

# Emergency Cord Switch Type LRS 004



Device identification no.: 93.046 690.004



## OPERATING INSTRUCTIONS






## **CE** CE-Sign and Conformity

The device meets the requirements of the valid European and national regulations.

Conformity has been proved and the corresponding declarations and documents are deposited at the manufacturer.



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# 1 For your own Safety

## 1.1 Intended Application

Emergency cord switches are used for emergency cut-off of continuous flow conveyors and tooling and processing machines. The emergency cord switches comply with the high requirements of the trade associations, who obligatorily stipulate emergency cut-off devices in belt conveyors for personal protection (UVV – VBG 10).

Applications other than specified and unauthorised modifications of the device or its components may lead to injury to persons and damage to the device for which the manufacturer is **not liable**.

"Intended Application" means that any work performed with the device or on the device must be carried out in accordance with these **operating instructions**. **Only qualified personnel** that are familiar with the **regulations for the prevention of accidents** as well as the standard safety rules, are allowed to work on the device.

**Observing the intended application protects yourself and prevents damage to the device!**

## 1.2 Symbols

Please pay particular attention to the text passages that are marked with the following symbols:



**Danger!**

**Information that must be observed under all circumstances in order to prevent the operator from being injured.**



**Attention!**

**Information that must be observed in order to prevent damage to the device.**



Helpful additional information



## 2 Transport, Packing, Storage, and Disposal

### 2.1 Transport and Packing

Choose a suitable packing in order to prevent damage to the device during transport, or when sending devices or components to KIEPE ELEKTRIK for repair. Take great care that the device is protected against shocks and humidity. Thus, damage due to transport is prevented, for which the manufacturer is not liable.

### 2.2 Storage

Avoid significant variations in temperature that may cause the formation of condensation water, as this might damage the device.

The permissible storage temperature is between  $-25^{\circ}\text{C}$  and  $+80^{\circ}\text{C}$ .



**Attention!**

**Keep the device clean and dry.**

### 2.3 Disposal

If possible, reuse the packing material or dispose of it in an environmentally friendly way.

Send the device and components to KIEPE ELEKTRIK for correct recycling or disposal (*company address see back cover*).



### 3 Design and Function

Emergency cord switches are used for emergency cut-off of continuous flow conveyors and tooling and processing machines. The continuous flow conveyor or the machine can be stopped at any hazardous location by means of one emergency cord switch with a range of max. 20 m.



#### Danger!

The release wire (15) should be tightened along the conveying system in such a way, that it is visible along its entire length.

The emergency cord switch, type LRS 004, is a unidirectional operated switch. If the release wire (15) sags or tears off, the operation of two normally closed contacts is forced (see fig. 3-1 and 3-2). In addition, the EMERGENCY OFF command can be triggered by means of the red mushroom button (5) mounted onto the lid of the cover. If the release wire (15) is pulled, a mechanical lock is activated, which can only be released via the reset button (4) on the device.

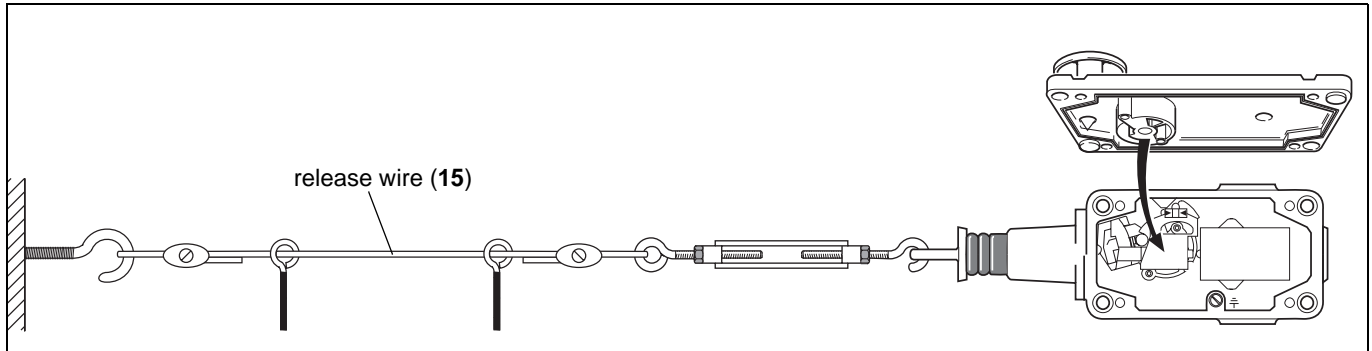


Fig. 3-1: Function of the emergency cord switch type LRS 004

The current switching condition (*AUS/OFF–EIN/RUN–SCHLAFF/SLACK*) of the switch is indicated on the cover lid (2).

The length of the release wire (15) depends on the local conditions, however, it may not exceed a length of 20 m.



### Danger!

**After triggering and before resetting the emergency cord switch, the system must be examined over the entire length of the release wire (15), in order to find out the cause of the activation of the emergency cord switch.**

The conveying system can only be restarted after unlocking the emergency cord switch by means of the reset button (4) on the device.

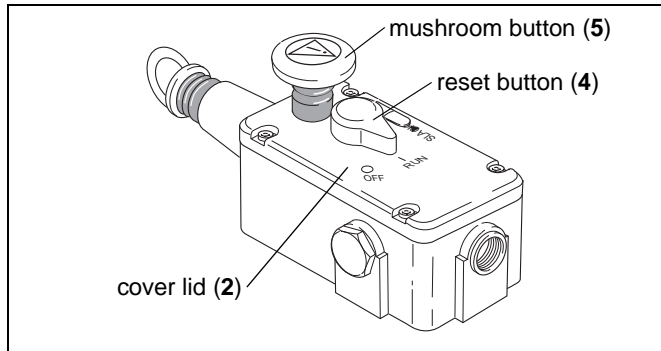


Fig. 3-2: Function of the emergency cord switch type LRS 004





## 4 Technical Data

### 4.1 General Technical Data

Complying with the following regulations	EN 60947-5-1, EN 0418, VDE 0110 – contamination class: 2 (internal), 4 (external), UVV – VBG 10
Suitable for	Controls and plants according to EN 60204
Design	AISi
Colours	Cover: yellow (RAL 1004), mushroom button: red (RAL 3000), reset button: blue
Fastening	4 bores for screws M 5
Permissible ambient temperature	– 25 °C ... + 80 °C
Switching system	Cam switch: 1 normally open contact, 2 normally closed contacts, forced operation
Permissible insulation voltage $U_i$	AC 250 V
Conventional thermal current $I_{th}$	10 A
Switching capacity $I_e/U_e$	2 A / AC 250 V
Utility category	AC 15
Protection class	IP 66 according to EN 60529
Built-in position	any
Supply line inlet	3 threads for PG 13.5 screw connection
Conductor connection	housing, screw M 4
Cross section for connection	max. 2.5 mm <sup>2</sup>
Operating force	approx. 190 N (preloaded force approx. 110 N)
Weight	approx. 630 g

## 4.2 Dimensions

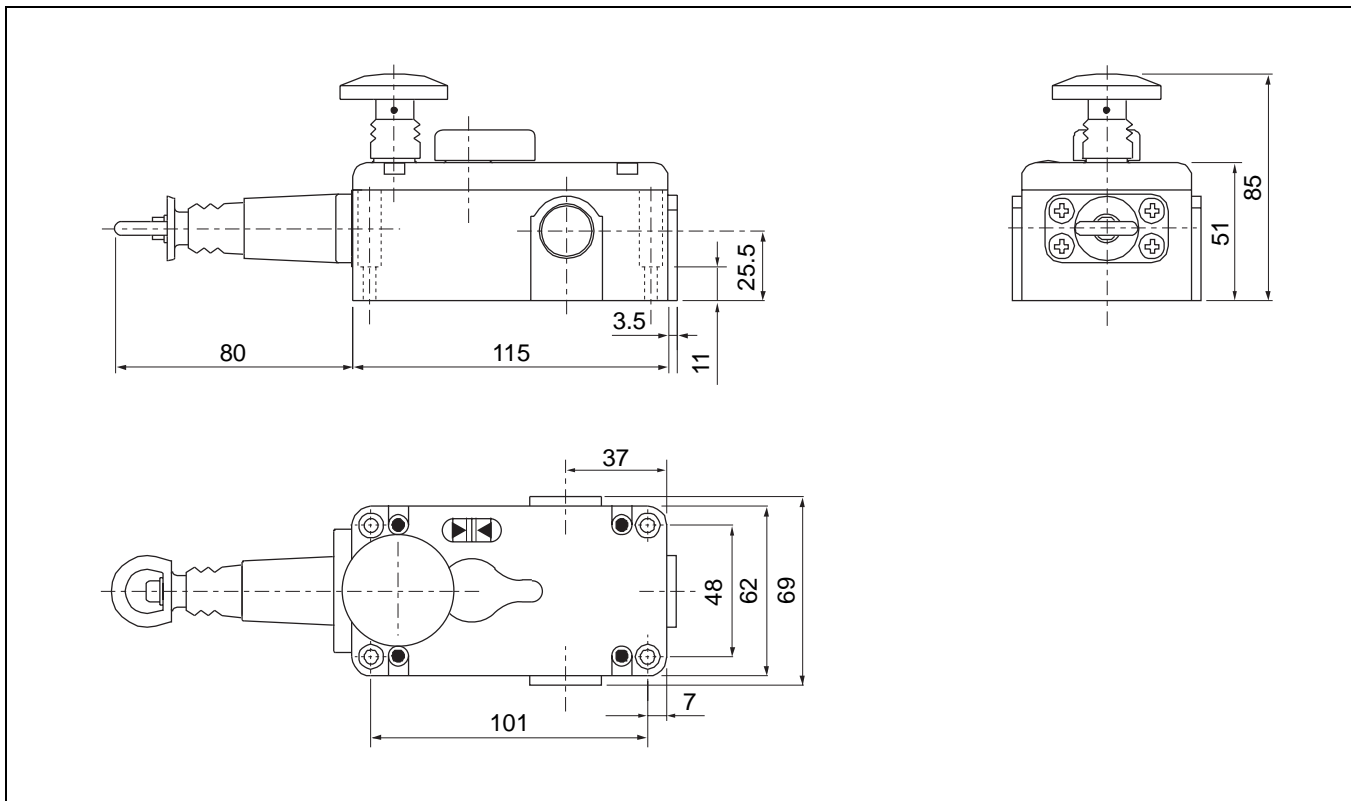


Fig. 4-1: Dimensions LRS 004 [mm]



## 5 Mounting and Dismounting

### 5.1 Scope of Delivery

The emergency cord switches are delivered ready for operation without any accessories (see section 7.1 "Ordering Accessories").

### 5.2 Mounting

The emergency cord switches are installed to the belt conveyor structure by means of KIEPE accessories. In order to mount the emergency cord switch, the following accessories are required (see fig. 5-1 and 5-2):

- four screws M 5 for fastening the emergency cord switch through the fastening bores (6)
- PG fitting nut (10)
- release wire (15) made of flexible steel wire (red), plastic-covered
- rope tension jack (17)
- egg-shaped brackets (18)
- eyebolts (19) M 12 x 60
- swivel hook (20) M 10

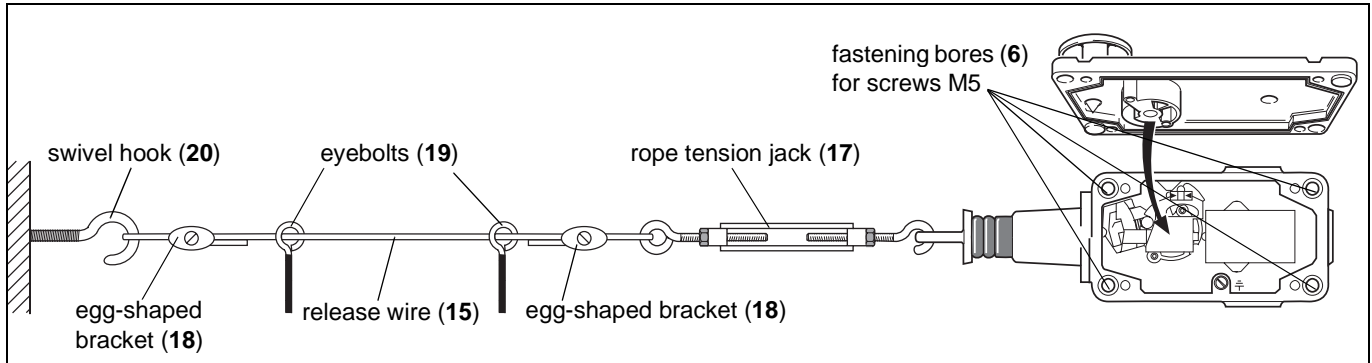


Fig. 5-1: Accessories for fastening the emergency cord switch to the belt conveyor system

### 5.2.1 Mounting to a Belt Conveyor



#### Danger!

Before mounting, disconnect the belt conveyor system from the voltage supply and prevent it from being switched on again.



#### Danger!

The release wire (15) should be tightened along the conveyor in such a way, that it is visible along its entire length.



#### Attention!

The emergency cord switches may only be integrated into control circuits.

Mount the emergency cord switch and the accessories to the belt conveyor structure as follows (see fig. 5-2 and 5-3):

1. Disconnect the belt conveyor system from the voltage supply and prevent it from being switched on again.
2. Open the cover lid (2) by loosening the four screws (7).



#### Danger!

Spilled material may not affect the function of the emergency cord switch.

3. Fasten the emergency cord switch by means of four screws M 5 through the fastening bores (6) in the cover (1) to the belt conveyor structure or to the machine to be monitored.

Make sure that the function of the emergency cord switch is not affected by spilled material.

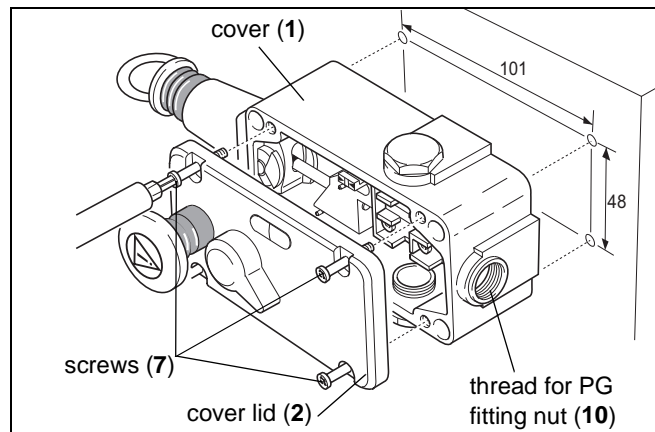


Fig. 5-2: Fastening of the emergency cord switch to the belt conveyor system

4. Fasten the swivel hook (20) to the belt conveyor system or machine to be monitored.
5. Mount the eyebolts (19) that guide the release wire (15) to the belt conveyor structure.  
Distance between the eyebolts (19): max. 4 m
6. Fasten the release wire (15) to the rope tension jack (17) by means of an egg-shaped bracket (18).
7. Pull the release wire (15) through the eyebolts (19).
8. Fasten the release wire (15) to the swivel hook (20) by means of an egg-shaped bracket (18).

### 5.2.2 Electrical Connection



#### Danger!

**Before starting the mounting, disconnect the belt conveyor system from the voltage supply and prevent it from being switched on again.**

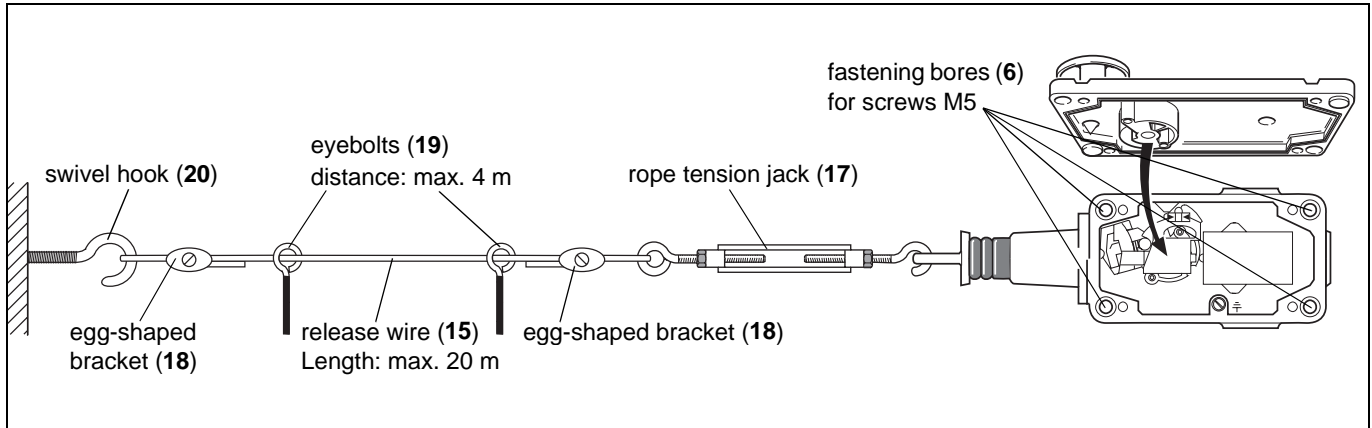


Fig. 5-3: Fastening of the emergency cord switch to the conveyor belt system

**Attention!**

The emergency cord switches may only be integrated into control circuits.

**Attention!**

In order to maintain the protection class IP 66, the PG fitting nuts must be sealed very effectively.

Connect the emergency cord switch as follows (see fig. 5-4 and 5-5):

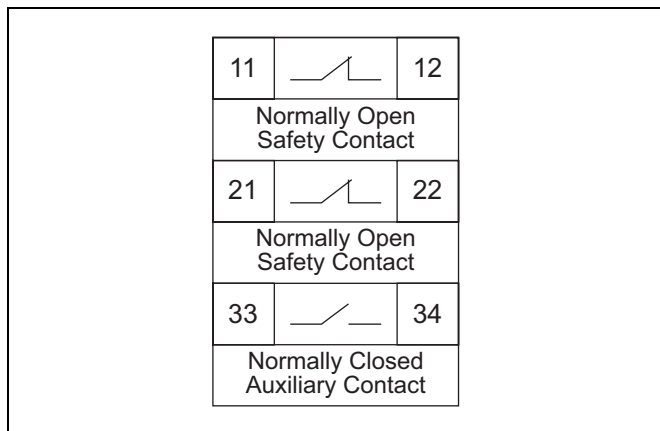


Fig. 5-4: Electrical connection – Contact designations

1. Before mounting, disconnect the conveyor system from the voltage supply and prevent it from being switched on again..
2. Screw in one PG fitting nut (10) into one of the three threads of the emergency cord switch.
3. Pull the connection cable through the PG fitting nut (10).
4. Connect the cable to the terminals according to the connection diagram:  
Open contacts: connections 11/12 and 21/22  
closed contacts: connections 33/34
5. Tightly fasten the PG fitting nut (10).

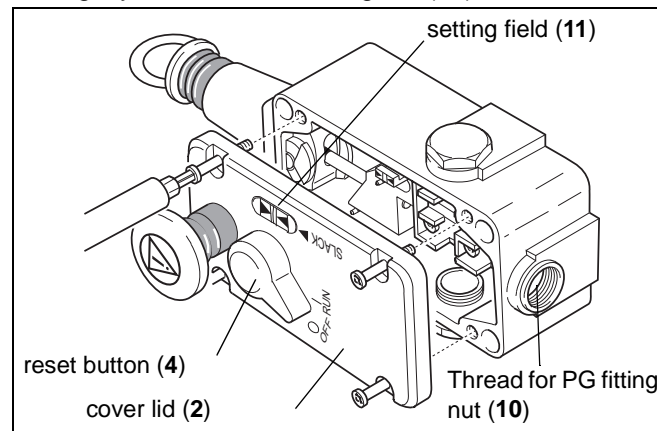


Fig. 5-5: Connecting the emergency cord switch

- Set the reset button (4) into position *AUS/OFF*.
- Close the cover lid (2) and fasten it by means of screws.

### 5.2.3 Tightening the Release Wire



**Danger!**

**Before mounting, disconnect the conveyor system from the voltage supply and prevent it from being switched on again.**



**Danger!**

**The release wire (15) should be tightened in such a way, that it is visible along its entire length.**

Tighten the release wire (15) as follows (see fig. 5-6 and 5-7):

- Preload the emergency cord switch by means of the rope tension jack (17) or the swivel hook (20), until the black marker in the setting field (11) is positioned between the two arrows.

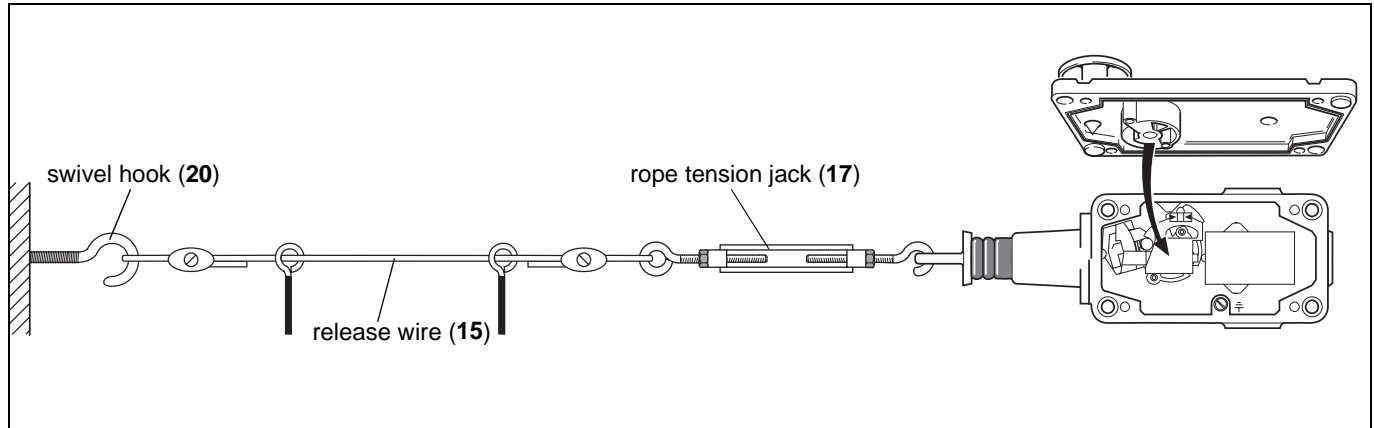


Fig. 5-6: Tightening the emergency cord switch

2. Set the reset button (4) into position *EIN/RUN*.
3. Forcefully pull the release wire (15). The reset button (4) must jump into position *AUS/OFF*. Trigger the emergency cord switch several times.
4. Check the tension of the release wire (15) in the setting field (11). If the marker is not set between the two arrows any more, repeat the tightening of the release wire (15) according to step 1.

The emergency cord switch is properly loaded and ready for operation after switching on the voltage supply.

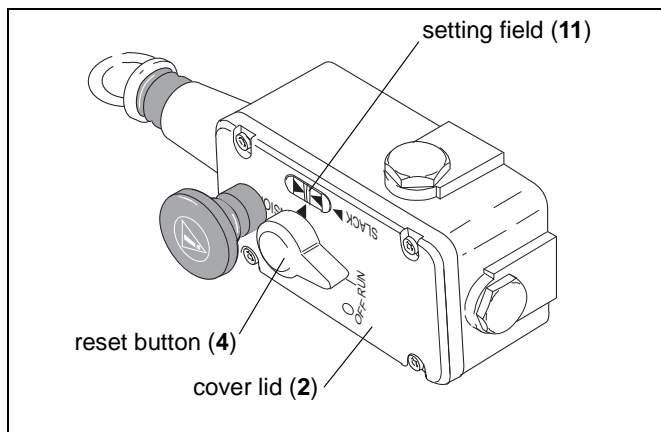


Fig. 5-7: Setting the emergency cord switch





## 6 Maintenance and Repair

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The emergency cord switches type LRS 004 are maintenance-free.

Defective devices can be sent to KIEPE ELEKTRIK for disposal (*company address see back cover*).



## 7 Ordering Accessories and Devices

### 7.1 Ordering Accessories

With every purchase order, please quote (*company address see back cover*):

1. **Order text for accessories**  
e. g. eyebolts M 12 x 60
2. **Order number**  
e. g. 94.045 727.001

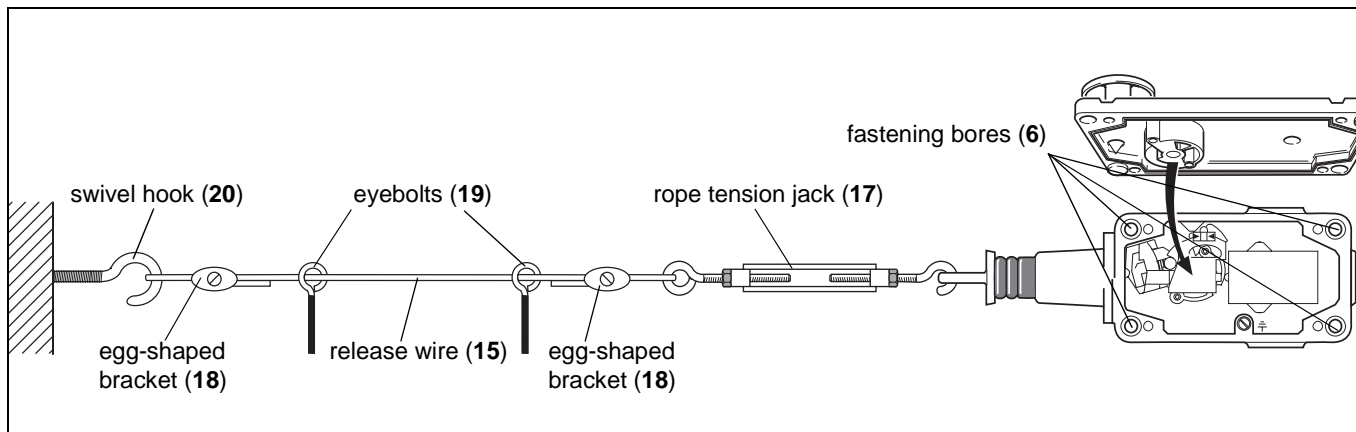


Fig. 7-1: Accessories

Item	Order text	Order number
15	Release wire, red, flexible steel wire, plastic-covered (available in rolls of 50, 100, or 500 m)	
	∅ 3 mm	94.045 731.001
	∅ 5 mm	94.045 731.002
17	Rope tension jack (metal, 1 hook, 1 eye)	215.22.80.02.01
18	Egg-shaped bracket	
	for release wire ∅ 3 mm	94.047 869.001
	for release wire ∅ 5 mm	94.047 869.002
19	Eyebolt	
	M 12 x 60	94.045 727.001
	M 12 x 200	94.045 727.002
20	Swivel hook M 10	94.045 728.001

## 7.2 Ordering Devices

With every purchase order please quote (*company address see back cover*):

1. **Type designation of the emergency cord switch**  
(*s. rating plate on the cover lid*): LRS 004
2. **Device identification number**  
(*s. rating plate on the cover lid*):  
93.046 690.004

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