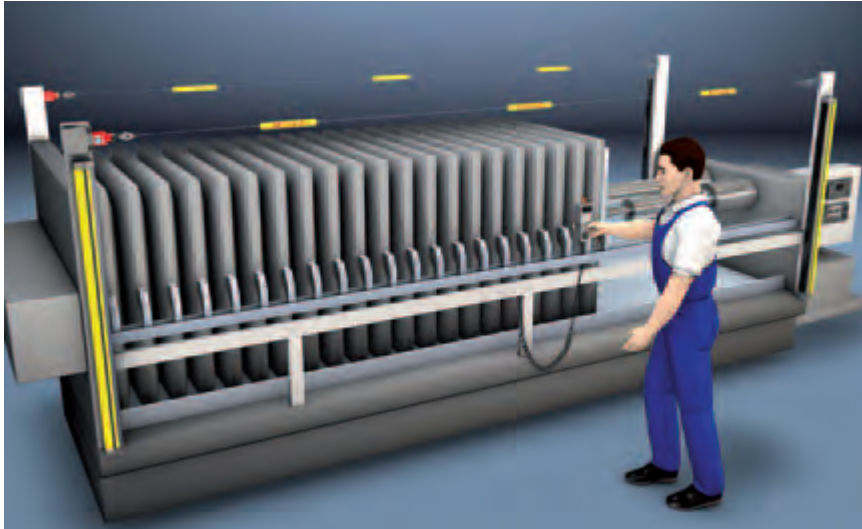


SAFETY COMMAND DEVICES

ERS200 E-STOP Rope Switch



ERS200 E-STOP Rope Switch as Safety Command Device on a filter press

For stopping in emergencies EN ISO 12100-1 stipulates protective devices and supplementary measures, such as E-STOP buttons or emergency rope switches, for example. The E-STOP function may not be used here as a substitute for protective devices or other safety functions. The ERS200 E-STOP Rope Switch is used with preference with expansive points of operation. Its rope pull activation guarantees that it is easy to reach and activate all along the point of operation. The switch's alignment indicator ensures that it is easy to set. The ERS 200 variants enable integration in control circuits up to category 4 in accordance with EN ISO 13849.

Typical areas of application

- Machinery and systems with expansive points of operation
- Large machines and systems, in which command input by pulling a rope is beneficial

Important technical data, overview

Switch type	E-STOP control device in accordance with EN 60947-5-5
Housing material	Metal
Contact equipment	1NC ⊖ + 1NO 2NC ⊖ + 1NO 2NC ⊖
Switching principle	Creep contact
Internal actuator	E-STOP Rope Switch
Actuation force (pull-out)	83 N, 235 N
Actuation force (slacken)	63 N, 147 N
Actuation force (pull-out with forced separation)	90 N, 250 N
Connection system	M20 x 1.5 (3-way)
Protection rating	IP 67

Functions

E-STOP control device in accordance with EN 60947-5-5
Integration in control circuits up to category 4 in accordance with EN ISO 13849
Position-independent E-STOP command input
Reset function (reset button with indicator)
Rope head with alignment indicator

Special features

- Contact sets for integration up to category 4 in accordance with EN ISO 13849
- Pulling the rope or rope fracture safely stops the machine
- Simple setup through switching point indicator
- Easy integration with 3 cable approach directions
- Clicks in on both sides with friction-locking contacts
- Compact metal housing
- Protection rating: IP 67



Features



Certification requested:



IMQ is a European Commission recognized certification center

Further information **Page**

● Ordering information	420
● Electrical connection	421
● Technical data	422
● Dimensional drawings	424
● Dimensional drawings: Accessories	425
● Accessories ordering information	427

SAFETY COMMAND DEVICES

Ordering information

ERS200

Included in delivery: Application information (print document)

Functions: E-STOP control device in accordance with EN 60947-5-5, Rope Switch with reset function and alignment indicator

ERS200 E-STOP Rope Switch, Heavy Duty

Art. no.	Article	Description	Contact equipment
63000500	ERS200-M0C3-M20-HLR	Safety Command Device, rope pull with reset and alignment indicator, actuation direction on longitudinal axis	(1NC ⊖ + 1NO) creep contacts
63000501	ERS200-M1C3-M20-HLR	Safety Command Device, rope pull with reset and alignment indicator, actuation direction on longitudinal axis	(2NC ⊖) creep contacts
63000502	ERS200-M4C3-M20-HLR	Safety Command Device, rope pull with reset and alignment indicator, actuation direction on longitudinal axis	(2NC ⊖ + 1NO) creep contacts
63000520	ERS200-M4C3-M20-HAR	Safety Command Device, rope pull with reset and alignment indicator, actuation direction to the right	(2NC ⊖ + 1NO) creep contacts
63000521	ERS200-M4C3-M20-HAL	Safety Command Device, rope pull with reset and alignment indicator, actuation direction to the left	(2NC ⊖ + 1NO) creep contacts

Steel rope, rope clamps and other accessories must be ordered separately, see page 427.

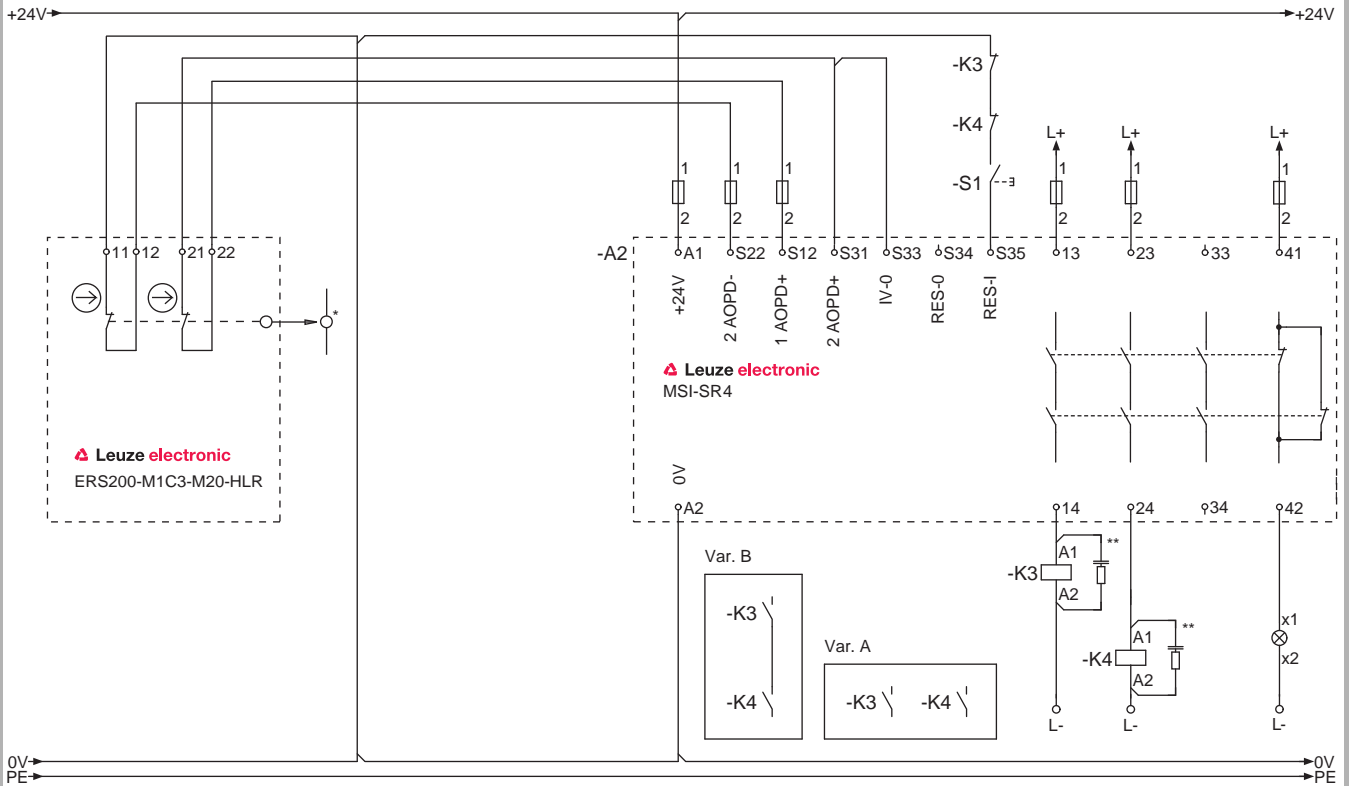
Article list for ERS200

Article	Description
ERS200	
-M	Metal housing
0, 1, 4	Contact set
C3	Number of cable bushings
-M20	Metric thread
-HLR	Rope pull direction in longitudinal axis
-HAR	Rope pull direction, right angled
-HAL	Rope pull direction, left angled

ERS200

Electrical connection

ERS200 connection example



*) Rope
 **) Spark extinction circuit, supply suitable spark extinction

ERS200 E-STOP Rope Switch with MSI-SR4 Safety Relay

Please observe the operating instructions of the components!

SAFETY COMMAND DEVICES

Technical data

General system data		
Switch type	E-STOP control device in accordance with EN 60947-5-5	
Service life (T_M) in accordance with EN ISO 13849-1	20 years	
Number of cycles until 10 % of the components have a failure to danger (B_{10d})	2,000,000	
Installation point	On rope pull axis	ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
	On rope pull axis, to the right	ERS200-M4C3-M20-HAR
	On rope pull axis, to the left	ERS200-M4C3-M20-HAL
Ambient temperature, operation	-25...+80°C	
Dirt levels, external, in accordance with EN 60947-1	3	
Housing material	Metal	
Internal actuator	E-STOP Rope Switch	
Dimensions	See dimensional drawing	
Protection rating	IP 67	
Actuation directions	On longitudinal axis	
Mechanical life time in accordance with IEC 6047-5-1	1x10 ⁶ actuation clearance	
Actuation frequency according to IEC 6047-5-1	Max. 600 activations an hour	
Actuation force (pull-out)	83 N	ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
	235 N	ERS200-M4C3-M20-HAR ERS200-M4C3-M20-HAL
Actuation force (slacken)	63 N	ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
	147 N	ERS200-M4C3-M20-HAR ERS200-M4C3-M20-HAL
Actuation force (pull-out with forced separation)	90 N	ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
	250 N	ERS200-M4C3-M20-HAR ERS200-M4C3-M20-HAL
Actuating path with forced separation	Min. 8 mm	ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
	Min. 14 mm	ERS200-M4C3-M20-HAR ERS200-M4C3-M20-HAL

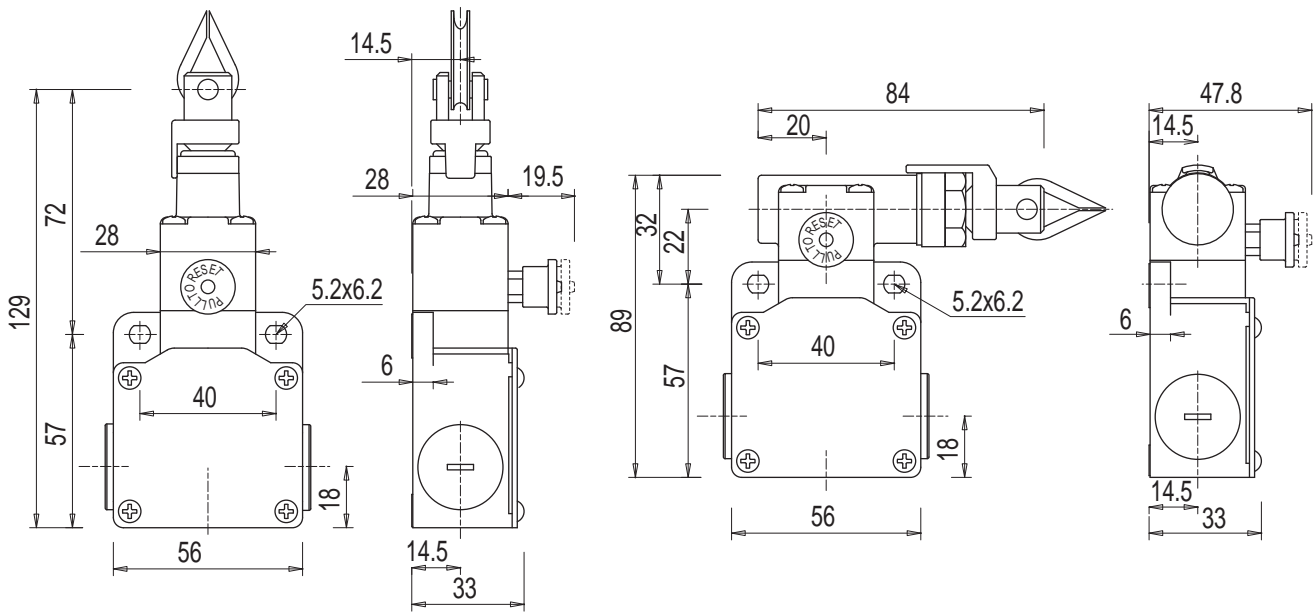
Technical data

Contact equipment	1NC ⊖ + 1NO	ERS200-M0C3-M20-HLR
	2NC ⊖ + 1NO	ERS200-M4C3-M20-HLR ERS200-M4C3-M20-HAR ERS200-M4C3-M20-HAL
	2NC ⊖	ERS200-M1C3-M20-HLR
General system data		
Switching principle	Creep contact	
Contact opening	Force-fit	
Contact material	Silver alloy	
Usage category in accordance with EN 60947-5-1	AC 15: Ue / Ie: 250 V / 6 A, 400 V / 4 A, 500 V / 1 A DC 13: Ue / Ie: 24 V / 6 A, 125 V / 1.1 A, 250 V / 0.4 A	
Rated insulation voltage	500 V AC, 600 V DC	
Conventional thermal current	Max. 10 A	
Short-circuit protection in accordance with IEC60269-1	500 V, 10 A, type aM	
Connection system	Number of cable entries	3
	Type of cable entries	M20 x 1.5
	Cable cross-section (wire)	1 x 0.5 mm ² to 2 x 2.5 mm ²
Actuator: Rope length at 20°C temperature difference	Max. 24 m (ERS200-M0C3-M20-HLR, ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR)	
	Max. 70 m (ERS200-M4C3-M20-HAR, ERS200-M4C3-M20-HAL)	

Please note the additional information in the connecting and operating instructions at www.leuze.com/ers200.

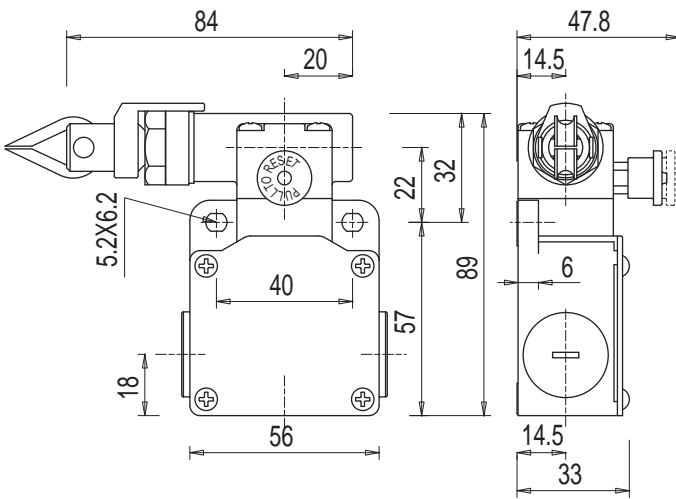
Dimensional drawings

E-STOP Rope Switch



ERS200 E-STOP Rope Switch

ERS200-M4C3-M20-HAR

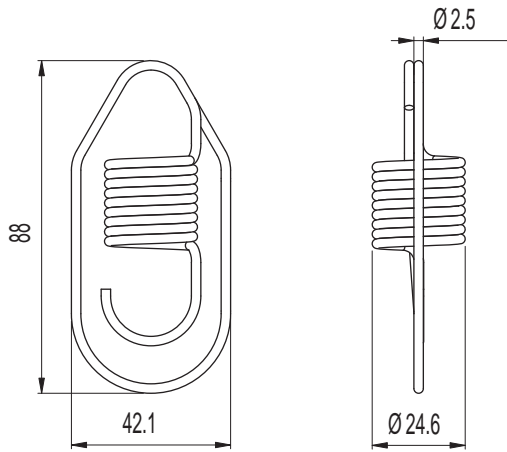


ERS200-M4C3-M20-HAL

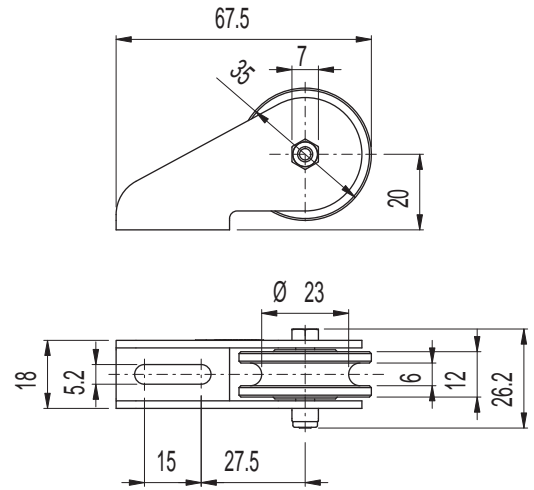
Dimensions in mm

Our 3D CAD models can be found under: www.leuze.com/3d-cad-models.

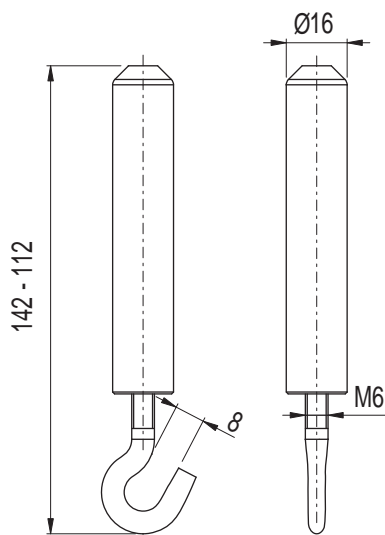
Safety spiral spring and corner pulley



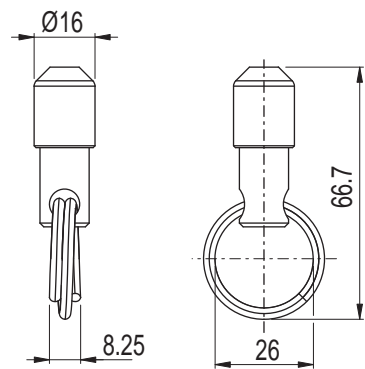
Safety spiral spring AC-SL-ERS



Corner pulley AC-AP-ERS



Stud bolts, adjustable AC-SBO-ERS

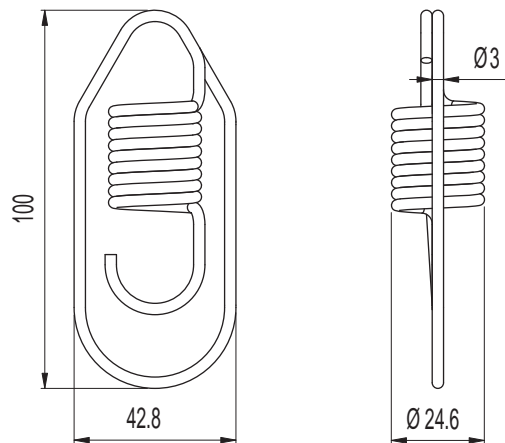


End ring with fixing AC-ENCLF-ERS

SAFETY COMMAND DEVICES

Dimensional drawings: Accessories

Safety spiral spring and corner pulley



Safety spiral spring AC-SA-ERS

Dimensions in mm

Accessories ordering information

Accessories for ERS200

Art. no.	Article	Description	Length, design
63000790	AC-KT10-ERS	Accessories set	Consisting of rope clamps and 10 m steel rope
63000791	AC-KT20-ERS	Accessories set	Consisting of rope clamps and 20 m steel rope
63000792	AC-SL-ERS	Safety spiral spring	For ERS200-M0C3-M20-HLR ERS200-M1C3-M20-HLR ERS200-M4C3-M20-HLR
63000793	AC-AP-ERS	Corner pulley	
63000794	AC-STOP-ERS	Rope label, <STOP>	For rope diameter 5 mm max.
63000795	AC-STRO-35-ERS	Steel rope	35 m long
63000796	AC-STRO-100-ERS	Steel rope	100 m long
63000797	AC-SBO-ERS	Stud bolts	Adjustable
63000798	AC-ENCLF-ERS	End ring	With fixing
63000799	AC-SA-ERS	Safety spiral spring	For ERS200-M4C3-M20-HAR, ERS200-M4C3-M20-HAL
63000800	AC-P-ERS	Deflection roller	

Article list for ERS200 accessories

Article	Description
AC	Accessories
-KT10, 20	Kit with rope, 10, 20 m long
-SL	Safety spiral spring for -HLR
-SA	Safety spiral spring for -HAL, -HAR
-AP	Corner pulley for rope pull
-P	Deflection roller
STRO	Steel rope
SBO	Stud bolts
ENCLF	End ring with fixing

AC