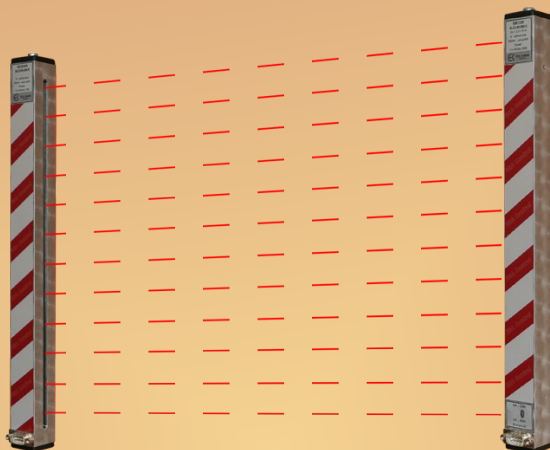


"ESA Control" Ltd



**SAFETY LIGHT CURTAIN**  
**/ PHOTOELECTRIC BARRIER /**  
**Series SLC3**

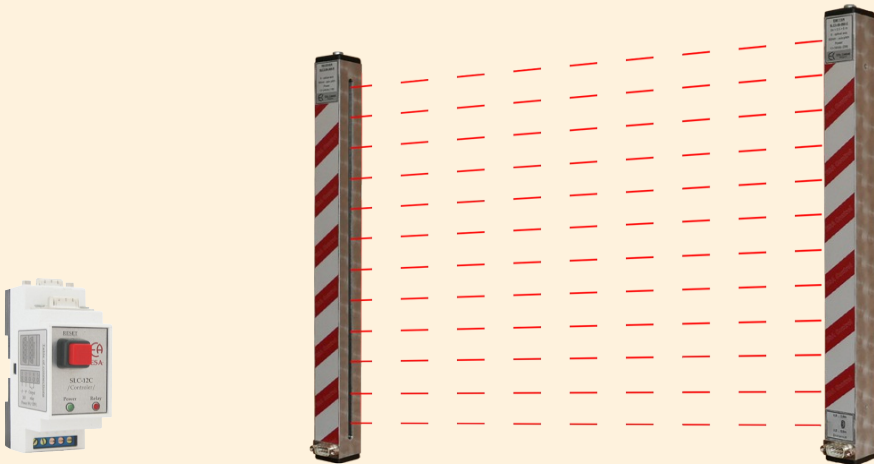
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## Application and operating principle

The safety light curtain (photoelectric barrier) of the series SLC3 is a specialized product used to protect the machines and other moving elements from accidental interventions and to protect the machine operator from injuries. The degree of protection of the optical safety barrier is Ip54.

The optical barrier consists of the following elements: Emitter (SLC3 / E), Receiver (SLC3 / R), Controller (SLC3 / C) and two connecting cables (SLC3-Cable). The emitter and the receiver are situated one against the other and are connected by infrared light rays (optical axes). The maximum number of light rays for the series SLC3 is 12. In a normal operation, the output relay of the controller is switched on and a current flows through the operational circuit (LED "Relay" - lights up). If only one of the rays is interrupted, the output relay of the controller is switched off and interrupts the current in the operating circuit (LED "Relay" - goes out). The restoring of the working process of the light curtain and turning on of the output relay starts by pushing once the "Reset" button situated on the face panel of the controller. Additional external button "Reset" can be used set between terminals 1 and 5 of the controller. The light curtain operates in automatic mode if terminals 1 and 5 are shorted.

For precise operation of the protective light curtain, its working distance is divided into two ranges: 0 ÷ 1.50 m and 1.50 ÷ 6 m. The operating range is selected using a small switch located on the lower rear of the emitter.



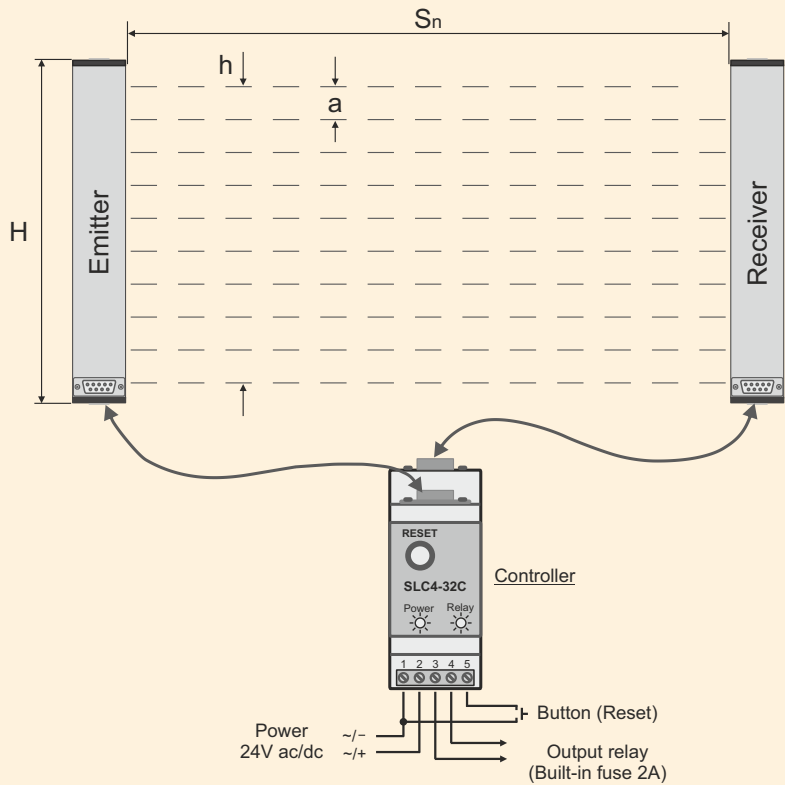
## Technical parameters

Operating distance, $S_n$	0...6 m (Option 6÷10)
Supply voltage, $U_s$	24 V AC/DC $\pm 10\%$
Current consumption, $I_s$	120 mA
Output - Relay (1 x NC)	1A / 220VAC (2A, Fuse)
Reaction time (ON to OFF)	100 ms
Startup waiting time (OFF to ON)	400 ms
Operating temperature range, $T_{amb}$	-20°...+50°C
Degree of protection - emitter, receiver	IP54
Degree of protection - controller	IP40
Indicator of the supply voltage	LED (green)
Indicator for the state of the output relay	LED (red)
Connecting a controller with a receiver (emitter)	Canon-9 (m) / Canon-9 (f)
The controller joining	Terminal block
The controller size (for M35 DIN-rail)	86x35x58 mm

Type parameters

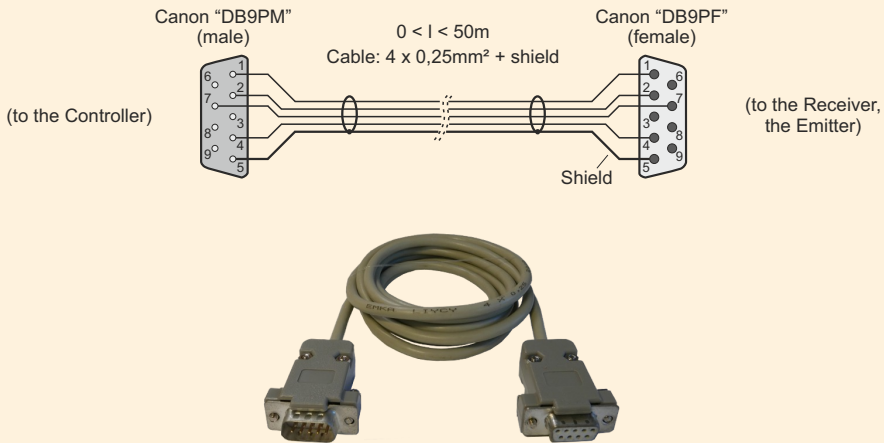
Type	Number of optical axes n	Optical axes pitch a /mm/	Effective height of action h /mm/	Height of curtain H /mm/
SLC3-06-030	6	30	150	210
SLC3-06-060	6	60	300	360
SLC3-12-030	12	30	330	390
SLC3-12-060	12	60	660	720

Joining

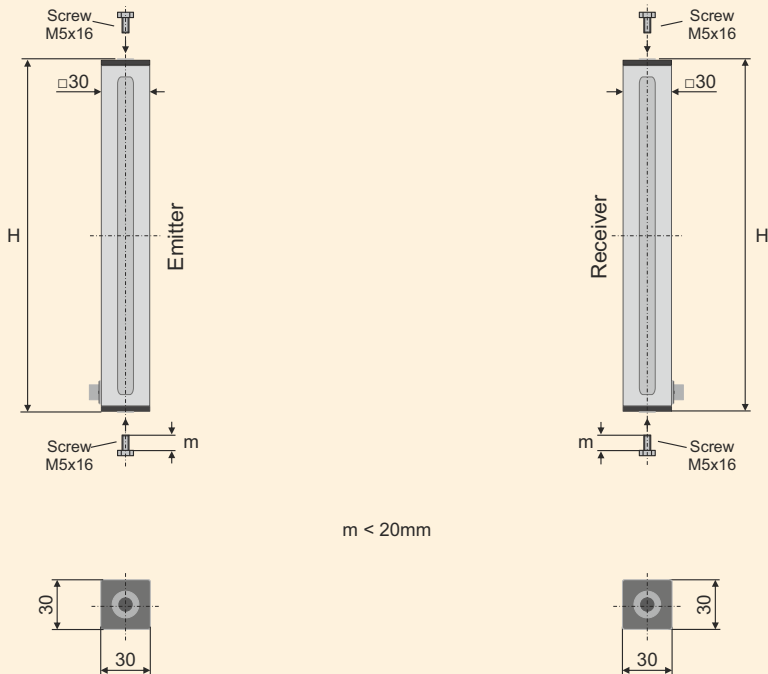


**Joining cable ( controller - emitter; controller - receiver )**

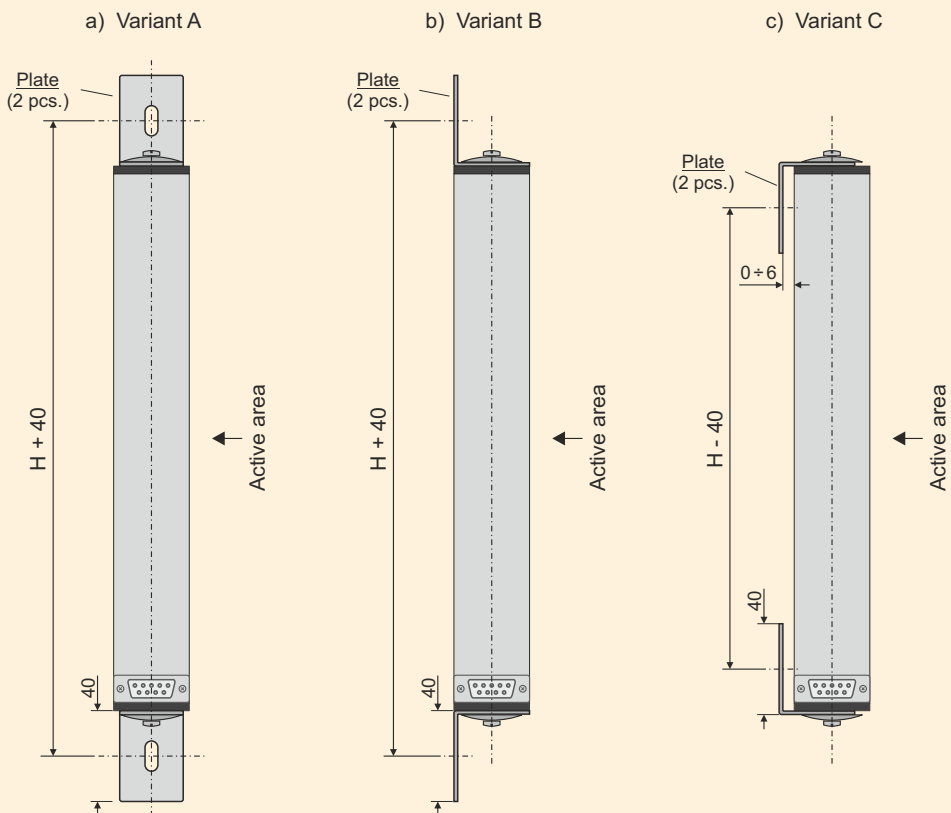
Two SLC3-Cable type shielded connection cables are required for the operation of the optical safety barrier series SLC3. One is used to connect the controller to the emitter and the other to connect the controller to the receiver. The cables are equivalent and interchangeable, but can be of different lengths. At both ends they end with "Canon 9" connectors (male and female).



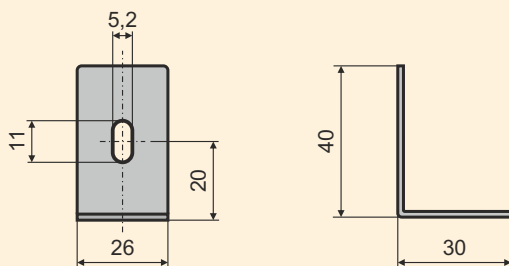
## Overall and joining sizes



## Method of installation the emitter and receiver using fixing plates



## Fixing plates



## Controller SLC3-12C

The SLC3-12C controller is part of the SLC3 series safety light curtain kit. It is an electronic device providing supply voltage to the emitter and the receiver, and synchronizes their signals. The controller is powered with 24V direct or alternating voltage. There is a relay output of "dry contact" type which includes to the control circuit of the actuation mechanisms. Direct inclusion of the controller to power circuits is not allowed. In the controller is mounted 2A fuse to protect the output circuit from overloading. The controller is designed for a M35 DIN rail mounting.

