a receiver unit and are thus suitable for highest ranges.

- 2-, 3- and 4-beam systems
- Ranges 0.5 - 50 m and 20 - 70 m

SLD – safety light grids

Device overview | order numbers Transmitter

Type	Actuator	Part. no.	Std. pack
SLD-4TR2-0-50	Transmitter, 2 beams, range 50 m	R1.641.2050.0	1
SLD-4TR2-0-70	Transmitter, 2 beams, range 70 m	R1.641.2070.0	1
SLD-4TR2-1-50	Transmitter, 2 beams, range 50 m, laser alignment aid	R1.641.2150.0	1
SLD-4TR2-1-70	Transmitter, 2 beams, range 70 m, laser alignment aid	R1.641.2170.0	1
SLD-4TR3-0-50	Transmitter, 3 beams, range 50 m	R1.641.3050.0	1
SLD-4TR3-0-70	Transmitter, 3 beams, range 70 m	R1.641.3070.0	1
SLD-4TR3-1-50	Transmitter, 3 beams, range 50 m, laser alignment aid	R1.641.3150.0	1
SLD-4TR3-1-70	Transmitter, 3 beams, range 70 m, laser alignment aid	R1.641.3170.0	1
SLD-4TR4-0-50	Transmitter, 4 beams, range 50 m	R1.641.4050.0	1
SLD-4TR4-0-70	Transmitter, 4 beams, range 70 m	R1.641.4070.0	1
SLD-4TR4-1-50	Transmitter, 4 beams, range 50 m, laser alignment aid	R1.641.4150.0	1
SLD-4TR4-1-70	Transmitter, 4 beams, range 70 m, laser alignment aid	R1.641.4170.0	1

Device overview | order numbers Receiver Standard

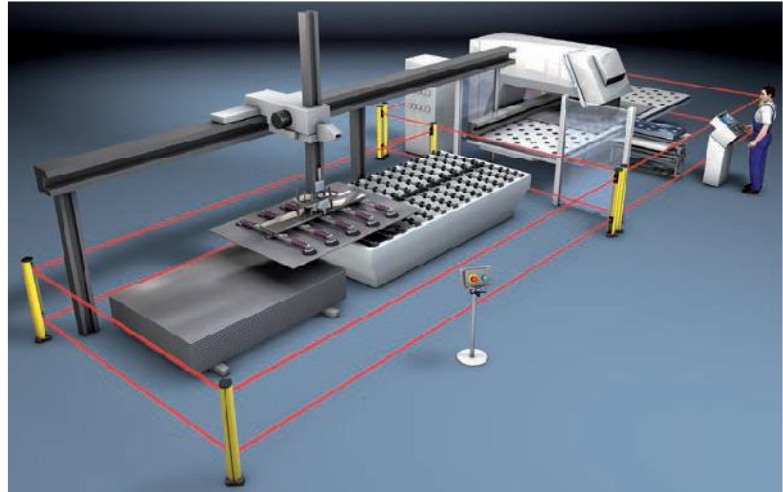
Type	Actuator	Part. no.	Std. pack
SLD-4ST2-0-50	Receiver-Standard, 2 beams, range 50 m	R1.642.2050.0	1
SLD-4ST2-0-70	Receiver-Standard, 2 beams, range 70 m	R1.642.2070.0	1
SLD-4ST2-1-50	Receiver-Standard, 2 beams, range 50 m, laser alignment aid	R1.642.2150.0	1
SLD-4ST2-1-70	Receiver-Standard, 2 beams, range 70 m, laser alignment aid	R1.642.2170.0	1
SLD-4ST3-0-50	Receiver-Standard, 3 beams, range 50 m	R1.642.3050.0	1
SLD-4ST3-0-70	Receiver-Standard, 3 beams, range 70 m	R1.642.3070.0	1
SLD-4ST3-1-50	Receiver-Standard, 3 beams, range 50 m, laser alignment aid	R1.642.3150.0	1
SLD-4ST3-1-70	Receiver-Standard, 3 beams, range 70 m, laser alignment aid	R1.642.3170.0	1
SLD-4ST4-0-50	Receiver-Standard, 4 beams, range 50 m	R1.642.4050.0	1
SLD-4ST4-0-70	Receiver-Standard, 4 beams, range 70 m	R1.642.4070.0	1
SLD-4ST4-1-50	Receiver-Standard, 4 beams, range 50 m, laser alignment aid	R1.642.4150.0	1
SLD-4ST4-1-70	Receiver-Standard, 4 beams, range 70 m, laser alignment aid	R1.642.4170.0	1

Device overview | order numbers Receiver Select

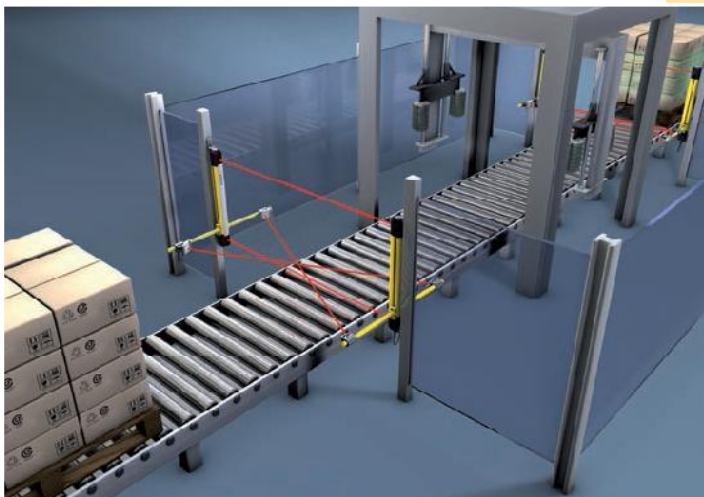
Type	Actuator	Part. no.	Std. pack
SLD-4SL2-0-50	Receiver-Select, 2 beams, range 50 m	R1.643.2050.0	1
SLD-4SL2-0-70	Receiver-Select, 2 beams, range 70 m	R1.643.2070.0	1
SLD-4SL2-1-50	Receiver-Select, 2 beams, range 50 m, laser alignment aid	R1.643.2150.0	1
SLD-4SL2-1-70	Receiver-Select, 2 beams, range 70 m, laser alignment aid	R1.643.2170.0	1
SLD-4SL3-0-50	Receiver-Select, 3 beams, range 50 m	R1.643.3050.0	1
SLD-4SL3-0-70	Receiver-Select, 3 beams, range 70 m	R1.643.3070.0	1
SLD-4SL3-1-50	Receiver-Select, 3 beams, range 50 m, laser alignment aid	R1.643.3150.0	1
SLD-4SL3-1-70	Receiver-Select, 3 beams, range 70 m, laser alignment aid	R1.643.3170.0	1
SLD-4SL4-0-50	Receiver-Select, 4 beams, range 50 m	R1.643.4050.0	1
SLD-4SL4-0-70	Receiver-Select, 4 beams, range 70 m	R1.643.4070.0	1
SLD-4SL4-1-50	Receiver-Select, 4 beams, range 50 m, laser alignment aid	R1.643.4150.0	1
SLD-4SL4-1-70	Receiver-Select, 4 beams, range 70 m, laser alignment aid	R1.643.4170.0	1

Device overview | order numbers Universal

Type	Actuator	Part. no.	Std. pack
SLD-4US2-0-00	Universal-Standard, 2 beams	R1.644.2000.0	1
SLD-4US3-0-00	Universal-Standard, 3 beams	R1.644.3000.0	1
SLD-4UL2-0-00	Universal-Select, 2 beams	R1.645.2000.0	1
SLD-4UL3-0-00	Universal-Select, 3 beams	R1.645.3000.0	1
SLD-MIR2-0-08	Mirror, 2 beams, range 8 m	R1.606.2008.0	1
SLD-MIR3-0-06	Mirror, 3 beams, range 6 m	R1.606.3006.0	1
SLD-MIR3-0-08	Mirror, 3 beams, range 8 m	R1.606.3008.0	1



Safeguarding of a machine with safety light grids



Parallel muting with SLD and SLX-MUTC-SET2P



SLD – Muting functions with *samos*[®]PRO

SLD safety light grids are ideally suited for monitoring material locks, such as in the packaging industry, in combination with the freely configurable muting function blocks of *samos*[®]PRO, for example in the packaging industry.

