



Position sensors and object recognition

ifm light curtains: Light frame, long reach.



Slim design with ranges up to 20 m for all protected areas.

- Type 2 and type 4 safety light curtains to IEC 61496.
- With SIL to IEC 61508 and PL to ISO 13849.
- Can be installed in L shape without dead band.
- Easy to connect via the tried and tested M12 connector (5 or 8-pin).

type 2
SIL 2

type 4
SIL 3

IP 65
IP 67

TÜV

Safe and certified

The safety light curtains and light grids have been developed in accordance with the current standards and certified by TÜV Süd. They meet the requirements type 2 / SIL2 or type 4 / SIL3, helping you to stay on the safe side – no matter what areas you want to protect.

Versions

Versatile versions in a slim design are available for applications from finger protection to body protection. Ranges up to 12 or 20 m in resolutions (detection capacity) of 14, 20, 30, 40, 50 and 90 mm. The light grids are available in 2, 3 or 4-beam version.

The protected area height is selectable from 160 mm to 1510 mm in distances of 150 mm.

They all have one thing in common: the very small housing dimensions of only 28 x 30 mm.



fluid sensors
and diagnostic
systems

position
sensors
and object
recognition

bus,
identification
and control systems

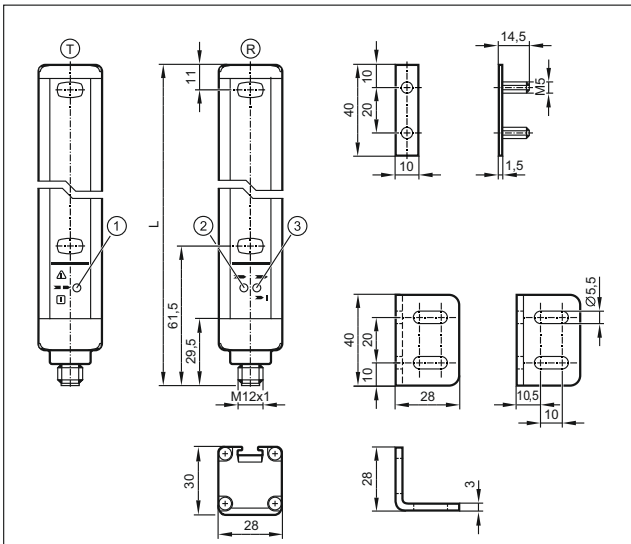
Easy installation

The units have a T-slot on the back for very easy installation. Angle brackets are enclosed with all units. The resolution is ensured also for installation in L or T shape. Given the short distance from the first light beam, the units can be installed without dead band on one side.

Easy wiring

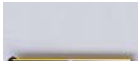

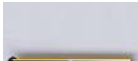





The units are configured via the pin connection of the 5- or 8-pin M12 connector. To do so, you need no PC or software. Functions such as EDM (External Device Monitoring), restart or external muting (safety relay G2001S) can be implemented.

Dimensions



T: transmitter, R: receiver
1) LED 3-colour, 2) LED 2-colour, 3) LED 2-colour

Base

Type	Description	Order no.
	Corner mirror with base for 2-beam light grids / light curtains	EY1011
	Corner mirror with base for 4-beam light grids / light curtains	EY1013
	Corner mirror with base for light curtain > 1360 mm	EY1014
	Corner mirror with base for light curtain > 1660 mm	EY1015
	Base for 2-beam light grids / light curtains	EY2001
	Base for 4-beam light grids / light curtains	EY2002
	Base for light curtain > 1360 mm	EY2003
	Base for light curtain > 1660 mm	EY2004


Accessories

Type	Description	Order no.
	Vibration damper, set with 4 pcs., rubber, galvanised metal	EY3001
	Vibration damper, set with 6 pcs., rubber, galvanised metal	EY3002
	Adjustable bracket axial ± 7°, set with 4 pcs., galvanised metal	EY3004
	Adjustable bracket axial ± 7°, set with 6 pcs., galvanised metal	EY3005
	Laser adjustment aid for light curtains, visible red light 650 nm	EY3099
	Test probe for resolution, Ø 14 mm	EY3006
	Test probe for resolution, Ø 20 mm	EY3007
	Test probe for resolution, Ø 30 mm	EY3008
	Test probe for resolution, Ø 40 mm	EY3009
	Test probe for resolution, Ø 50 mm	EY3010

Corner mirror

Description	Order no.
Corner mirror, length 250 mm, with angle bracket, aluminium, galvanised metal	EY1001
Corner mirror, length 400 mm, with angle bracket, aluminium, galvanised metal	EY1002
Corner mirror, length 540 mm, with angle bracket, aluminium, galvanised metal	EY1003
Corner mirror, length 715 mm, with angle bracket, aluminium, galvanised metal	EY1004
Corner mirror, length 885 mm, with angle bracket, aluminium, galvanised metal	EY1005
Corner mirror, length 1060 mm, with angle bracket, aluminium, galvanised metal	EY1006
Corner mirror, length 1230 mm, with angle bracket, aluminium, galvanised metal	EY1007
Corner mirror, length 1400 mm, with angle bracket, aluminium, galvanised metal	EY1008
Corner mirror, length 1450 mm, with angle bracket, aluminium, galvanised metal	EY1009
Corner mirror, length 1600 mm, with angle bracket, aluminium, galvanised metal	EY1010

Accessories base

Type	Description	Order no.
	Mounting base	EY2005



Evaluation unit

Type	Description	Order no.
	Safety relay, multifunctional, 2 relay outputs	G1501S
	Safety relay Semiconductor outputs	G1503S
	Safety relay, 2 relay outputs, muting function	G2001S


Connectors and splitter boxes

Type	Description	Order no.
	Socket, M12, 5 m, 8-pin, PUR	E12166
	Socket, M12, 10 m, 8-pin, PUR	E12167
	Socket, M12, 5 m, 8-pin, PUR	E12168
	Socket, M12, 10 m, 8-pin, PUR	E12169
	Socket, M12, 2 m, 5-pin, PUR	EVC070
	Socket, M12, 5 m, 5-pin, PUR	EVC071
	Socket, M12, 10 m, 5-pin, PUR	EVC072
	Socket, M12, 2 m, 5-pin, PUR	EVC073
	Socket, M12, 5 m, 5-pin, PUR	EVC074
	Socket, M12, 10 m, 5-pin, PUR	EVC075



AS-i bus system

Type	Description	Order no.
	Safe AS-i input module, 2 OSSD inputs via M12 connector	AC007S
	Flat cable lower part, yellow/black	AC5003




SmartLine module

	Safe SmartLine output module 4 DI / 1 SO R	AC030S
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AS-i safety monitor

	1-channel, enhanced, with integrated safe slave	AC031S
	2-channel, enhanced, with integrated safe slave	AC032S

Adapter cables

Type	Description	Order no.
	Adapter cable for receiver light curtain AUTOMATIC start	EY3090
	Adapter cable for transmitter light curtain LONG RANGE > 3 m	EY3091
	Adapter cable for receiver light curtain SHORT RANGE < 4 m	EY3092

Applications: access limitations and primary guarding, robot cells, pick-and-place machines, production lines in industrial automation.

Safety light curtains

Resolution / detection capacity [mm]	Protected area height [mm]									
	160	310	460	610	760	910	1060	1210	1360	1510
Type 4 / SIL3 / PL e	Protected area width 0...3 m / 1...6 m									
14	OY001S	OY002S	OY003S	OY004S	OY005S	OY006S	OY007S	OY008S	OY009S	OY010S
Type 2 / SIL2 / PL d	Protected area width 0...4 m / 3...12 m									
30	OY031S	OY032S	OY033S	OY034S	OY035S	OY036S	OY037S	OY038S	OY039S	OY040S
40	OY051S	OY052S	OY053S	OY054S	OY055S	OY056S	OY057S	OY058S	OY059S	OY060S
50		OY072S	OY073S	OY074S	OY075S	OY076S	OY077S	OY078S	OY079S	OY080S
90				OY094S	OY095S	OY096S	OY097S	OY098S	OY099S	OY100S
Type 4 / SIL3 / PL e	Protected area width 0...4 m / 3...12 m									
30	OY041S	OY042S	OY043S	OY044S	OY045S	OY046S	OY047S	OY048S	OY049S	OY050S
40	OY061S	OY062S	OY063S	OY064S	OY065S	OY066S	OY067S	OY068S	OY069S	OY070S
50		OY082S	OY083S	OY084S	OY085S	OY086S	OY087S	OY088S	OY089S	OY090S
90				OY104S	OY105S	OY106S	OY107S	OY108S	OY109S	OY110S
Type 4 / SIL3 / PL e	Protected area width 0...10 m / 3...20 m									
20	OY221S	OY222S	OY223S	OY224S	OY225S	OY226S	OY227S	OY228S	OY229S	OY230S
30	OY241S	OY242S	OY243S	OY244S	OY245S	OY246S	OY247S	OY248S	OY249S	OY250S
40	OY261S	OY262S	OY263S	OY264S	OY265S	OY266S	OY267S	OY268S	OY269S	OY270S
50		OY282S	OY283S	OY284S	OY285S	OY286S	OY287S	OY288S	OY289S	OY290S
90				OY204S	OY205S	OY206S	OY207S	OY208S	OY209S	OY210S

Safety light grid

Type 2 SIL2 PL d	2 beams	3 beams	4 beams
		Protected area width 0...4 m / 3...12 m	
	OY111S	OY112S	OY113S
Type 4 SIL3 PL e	Protected area width 0...4 m / 3...12 m		
	OY114S	OY115S	OY116S
	Protected area width 0...10 m / 3...20 m		
	OY120S	OY121S	OY122S

Common technical data		
Operating voltage	[V]	19.2...28.8
Current rating	[mA]	2 x 400
Current consumption	[mA]	
	Transmitter	42
	Receiver	83
Safety outputs (OSSDs)		2 x PNP
Ambient temperature	[°C]	-10...55
Protection		IP 65, IP 67
Dimensions (W x D)	[mm]	28 x 30
Connection		M12 connector
max. cable length	[m]	100
Safety category		
	IEC 61496-1: 2004	type 2 / type 4
	IEC 61496-2: 2006	
	IEC 61508: 1998	SIL 2 / SIL 3
	ISO 13849-1: 2006	PL d / PL e