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DATASHEET

INTERLOCK SEMAPHORE

SL, SL-S, SL-E, SL-SE

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Date: 11.11.2025.

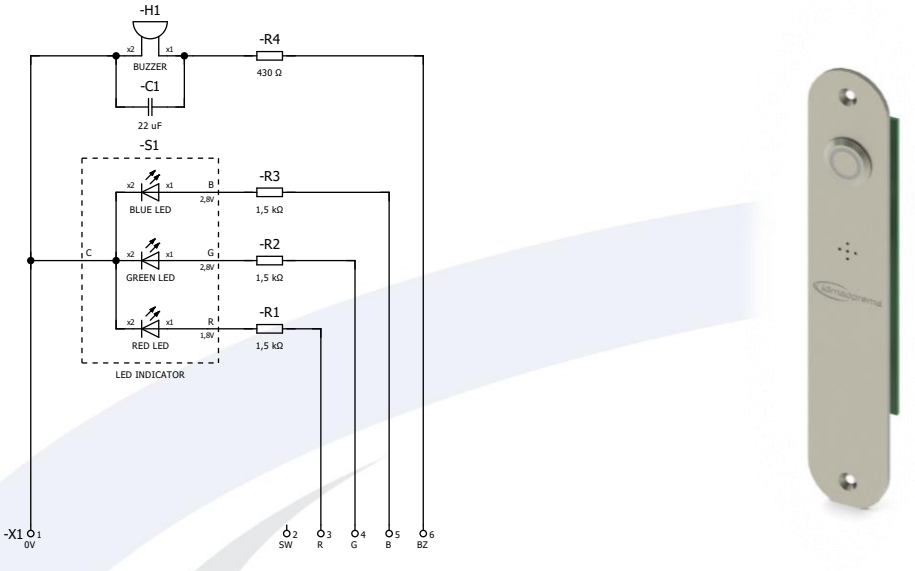
Interlock system

The interlock system prevents more than one door from being opened at the same time, in order to prevent the direct transfer of air particles from one room to another. The interlock semaphore signals the possibility of passing through the door. A red light indicates a locked door, while a green light indicates an unlocked door. A buzzer and various combinations of flashing lights signal irregular situations. A push button is used to unlock the door, while the mushroom button allows the door to be unlocked in emergency situations.

Semaphore - SL (S*ignal light*) - C00001674

The SL semaphore consists of an RGB (red, green, blue) LED and a buzzer. It is used in interlock systems where only visual and audible indication is required. Examples of using SL semaphore:

- An interlock system in which all doors are normally unlocked (the side of the door that is not in the evacuation route)
- Access-controlled doors (the side of the door where the access control is installed)



Wiring diagram and SL semaphore

TERMINAL		WIRE COROL		FUNCTION	TECH. CHARACTERISTICS
1	0V		WHITE	0V (COM)	-
2	SW		BROWN	-	-
3	R		GREEN	LED diode, red	24VDC; 15mA
4	G		YELLOW	LED diode, green	24VDC; 15mA
5	B		GREY	LED diode, blue	24VDC; 15mA
6	BZ		PINK	Buzzer	24VDC; 30mA, 2.3kHz, 85dB

SL semaphore terminals

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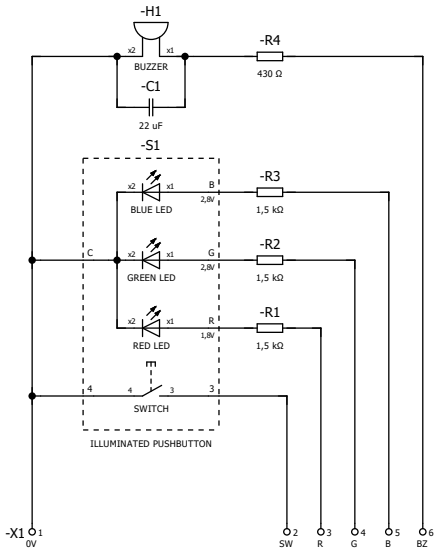
Semaphore - SL-S (*Signal light – Switch*) - C00001675

The SL-S semaphore consists of an RGB (red, green, blue) LED, a buzzer, and a NO push button. It is used in interlock systems where, in addition to visual and audible signaling, a push button for unlocking the door is also required. Examples of using SL-S semaphore:

- Passbox
- An interlock system in which all doors are normally locked (the side of the door that is not in the evacuation route)
- Automatic door (the side of the door that is not in the evacuation route)



Wiring diagram and SL-S semaphore

TERMINAL		WIRE COROL		FUNCTION	TECH. CHARACTERISTICS
1	0V		WHITE	0V (COM)	-
2	SW		BROWN	Push button, NO	DC-12: 2A @24VDC
3	R		GREEN	LED diode, red	24VDC; 15mA
4	G		YELLOW	LED diode, green	24VDC; 15mA
5	B		GREY	LED diode, blue	24VDC; 15mA
6	BZ		PINK	Buzzer	24VDC; 30mA, 2.3kHz, 85dB

SL-S semaphore terminals

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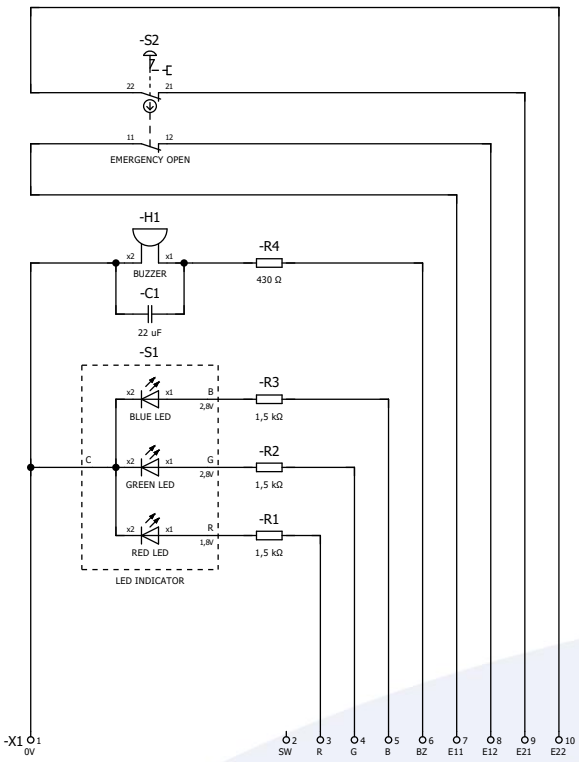
Semaphore - SL-E (*Signal light – Emergency*) - C00001676

The SL-E semaphore consists of an RGB (red, green, blue) LED, a buzzer, and a 2NC emergency push button. It is used in interlock systems where, in addition to visual and audible signaling, an emergency exit push button is also required. An example of using the SL-E semaphore:

- An interlock system in which all doors are normally unlocked (the side of the door that is in the evacuation route)



Wiring diagram and SL-E semaphore

TERMINAL		WIRE COROL	FUNCTION	TECH. CHARACTERISTICS
1	0V	WHITE	0V (COM)	-
2	SW	BROWN	-	-
3	R	GREEN	LED diode, red	24VDC; 15mA
4	G	YELLOW	LED diode, green	24VDC; 15mA
5	B	GREY	LED diode, blue	24VDC; 15mA
6	BZ	PINK	Buzzer	24VDC; 30mA, 2.3kHz, 85dB
7	E11	BLUE	Emergency button, NC, contact 11	DC-12: 2A @24VDC
8	E12	RED	Emergency button, NC, contact 12	DC-13: 1A @24VDC
9	E21	BLACK	Emergency button, NC, contact 21	DC-12: 2A @24VDC
10	E22	VIOLET	Emergency button, NC, contact 22	DC-13: 1A @24VDC

SL-E semaphore terminals

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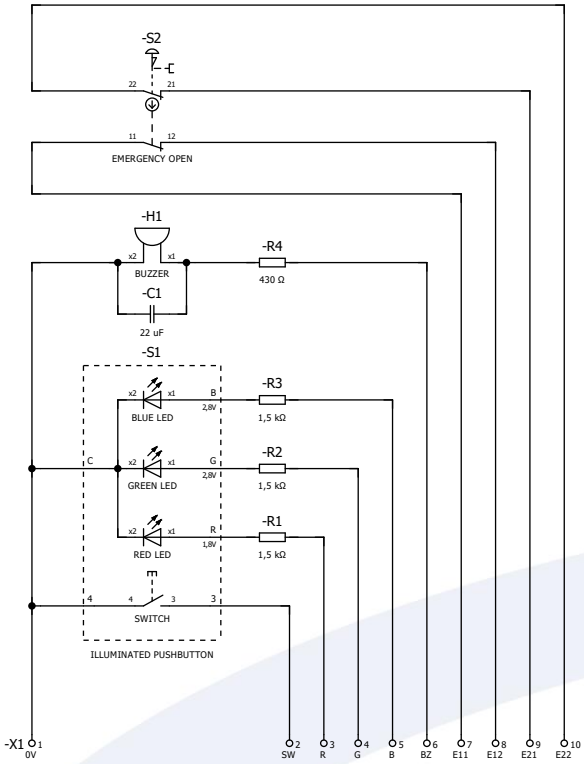
Semaphore - SL-SE (*Signal light – Switch, Emergency*) - C00001677

The SL-SE semaphore consists of an RGB (red, green, blue) LED, a buzzer, a NO push button, and a 2NC emergency push button. It is used in interlock systems where, in addition to visual and audible signaling, a door-unlock push button and an emergency exit push button are required. Examples of using SL-SE semaphore:

- An interlock system in which all doors are normally locked (the side of the door that is in the evacuation route)
- Automatic door (the side of the door that is in the evacuation route)



Wiring diagram and SL-SE semaphore

TERMINAL		WIRE COROL		FUNCTION	TECH. CHARACTERISTICS
1	0V		WHITE	0V (COM)	-
2	SW		BROWN	Push button, NO	DC-12: 2A @24VDC
3	R		GREEN	LED diode, red	24VDC; 15mA
4	G		YELLOW	LED diode, green	24VDC; 15mA
5	B		GREY	LED diode, blue	24VDC; 15mA
6	BZ		PINK	Buzzer	24VDC; 30mA, 2.3kHz, 85dB
7	E11		BLUE	Emergency button, NC, contact 11	DC-12: 2A @24VDC
8	E12		RED	Emergency button, NC, contact 12	DC-13: 1A @24VDC
9	E21		BLACK	Emergency button, NC, contact 21	DC-12: 2A @24VDC
10	E22		VIOLET	Emergency button, NC, contact 22	DC-13: 1A @24VDC

SL-SE semaphore terminals

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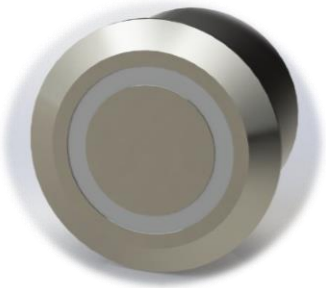
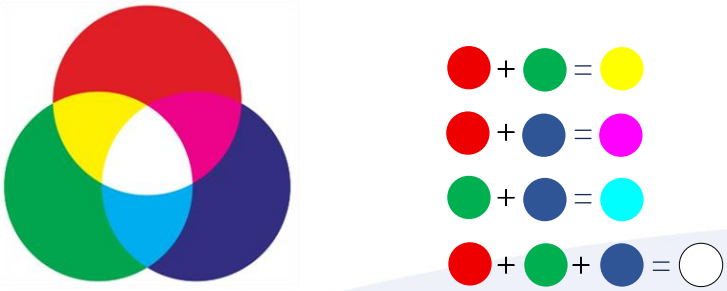
General information

Using the built-in LED diode and combining the three primary colors (red, green and blue), each of the listed semaphore version can display a total of seven colors.



RGB LED diode

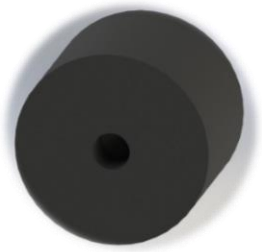
By combining red and green, yellow is obtained; by combining red and blue, purple; and by combining green and blue, turquoise. White is obtained by combining red, green, and blue.



RGB color combination

In the interlock system, red indicates locked doors and green indicates unlocked doors. Other colors may be used to represent different states of the interlock system (e.g., blue for a state in which an interlock system reset is required after the emergency exit button has been activated).

The buzzer is used to signal various irregular conditions, eg a door open for too long, two or more doors open at the same time, etc. The built-in buzzer emits a continuous tone of 2.3 kHz (±300 Hz) with a sound pressure level of 85 dB at a distance of 10 cm from the semaphore.



Buzzer

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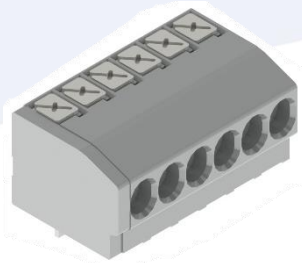
On the SL-S and SL-SE semaphore versions, one side of the NO contact of the door unlock push button is permanently connected to the 0V potential. The other side of the NO contact is connected to terminal 2 (SW) of the semaphore. When the push button is pressed, 0V is present at terminal 2 (SW) of the semaphore. This means that, to use this push button, the digital inputs on the PLC must be sourcing inputs.

The emergency push button on the SL-E and SL-SE semaphore versions consists of two NC contacts. The first NC contact is used to directly interrupt the power supply to the electromagnetic lock. The second NC contact is used to send a signal to the PLC/BMS system.
After activation, the emergency push button remains in the same position. To deactivate the emergency push button, it must be pulled out. Protective collar around the emergency push button prevents unintended activation.

Emergency push button

The terminals on the SL and SL-S semaphore versions are 6-pole, while the SL-E and SL-SE versions have 6-pole plus 4-pole terminals. No tool is required to connect solid conductors or fine-stranded conductors with ferrules. A flat-blade screwdriver 2,5x0,4 is required for disconnection.



6-pole terminal

Terminal type	Push-in (push button)
Rated current	17,5 A
Solid conductor	0,2 ... 1,5 mm²
Fine-stranded conductor with ferrule	0,25 ... 1 mm²
Strip length	8-10 mm

Technical characteristics of 4-pole and 6-pole terminals

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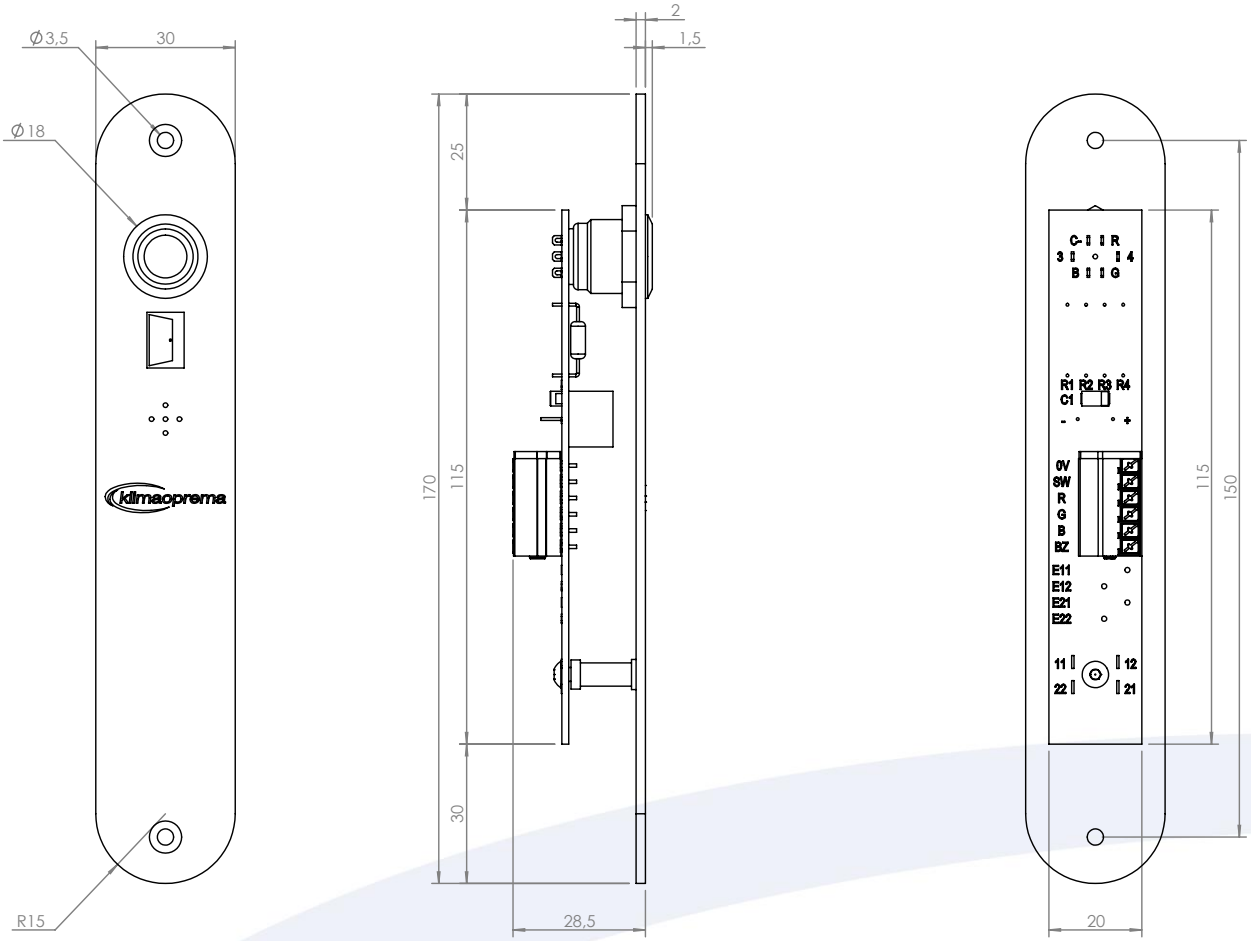
Dimensions

SL and SL-S semaphore dimensions



SL and SL-S semaphore dimensions

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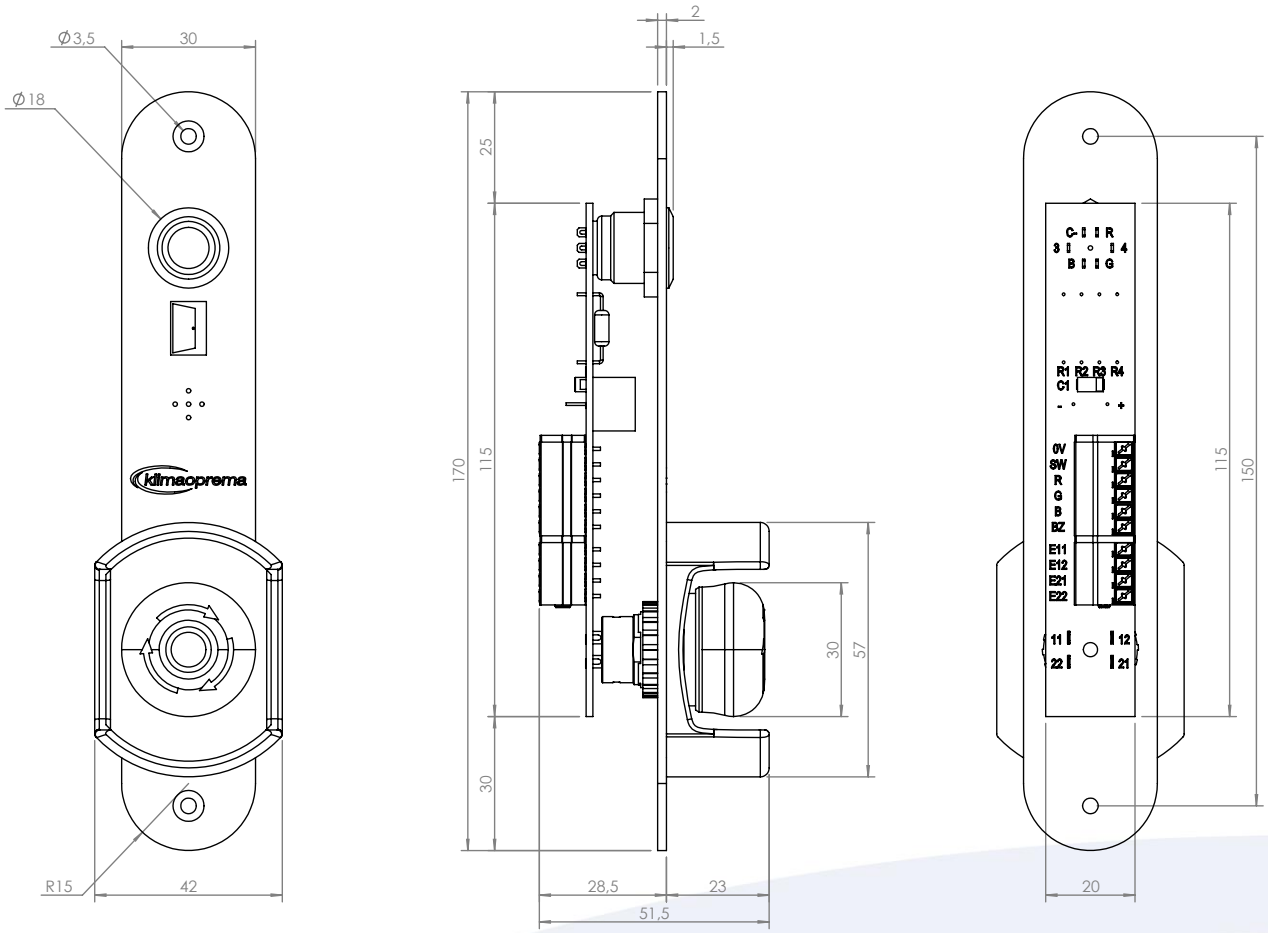
SL-E and SL-SE semaphore dimensions



SL-E and SL-SE semaphore dimensions

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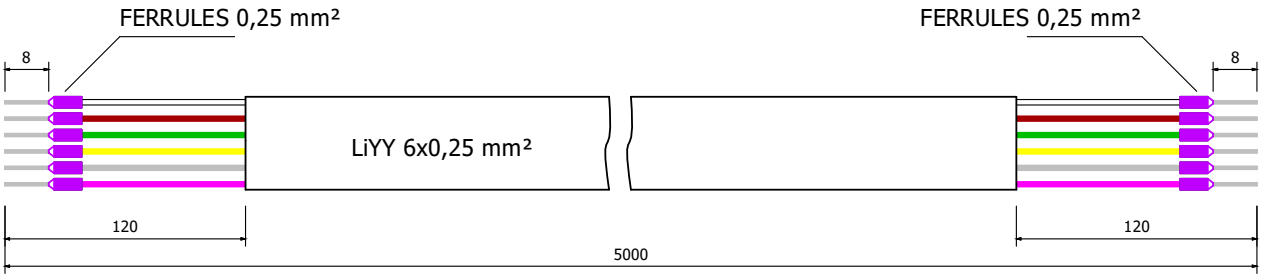
Accessories

Semaphore cable SL-xx 6P - 10071192

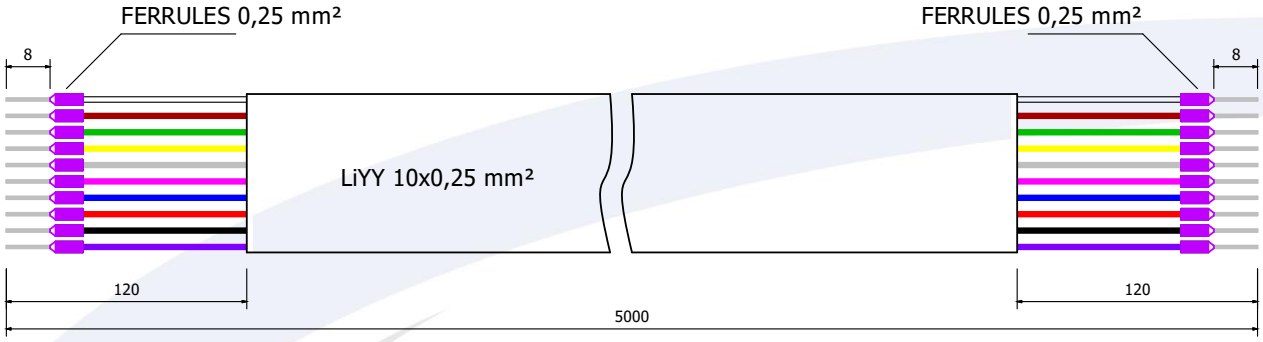
The cable is used to connect semaphores without an emergency push button (SL, SL-S) and the junction box.



Semaphore cable SL-xx 6P

Semaphore cable SL-xx 10P - 10071193

The cable is used to connect semaphores with an emergency push button (SL-E, SL-SE) and the junction box.



Semaphore cable SL-xx 10P

Screw for a semaphore SL-xx - 10019587

Screw for fixing a semaphore SL-xx to the door frame (DIN7991, A2, M3x10). Two pieces needed.

Screw for a semaphore SL-xx

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