Non-contact safety solution for gates, industrial & garage door applications

SAFETY LIGHT CURTAIN LIGI-01

Sold only to industrial specialist companies

WITT® Sensoric

Light barrier systems

Move doors safely

Subject to change

LIGI-01 Technical information

- **Powerful, for doors up to 10 m wide**
- **Can be mounted inside door guides, due to door blanking function**
- **Easy installation, direct mounting or surface mounting clamps**
- **Extremely robust thanks to fully encapsulated light curtain**
- **IP 67, resistance to environmental influences**
- **Optional version for car wash facilities**
- **For all current door controls**
- **Automatic light controls**
- **Integrated service diagnostics**
- **Highly resistant to extraneous light**
- **Compact housing, just 16x16 mm**
- **Extensive range of length and beam distribution variants available**
- **Lasered nameplate, legible from front**

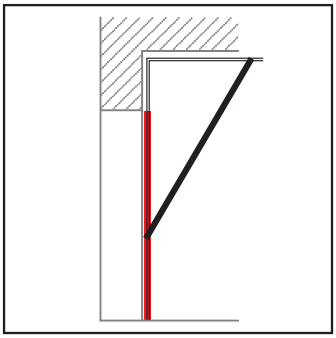
Just like all of Witt's products, the new LIGI has been designed especially for the harsh usage conditions of gates, garage and industrial doors. The highly compact and fully encapsulated door light curtain offers perfect protection against moisture and vibrations in everyday door use. The LIGI features state-of-the-art electronics and even sets standards for the future with its intelligent software. Its compatibility with standard door controllers means that it can be used universally in almost all door systems. Easy installation options allow for fast and uncomplicated installation of the LIGI.

Technical data

Door widths	1.6 - 10 m	
Operating voltage	10 - 30 V DC	
Current consumption	Transmitter:	approx. 30 mA (24 V DC)
	Receiver:	approx. 20 mA (24 V DC)
Power consumption	approx. 1.2 W	
Type of light	modulated infrared	
OSE output	approx. 950 Hz, alternating signal, short-circuit-proof, protected against reverse polarity	
PNP output	100 mA, short circuit-proof, protected against reverse polarity	
NPN output	100 mA, short circuit-proof, protected against reverse polarity	
Push-pull output	100 mA, short circuit-proof, protected against reverse polarity	
SSR semiconductor relay	100 mA, short circuit-proof, potential-free	
Response time	< 100 ms	
Reactivation time	< 800 ms	
Ambient light safety	≥ 100 klux	
Housing material	Aluminium profile fully encapsulated in 2 K epoxy resin	
Connection	M8-4-pin (OSE/PNP/NPN/Push-pull), M8-6-pin (SSR)	
Degree of protection	IP67 as per EN60529	
Operating temperature	-20 to +60°C	
Storage temperature	-30 to +70°C	

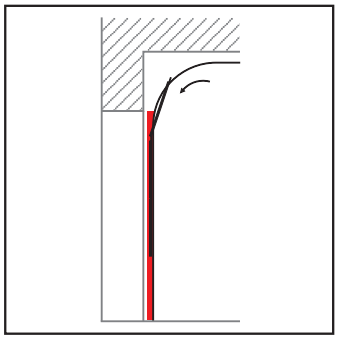
Examples of applications

Up-and-over doors



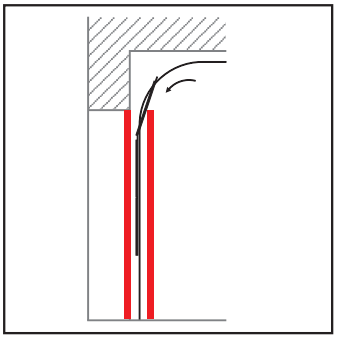
Installation in running plane of leading edge

Sectional doors



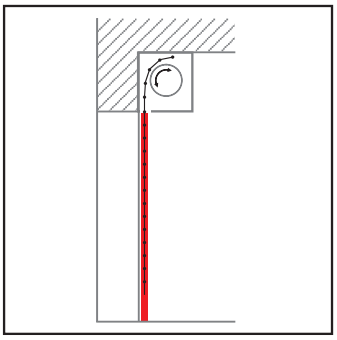
Leading edge protection

Sectional doors



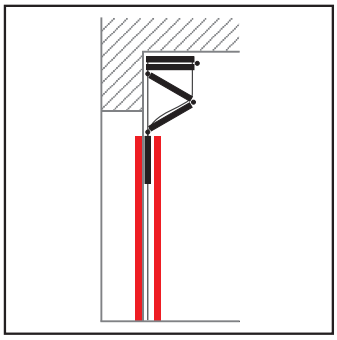
Installation in front of and behind door leaf

Rolling grille doors



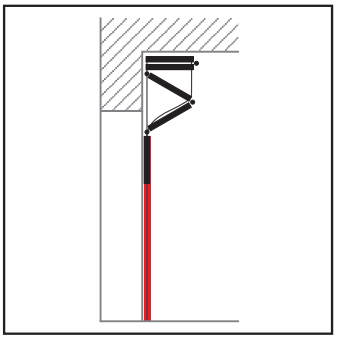
Installation in slide rail

Lifting shutter doors



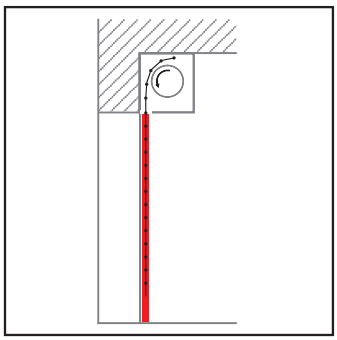
Installation in front of and behind door leaf

Lifting shutter doors



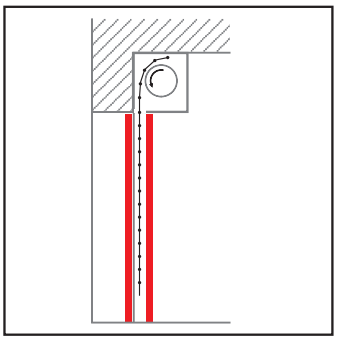
Protection of closing motion thanks to installation in slide rail

Roller shutters/rapid action doors



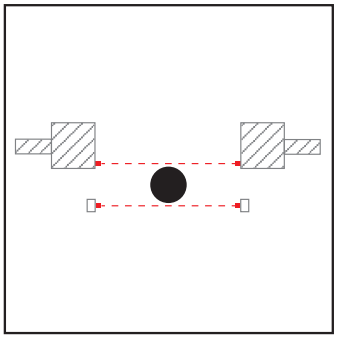
Protection of leading edge thanks to installation in slide rail

Roller shutters/rapid action doors



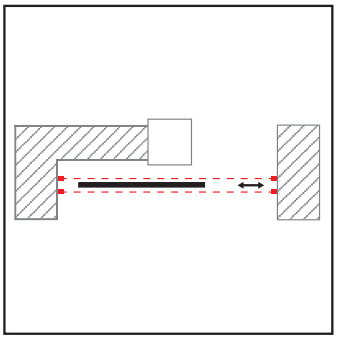
Installation in front of and behind door curtain

Bollards



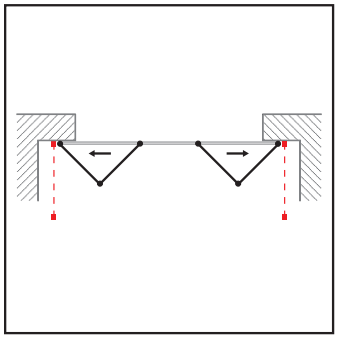
Protection of danger zone for extendable bollards

Sliding Gate



Protection of hazard points

Folding Gate



Protection against pinch points

Basic functions

The LIGI is a very powerful safety light curtain equipped with state-of-the-art microprocessor technology. It comes with a very broad capacity range in regard to parameterisation for optimal adjustment to the door types and installation type. It performs a permanent self-test of the internal electronic system and software.

Diagnosis indicators

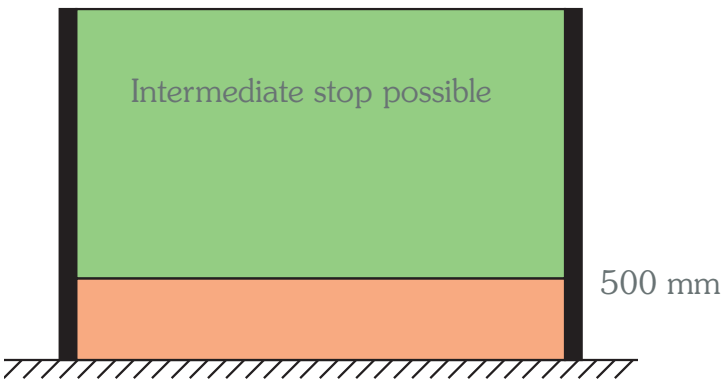
Setting parameters and service diagnosis are represented by a flashing code of the indicator LEDs. The LIGI monitors all important internal parameters of the electronic system and the software. In case of an error, a flash code is issued.

○ LED illuminated
☆ LED flashing
⊗ LED off

Indicator transmitter	Indicator receiver	Description	Error	Solution
⊗ ⊗	⊗ ⊗		no power supply	Check power supply
⊗ ⊗ ⊗ ⊗ ☆ ☆ ☆ ⊗	⊗ ⊗	Yellow LED flashes 3x, long pause	Receiver polarity reversed	Check operating voltage for receiver
	⊗ ⊗ ⊗ ⊗ ☆ ☆ ⊗ ⊗	Red LED flashes 2x, long pause	Short-circuit at output	Check output line, overload, incorrectly connected, line faulty, output in light curtain faulty
⊗ ⊗ ⊗ ⊗ ☆ ☆ ☆ ⊗	⊗ ⊗ ⊗ ⊗ ☆ ☆ ☆ ⊗	LEDs flash 3x, long pause	Fault in sync line	Check sync line, should only be connected between transmitter and receiver
☆ ⊗ ☆ ⊗ ⊗ ☆ ⊗	☆ ⊗ ☆ ⊗ ☆ ⊗ ☆ ⊗	All LEDs flashing	Internal device error	Light curtain needs to be replaced

Runtime monitoring

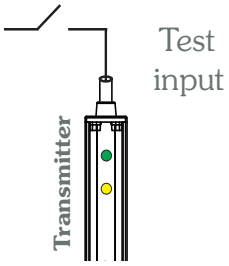
To increase operational safety, the LIGI is equipped with a feature which monitors the span of the door movement in the area from the floor up to 500 mm. If a standstill occurs in this range, the switching output is activated and the door can only be moved up. This is the case when the door is closed. The output remains activated in this case until all the light beams of the LIGI are free again.
In the range of 500 mm up to the maximum height of the protected area, the door can also be operated with intermediate stops.



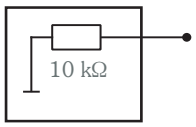
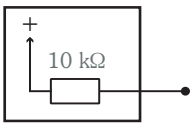
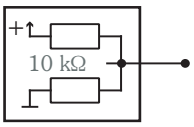
Test inputs / adjustment mode

Function assignment for test input
The test input on the LIGI transmitter is used with time control for two functions.

1. Test of the light curtain using the control
2. Alignment mode through activation of the test input for at least 15s

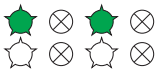
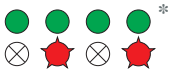


Switch variants for test input

	T00	T01	T02	T03	T04	T05
Test input switching	OSE output	PNP output	PNP output	NPN output	NPN output	SSR output
10 - 30 V DC	Adjustment > 15s	Operation	Test adjustment > 15s	Operation	Test adjustment > 15s	Test Adjustment > 15s
open	Operation	Test adjustment > 15s	Operation	Operation	Test Adjustment > 15s	Operation
GND	Operation	Test adjustment > 15s	Operation	Test Adjustment > 15s	Operation	Test Adjustment > 15s
Internal test input						

Alignment mode

If the test input is activated for longer than 15s, the LIGI internally measures the OSE signal at the receiver. The light signal quality is indicated through a flashing code of the indicator LEDs on the receiver. This serves to indicate the signal strength to solve problems with the adjustment, pollution or installation. Furthermore, it is also a helpful function to detect errors if service is needed and during the recommended annual inspection.

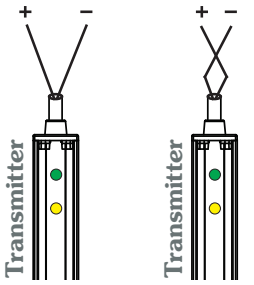
activated test input	Transmitter	Receiver	Description
0 - 15s			LEDs flash in alternation
> 15s		**Output of measured value**	
			green LED flashes Insufficient light reserve
		 *	green LED on red LED flashes

* The faster the flashing frequency of the red LEDs, the greater the light reserve.

Troubleshooting if the light reserve is insufficient:
clean the LIGI, check adjustment, possibly check installation behind the panel if the LIGI or the panel has shifted.

Programmable blanking

Only for order option F05
Switching between blanking/without blanking through reverse polarity of the operating voltage at the transmitter

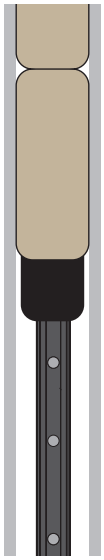


F05 Reverse polarity of operating voltage

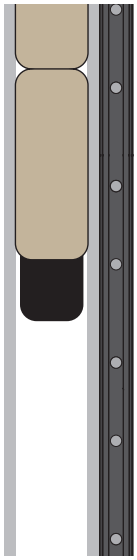
Blanking/door function F00 and F05
The LIGI is preconfigured with the blanking/door function and can be installed directly in the closing level of the door. In this dynamic mode, the LIGI distinguishes between whether the light beams are systematically interrupted while the door is closing by the door leaf, or if an obstacle penetrates into or is present in the protected area.

Without blanking/classic light curtain function F01, F05 and F07
For door systems where the installation is not possible at the closing level, e.g. for roller shutters, the LIGI can also be installed directly in front of the door. For this type of installation in front of the door, we recommend the settings for the classic function. With the F05 (or F01) option, the classic light curtain function is selected through the reverse polarity of the operating voltage. Switching is now activated with each interruption of the light beam.

Mounted in the door guides at the closing level with blanking (default) F00/F05



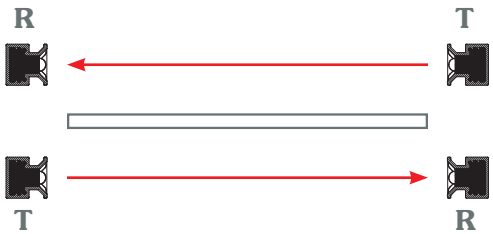
Program installation in front of door without blanking F01/F05/F07



Settings recommended for installation in front of the door

1. Set function 'without blanking'
2. 'without light control' function Program luminance directly at open door (see chapter on Light control)

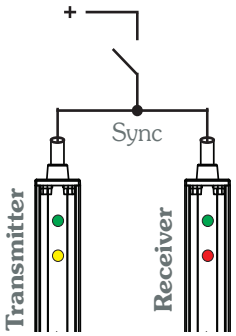
Two-way installation



To minimise the mutual impact of two LIGIs for installation in front of the door, they must be installed alternately.

Programmable light control

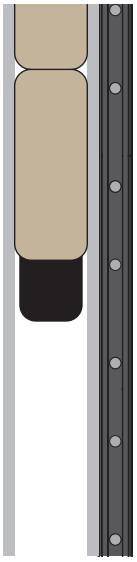
With light control (default)
The LIGI is delivered by default with an automated luminance control.
The control continuously adapts the luminance to the operating conditions.



Programming the luminance
For the installation of the LIGI in front of the door, especially in door systems with very high reflective values, e.g. circle-matted structures, stainless steel and reflecting surfaces, the light control may be disrupted.

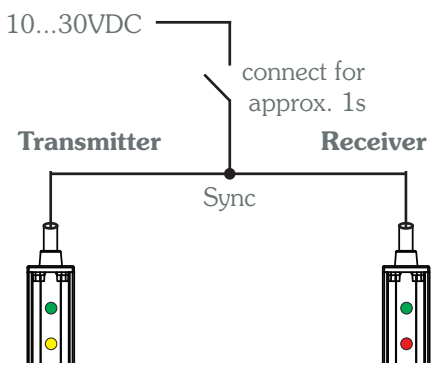
In these cases, the ideal luminance can be teached-in directly at the open door.
This serves to disable the automated luminance control.

Settings recommended for installation in front of the door
1. Set function 'without blanking' (only for F05)
2. 'without light control' function teach-in luminance directly on the open door



Procedure:
1. Door must be open
2. LIGI must be connected and ready for operation
3. LIGI must have uninterrupted free view during the reading of approx. 10s
4. Sync line for approx. 1s connected with the positive pole, reading and setting starts

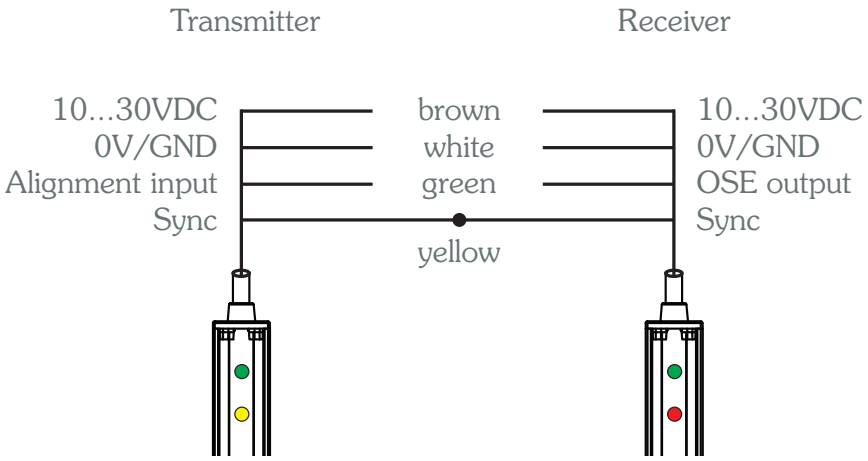
Start (when protected area is vacant)



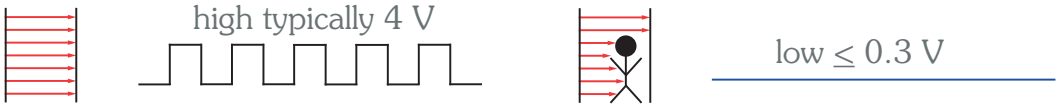
Indicator LEDs on receiver	
Indicator before start protected area vacant	● ⊗
Programming phase, approx. 10s green on / red flashes	● ● ● ● ● ● ● ⊗ ✸ ⊗ ✸ ⊗ ✸
Programming phase completed Operational	● ⊗

OSE output

The safety-oriented OSE output is supported by most door controls.

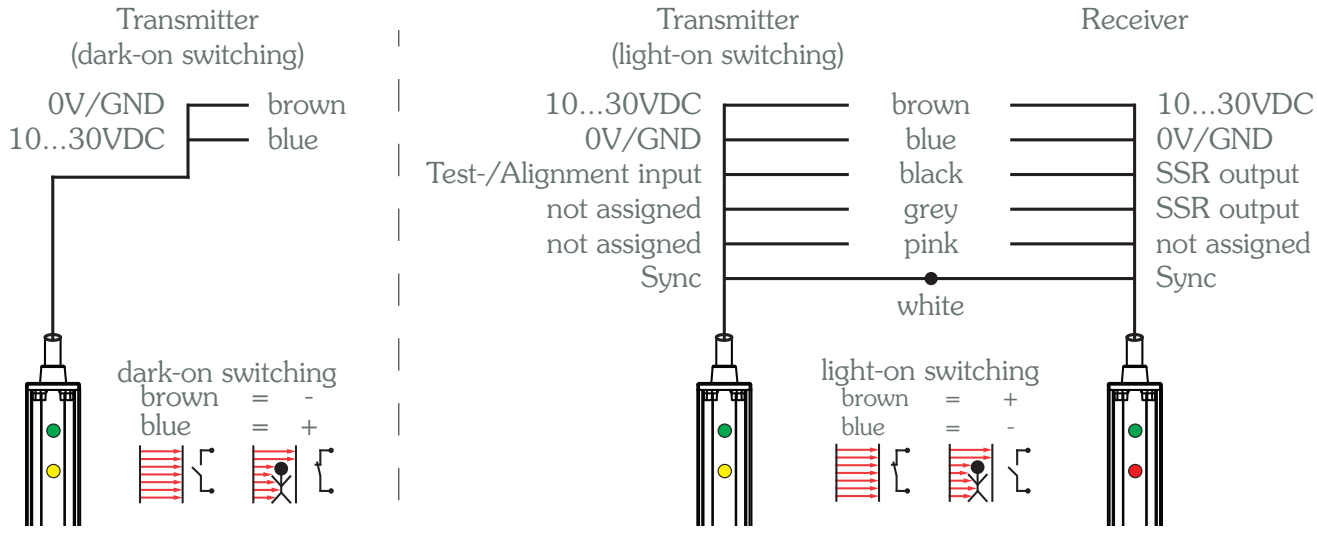


I = max. 20 mA, typ. 950 Hz

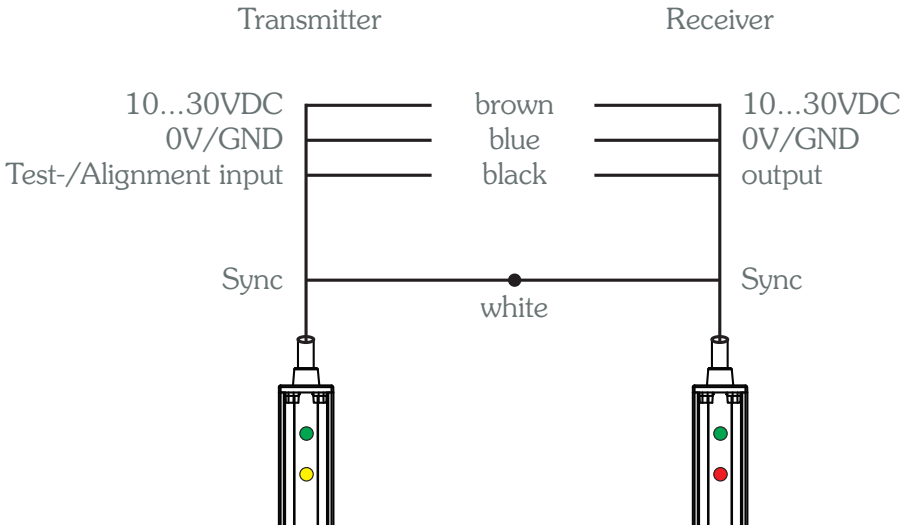


SSR semiconductor relay output

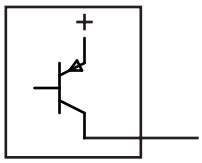
The SSR output is a semiconductor relay with potential-free contact.



Transistor outputs

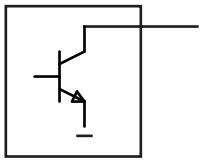


PNP output



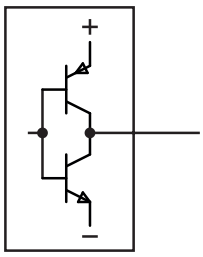
Order options P01/P02/P03
The PNP output is a positive-switching semiconductor output.
short circuit-proof, protected against reverse polarity, max. 100 mA

NPN output



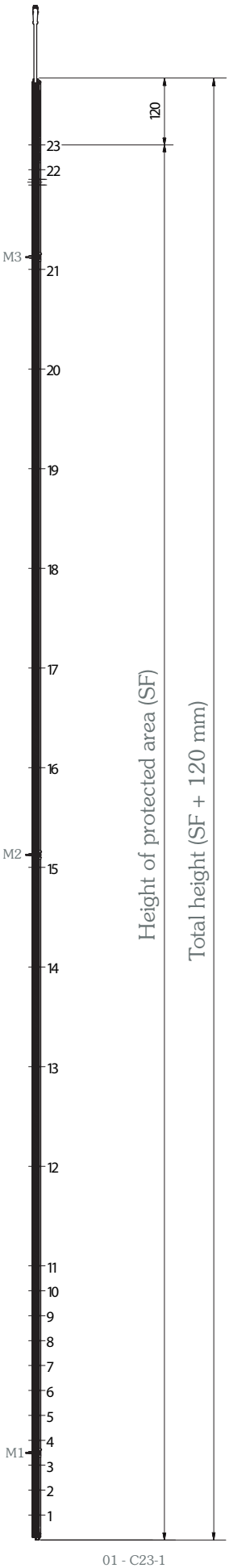
Order options N01/N02/N03
The NPN output is a negative-switching semiconductor output.
short circuit-proof, protected against reverse polarity, max. 100 mA

Push-pull output



Order options PP1/PP2/PP3
The push-pull is a counteracting semiconductor output that puts both the positive and the negative potential through.
short circuit-proof, protected against reverse polarity, max. 100 mA

C-1 Variants – Standard model



01 - C23-1

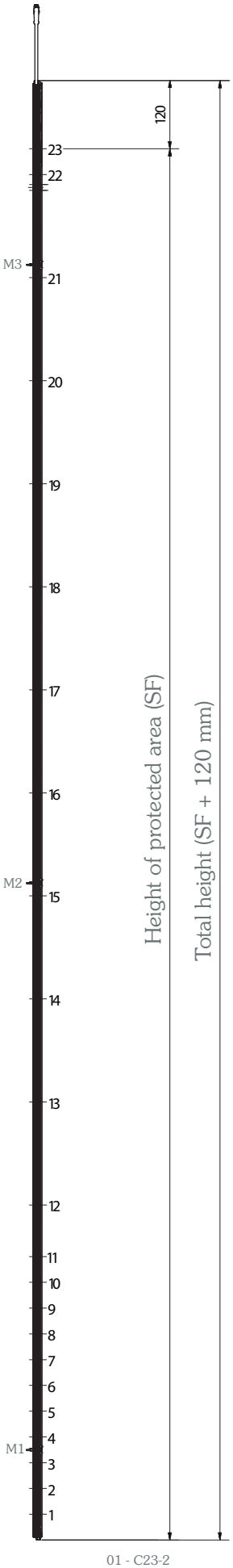
Normative beam distribution Standard model height

KA	C23-1 SA	C23-1 SF	C22-1 SA	C22-1 SF	C21-1 SA	C21-1 SF	C20-1 SA	C20-1 SF	C19-1 SA	C19-1 SF
23	45	2520	45	2340	45	2160	45	1980	45	1800
22	180	2475	180	2295	180	2115	180	1935	180	1755
21	180	2295	180	2115	180	1935	180	1755	180	1575
20	180	2115	180	1935	180	1755	180	1575	180	1395
19	180	1935	180	1755	180	1575	180	1395	180	1215
18	180	1755	180	1575	180	1395	180	1215	180	1035
17	180	1575	180	1395	180	1215	180	1035	180	855
16	180	1395	180	1215	180	1035	180	855	180	675
15	180	1215	180	1035	180	855	180	675	45	495
14	180	1035	180	855	180	675	45	495	45	450
13	180	855	180	675	45	495	45	450	45	405
12	180	675	45	495	45	450	45	405	45	360
11	45	495	45	450	45	405	45	360	45	315
10	45	450	45	405	45	360	45	315	45	270
09	45	405	45	360	45	315	45	270	45	225
08	45	360	45	315	45	270	45	225	45	180
07	45	315	45	270	45	225	45	180	45	135
06	45	270	45	225	45	180	45	135	45	90
05	45	225	45	180	45	135	45	90	45	45
04	45	180	45	135	45	90	45	45		
03	45	135	45	90	45	45				
02	45	90	45	45						
01	45	45								
00										
M3		2318		2138		1958		1778		1598
M2		1238		1148		1058		968		878
M1		158		158		158		158		158

KA	C18-1 SA	C18-1 SF	C17-1 SA	C17-1 SF	C16-1 SA	C16-1 SF	C15-1 SA	C15-1 SF	C14-1 SA	C14-1 SF	C13-1 SA	C13-1 SF
18	45	1620	45	1440	45	1260	45	1080	45	900	45	720
17	180	1575	180	1395	180	1215	180	1035	180	855	180	675
16	180	1395	180	1215	180	1035	180	855	180	675	45	495
15	180	1215	180	1035	180	855	180	675	45	495	45	450
14	180	1035	180	855	180	675	45	495	45	450	45	405
13	180	855	180	675	45	495	45	450	45	405	45	360
12	180	675	45	495	45	450	45	405	45	360	45	315
11	45	495	45	450	45	405	45	360	45	315	45	270
10	45	450	45	405	45	360	45	315	45	270	45	225
09	45	405	45	360	45	315	45	270	45	225	45	180
08	45	360	45	315	45	270	45	225	45	180	45	135
07	45	315	45	270	45	225	45	180	45	135	45	90
06	45	270	45	225	45	180	45	135	45	90	45	45
05	45	225	45	180	45	135	45	90	45	45		
04	45	180	45	135	45	90	45	45				
03	45	135	45	90	45	45						
02	45	90	45	45								
01	45	45										
00												
M3		1418		1238		1058		878		698		518
M2		788		698		608		518		428		-
M1		158		158		158		158		158		158

KA = channels
SA = beam distances
SF = height of protected area

C-2 Variants – Shorter models with the same number of beams



01 - C23-2

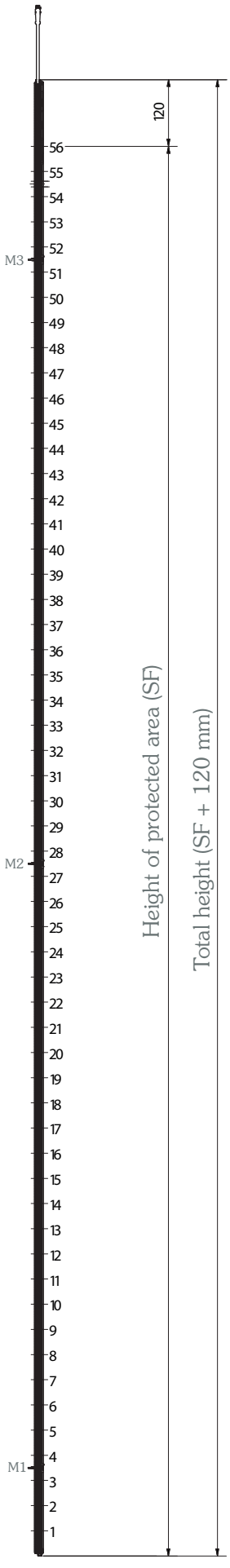
KA	C23-2 SA	C23-2 SF	C22-2 SA	C22-2 SF	C21-2 SA	C21-2 SF	C20-2 SA	C20-2 SF	C19-2 SA	C19-2 SF
23	45	2430	45	2250	45	2070	45	1890	45	1710
22	180	2385	180	2205	180	2025	180	1845	180	1665
21	180	2205	180	2205	180	2025	180	1845	180	1665
20	180	2025	180	2025	180	2025	180	1845	180	1665
19	180	1845	180	1845	180	1845	180	1845	180	1665
18	180	1665	180	1665	180	1665	180	1665	180	1485
17	180	1485	180	1485	180	1485	180	1485	180	1485
16	180	1305	180	1305	180	1305	180	1305	180	1305
15	180	1125	180	1125	180	1125	180	1125	180	1125
14	180	945	180	945	180	945	180	945	180	945
13	180	765	180	765	180	765	180	765	180	765
12	90	585	90	585	90	585	90	585	90	675
11	45	495	45	495	45	495	45	495	45	495
10	45	450	45	450	45	450	45	450	45	450
09	45	405	45	405	45	405	45	405	45	405
08	45	360	45	360	45	360	45	360	45	360
07	45	315	45	315	45	315	45	315	45	315
06	45	270	45	270	45	270	45	270	45	270
05	45	225	45	225	45	225	45	225	45	225
04	45	180	45	180	45	180	45	180	45	180
03	45	135	45	135	45	135	45	135	45	135
02	45	90	45	90	45	90	45	90	45	90
01	45	45	45	45	45	45	45	45	45	45
00										
M3		2228		2048		1868		1688		1508
M2		1148		1103		968		923		788
M1		158		158		158		158		158

KA	C18-2 SA	C18-2 SF	C17-2 SA	C17-2 SF	C16-2 SA	C16-2 SF	C15-2 SA	C15-2 SF	C14-2 SA	C14-2 SF
18	45	1530	45	1350	45	1170	45	990	45	810
17	180	1485	180	1305	180	1125	180	945	180	765
16	180	1305	180	1125	180	945	180	765	90	585
15	180	1125	180	945	180	765	90	585	45	495
14	180	945	180	765	90	585	45	495	45	450
13	180	765	90	585	45	495	45	450	45	405
12	90	585	45	495	45	450	45	405	45	360
11	45	495	45	450	45	405	45	360	45	315
10	45	450	45	405	45	360	45	315	45	270
09	45	405	45	360	45	315	45	270	45	225
08	45	360	45	315	45	270	45	225	45	180
07	45	315	45	270	45	225	45	180	45	135
06	45	270	45	225	45	180	45	135	45	90
05	45	225	45	180	45	135	45	90	45	45
04	45	180	45	135	45	90	45	45		
03	45	135	45	90	45	45				
02	45	90	45	45						
01	45	45								
00										
M3		1328		1148		968		788		608
M2		743		608		563		428		-
M1		158		158		158		158		158

Normative beam selection

KA = channels
SA = beam distances
SF = height of protected area

A-variants – high beam distribution



01 - A56

KA	SA	A56		A55		A54		A53		A52		A51		A50		A49		A48		A47		A46		A45		A44	
		SF		SF		SF		SF		SF		SF		SF		SF		SF		SF		SF		SF		SF	
56	45	2520		2475		2430		2385		2340		2295		2250		2205		2160		2115		2070		2025		1980	
55	45	2475		2430		2385		2340		2295		2250		2205		2160		2115		2070		2025		1980		1935	
54	45	2430		2385		2340		2295		2250		2205		2160		2115		2070		2025		1980		1935		1890	
53	45	2385		2340		2295		2250		2205		2160		2115		2070		2025		1980		1935		1890		1845	
52	45	2340		2295		2250		2205		2160		2115		2070		2025		1980		1935		1890		1845		1800	
51	45	2295		2250		2205		2160		2115		2070		2025		1980		1935		1890		1845		1800		1755	
50	45	2250		2205		2160		2115		2070		2025		1980		1935		1890		1845		1800		1755		1710	
49	45	2205		2160		2115		2070		2025		1980		1935		1890		1845		1800		1755		1710		1665	
48	45	2160		2115		2070		2025		1980		1935		1890		1845		1800		1755		1710		1665		1620	
47	45	2115		2070		2025		1980		1935		1890		1845		1800		1755		1710		1665		1620		1575	
46	45	2070		2025		1980		1935		1890		1845		1800		1755		1710		1665		1620		1575		1530	
45	45	2025		1980		1935		1890		1845		1800		1755		1710		1665		1620		1575		1530		1485	
44	45	1980		1935		1890		1845		1800		1755		1710		1665		1620		1575		1530		1485		1440	
43	45	1935		1890		1845		1800		1755		1710		1665		1620		1575		1530		1485		1440		1395	
42	45	1890		1845		1800		1755		1710		1665		1620		1575		1530		1485		1440		1395		1350	
41	45	1845		1800		1755		1710		1665		1620		1575		1530		1485		1440		1395		1350		1305	
40	45	1800		1755		1710		1665		1620		1575		1530		1485		1440		1395		1350		1305		1260	
39	45	1755		1710		1665		1620		1575		1530		1485		1440		1395		1350		1305		1260		1215	
38	45	1710		1665		1620		1575		1530		1485		1440		1395		1350		1305		1260		1215		1170	
37	45	1665		1620		1575		1530		1485		1440		1395		1350		1305		1260		1215		1170		1125	
36	45	1620		1575		1530		1485		1440		1395		1350		1305		1260		1215		1170		1125		1080	
35	45	1575		1530		1485		1440		1395		1350		1305		1260		1215		1170		1125		1080		1035	
34	45	1530		1485		1440		1395		1350		1305		1260		1215		1170		1125		1080		1035		990	
33	45	1485		1440		1395		1350		1305		1260		1215		1170		1125		1080		1035		990		945	
32	45	1440		1395		1350		1305		1260		1215		1170		1125		1080		1035		990		945		900	
31	45	1395		1350		1305		1260		1215		1170		1125		1080		1035		990		945		900		855	
30	45	1350		1305		1260		1215		1170		1125		1080		1035		990		945		900		855		810	
29	45	1305		1260		1215		1170		1125		1080		1035		990		945		900		855		810		765	
28	45	1260		1215		1170		1125		1080		1035		990		945		900		855		810		765		720	
27	45	1215		1170		1125		1080		1035		990		945		900		855		810		765		720		675	
26	45	1170		1125		1080		1035		990		945		900		855		810		765		720		675		630	
25	45	1125		1080		1035		990		945		900		855		810		765		720		675		630		585	
24	45	1080		1035		990		945		900		855		810		765		720		675		630		585		540	
23	45	1035		990		945		900		855		810		765		720		675		630		585		540		495	
22	45	990		945		900		855		810		765		720		675		630		585		540		495		450	
21	45	945		900		855		810		765		720		675		630		585		540		495		450		405	
20	45	900		855		810		765		720		675		630		585		540		495		450		405		360	
19	45	855		810		765		720		675		630		585		540		495		450		405		360		315	
18	45	810		765		720		675		630		585		540		495		450		405		360		315		270	
17	45	765		720		675		630		585		540		495		450		405		360		315		270		225	
16	45	720		675		630		585		540		495		450		405		360		315		270		225		180	
15	45	675		630		585		540		495		450		405		360		315		270		225		180		135	
14	45	630		585		540		495		450		405		360		315		270		225		180		135		90	
13	45	585		540		495		450		405		360		315		270		225		180		135		90		45	
12	45	540		495		450		405		360		315		270		225		180		135		90		45			
11	45	495		450		405		360		315		270		225		180		135		90		45					
10	45	450		405		360		315		270		225		180		135		90		45							
09	45	405		360		315		270		225		180		135		90		45									
08	45	360		315		270		225		180		135		90		45											
07	45	315		270		225		180		135		90		45													
06	45	270		225		180		135		90		45															
05	45	225		180		135		90		45																	
04	45	180		135		90		45																			
03	45	135		90		45																					
02	45	90		45																							
01	45	45																									
00																											
M3		2318		2273		2430		2183		2138		2093		2048		2003		1958		1913		1868		1823		1778	
M2		1238		1193		1148		1103		1148		1103		1103		1058		1058		1013		968		923		968	
M1		158		158		158		158		158		158		158		158		158		158		158		158		158	

A-variants – high beam distribution

KA	SA	A43																
		SF	A42															
43	45	1935	SF	A41														
42	45	1890	1890	SF	A40													
41	45	1845	1845	1845	SF	A39												
40	45	1800	1800	1800	1800	SF	A38											
39	45	1755	1755	1755	1755	1755	SF	A37										
38	45	1710	1710	1710	1710	1710	1710	SF	A36									
37	45	1665	1665	1665	1665	1665	1665	1665	SF	A35								
36	45	1620	1620	1620	1620	1620	1620	1620	1620	SF	A34							
35	45	1575	1575	1575	1575	1575	1575	1575	1575	1575	SF	A33						
34	45	1530	1530	1530	1530	1530	1530	1530	1530	1530	1530	SF	A32					
33	45	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	1485	SF	A31				
32	45	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	1440	SF	A30			
31	45	1395	1395	1395	1395	1395	1395	1395	1395	1395	1395	1395	1395	1395	SF	A29		
30	45	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	1350	SF	A28	
29	45	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	1305	SF	A27
28	45	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	1260	SF
27	45	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215	1215
26	45	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170	1170
25	45	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125
24	45	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080	1080
23	45	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035	1035
22	45	990	990	990	990	990	990	990	990	990	990	990	990	990	990	990	990	990
21	45	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945	945
20	45	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
19	45	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855
18	45	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810	810
17	45	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765	765
16	45	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720	720
15	45	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675
14	45	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630
13	45	585	585	585	585	585	585	585	585	585	585	585	585	585	585	585	585	585
12	45	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540
11	45	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495
10	45	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
09	45	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405
08	45	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
07	45	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315
06	45	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
05	45	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225
04	45	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
03	45	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
02	45	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
01	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
00																		

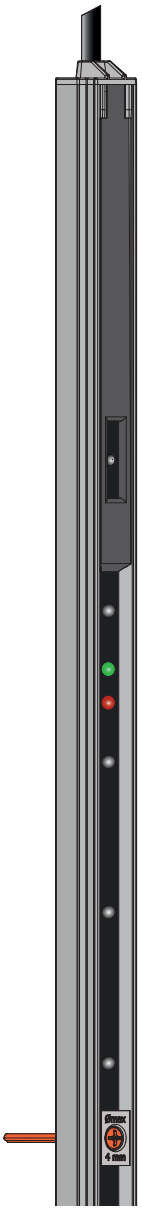
M3		1733	1688	1643	1598	1553	1508	1463	1418	1373	1328	1283	1238	1193	1148	1103	1058	1013
M2		923	923	878	878	833	788	743	788	743	743	698	698	653	608	563	608	563
M1		158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158

A-variants – high beam distribution

KA	SA	A26															
		SF	A25														
26	45	1170	SF	A24													
25	45	1125	1125	SF	A23												
24	45	1080	1080	1080	SF	A22											
23	45	1035	1035	1035	1035	SF	A21										
22	45	990	990	990	990	990	SF	A20									
21	45	945	945	945	945	945	945	SF	A19								
20	45	900	900	900	900	900	900	900	SF	A18							
19	45	855	855	855	855	855	855	855	855	SF	A17						
18	45	810	810	810	810	810	810	810	810	810	SF	A16					
17	45	765	765	765	765	765	765	765	765	765	765	SF	A15				
16	45	720	720	720	720	720	720	720	720	720	720	720	SF	A14			
15	45	675	675	675	675	675	675	675	675	675	675	675	675	SF	A13		
14	45	630	630	630	630	630	630	630	630	630	630	630	630	630	SF	A12	
13	45	585	585	585	585	585	585	585	585	585	585	585	585	585	585	SF	A11
12	45	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	SF
11	45	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495	495
10	45	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
09	45	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405
08	45	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360
07	45	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315
06	45	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270	270
05	45	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225	225
04	45	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
03	45	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135
02	45	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
01	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
00																	

M3		968	923	878	833	788	743	698	653	608	563	518	473	428	383	338	293
M2		563	518	518	473	428	428	428	-	-	-	-	-	-	-	-	-
M1		158	158	158	158	158	158	158	158	158	158	158	158	68	68	68	68

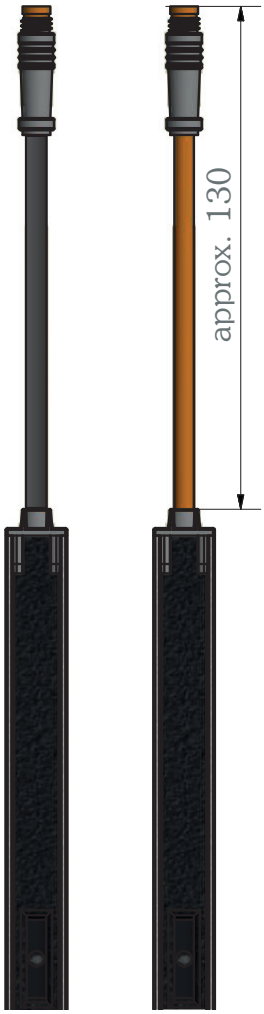
easy direct installation
via screw-through technology

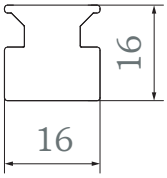


Front-lasered
label field

M-8 plug

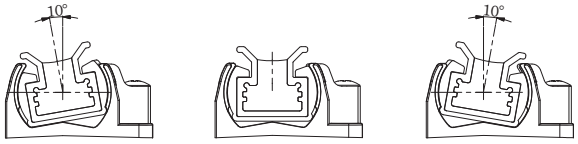
6-pin 4-pin



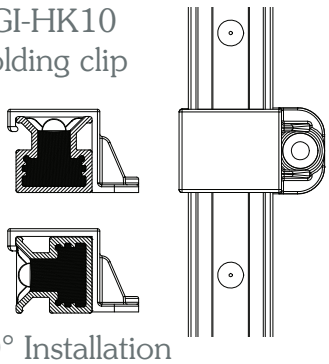


Optional accessories

LIGI-JK10
Adjustable setting clamp
±10°



LIGI-HK10
Holding clip



90° Installation

Order code LIGI - safety light curtain

LIGI-01-BW-P01-T00-A-57-2520-F00-C00-S015

Description

Housing design
01 = standard profile 16x16mm

Finish
R = without anodised finish
S = silver
B = black
_W = car wash (optional)

Output versions
OSE = rectangular signal
P01 = PNP - positive switching, light-on switching (preferred configuration)
P02 = PNP - positive switching, dark-on switching
P03 = PNP - light-on/dark-on switching
N01 = NPN - negative switching, light-on switching (preferred configuration)
N02 = NPN - negative switching, dark-on switching
N03 = NPN - light-on/dark-on switching
R01 = SSR - light-on switching
R02 = SSR - dark-on switching
R03 = SSR - light-on/dark-on switching
PP1 = Push-Pull - light = high-level - dark = low-level
PP2 = Push-Pull - light = low-level - dark = high-level
PP3 = Push-Pull - light-on/dark-on switching

Testing
T00 = pull-down resistor, only activates the alignment mode
T01 = pull-down resistor, test/alignment=low or open
T02 = pull-down resistor, test/alignment=high
T03 = pull-up resistor, test/alignment=low
T04 = pull-up resistor, test/alignment=high or open
T05 = open is normal operation, test=low or high

Beam geometry
A = continuous high detection capability
C = standard-compliant detection capability

Active light beams

Active detection zone
in mm

F = Function
00 = with blanking
01 = without blanking
05 = switching blanking/no blanking programmable
07 = Outdoor (always without blanking)

C = Cable length/connector
00 = pig-tail connector with M8 plug, 4-pin
03 = pig-tail connector with M8 plug, 6-pin

S = Special version
015 = standard version
XXX = custom design without functional difference, for example: color, logo, etc.

Order information

The LIGIs with the OSE, PNP, NPN, and push-pull output variants are supplied with a 4-pin M8 plug system, and the output variants with SSR are supplied with a 6-pin M8 plug system. The delivery includes one connecting cable of 5 m and 15 m each.

Overview of light curtain Variant A (beam distance 45 mm)

Description	Number of beams	SF	GH	OSE output Item no.:	PNP output Item no.:	NPN output Item no.:	SSR output Item no.:
01 - A56	56	2520	2640	318740*	318795*	318871*	318922*
01 - A55	55	2475	2595	318737	318792	318868	321504
01 - A54	54	2430	2550	318734	318789	318865	318916
01 - A53	53	2385	2505	318731	318758	318862	318913
01 - A52	52	2340	2460	318728	318755	318859	318910
01 - A51	51	2295	2415	318725	318752	318856	320886
01 - A50	50	2250	2370	318722*	318749*	318853	320889
01 - A49	49	2205	2325	318719	318746	318850	318901
01 - A48	48	2160	2280	318983	319179	319255	319388
01 - A47	47	2115	2235	318986	319093	320653	319482
01 - A46	46	2070	2190	318989	319060	320656	321055
01 - A45	45	2025	2145	318992	321077	320659	321968
01 - A44	44	1980	2100	318995*	319456*	319258	321971
				T00/F05	T01/P01/ F05	T03/N01/ F05	T05/R03/ F00

Overview of light curtain Variant C (standard compliant beam distance)

Description	Number of beams	SF	GH	OSE output Item no.:	PNP output Item no.:	NPN output Item no.:	SSR output Item no.:
01 - C23-1	23	2520	2640	318786*	318847*	318898*	318949*
01 - C23-2	23	2430	2550	318783	318844	318895	318946
01 - C22-1	22	2340	2460	318780	318841	318892	318943
01 - C22-2	22	2250	2370	318777	318838	318889	318940
01 - C21-1	21	2160	2280	318774	318835	318886	318937
01 - C21-2	21	2070	2190	318771*	318832	318883	318934
01 - C20-1	20	1980	2100	318768	318804	318880	318931
01 - C20-2	20	1890	2010	318765	318801	318877	318928
01 - C19-1	19	1800	1920	318762	318798	318874	318925
				T00/F05	T01/P01/ F05	T03/N01/ F05	T05/R03/ F00

SF = height of protected area
GH = total height

*** Preferred variants, colour-coded**
other light curtain types available on request

Notes

Notes

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