

FOR RECYCLING PURPOSES ONLY

Disassembly Instructions

Motorized change-over switches
OTM3200–4000_C



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Important information

This document shows the disassembly process of OTM3200-4000_C motorized change-over switches. Accessories, such as shafts, clamps, shrouds, neutral links and auxiliary contacts are not included. **Note! This document is for recycling purposes only.**

Safety Notes

Before starting the disassembly process it is mandatory to put the motorized change-over switch in open position.

Disassembly of motorized change-over switches must be performed by qualified and skilled personnel in the electrical field (IEV 195-04-01: person with relevant education and experience to enable him or her to perceive risks and to avoid hazards which electricity can create) and having a detailed knowledge of motorized change-over switches.

Disassembly must be done in an ergonomic workspace which can ensure the protection of the person doing the disassembling.

Applicable national legislation and international standards in force at the time of the disassembly of the motorized change-over switches must be taken into account in addition to the prescriptions illustrated in this document.

ABB declines any responsibility for injury to people or damage to property resulting from a failure to comply with the instructions set out in this document and with any applicable safety standard.

Personal Protective Equipment (PPE)

When doing the disassembling following safety Personal Protective Equipment (PPE) must be worn:

Glasses



Gloves



Safety shoes



Protective clothes



Tools

The disassembly process requires the use of tools (e.g. screwdriver, torx key, pliers). Tools to be used are specified inside each phase of the disassembly process.

Disassembly process

For each phase of the disassembly process the following information is provided:

- Part/parts to be disassembled (title of the phase)
- Tools to be used
- Description of actions to be performed
- Pictures showing actions to be performed
- List, quantity and picture of disassembled parts with an indication about separate treatment (when applicable)
- In case of potential hazards signal below is reported:



Disassembly of the motorized change-over switch

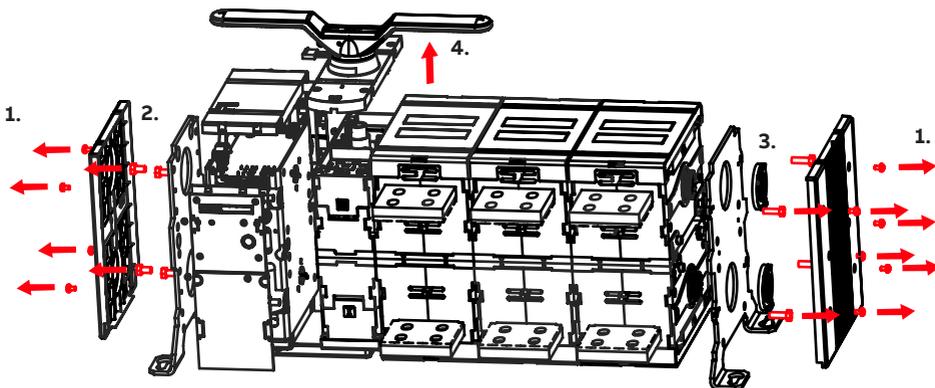
Phase 1,2,3,4 – End plates, mounting plates, contact guide supports, handle kit

1. Use a torx key (size 25) to unscrew the 10 screws fixing the end plates to the motorized change-over switch.

2. Unscrew the 8 screws fixing the mounting plate to the motor operator.

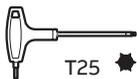
3. Use a socket wrench (13 mm) to unscrew the 4 screws fixing the mounting plate to the change-over switch. Remove the contact guide supports.

4. Separate the handle kit from the change-over switch (see instructions on the page 8).



Tools

Torx key (size 25)



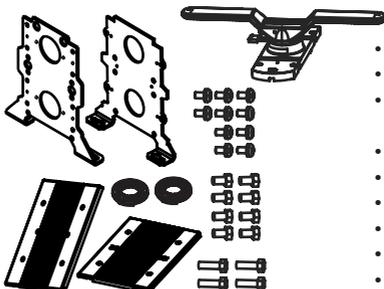
T25

Socket wrench



socket 13 mm

Disassembled parts



- 1 end plate
- 1 mounting plate
- 2 contact guide supports
- 10 screws
- 8 screws
- 4 screws
- 1 end plate
- 1 mounting plate
- 1 handle kit

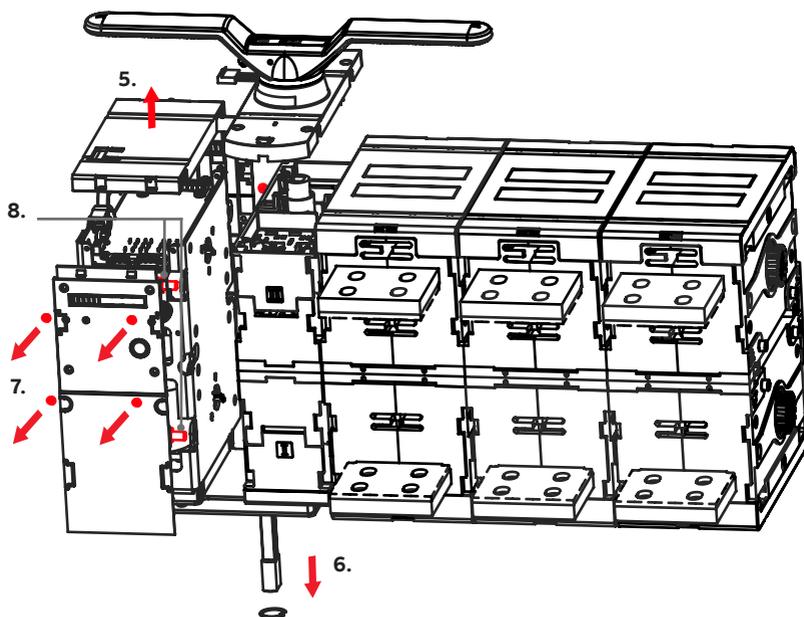
Phase 5,6,7,8 – Top cover, transmission shaft, motor operator

5. Remove the top cover of the motor operator with the help of a flat screwdriver.

6. Use pliers to separate circlip and transmission shaft from the motor operator.

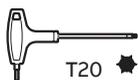
7. Use a torx key (size 20) to unscrew the 8 screws fixing the side covers to the motor operator.

8. Unscrew the 4 screws fixing the motor operator to the change-over switch.



Tools

Torx key (size 20)



T20

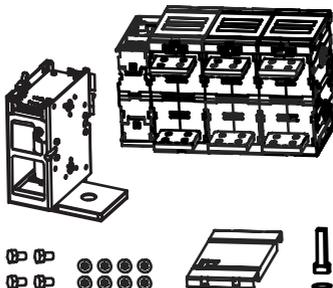
Flat screwdriver



Pliers



Disassembled parts

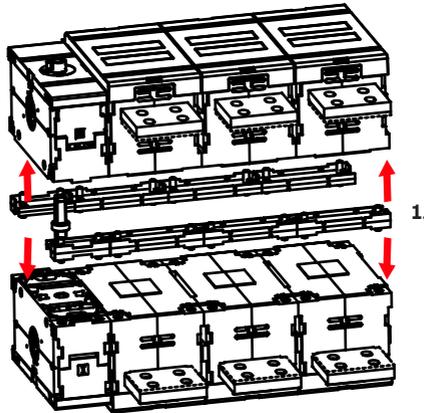


- 1 motor operator
- 4 screws
- 8 screws
- 1 handle kit
- 1 top cover
- 1 change-over switch
- 1 transmission shaft
- 1 circlip

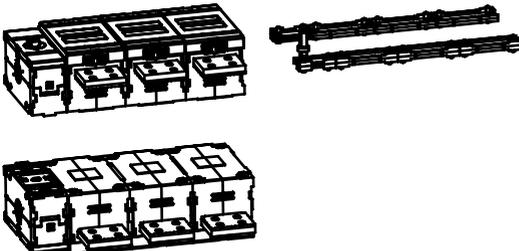
Disassembly of the change-over switch

Phase 1 – Switch-disconnectors and intern covers

1. Separate the switch-disconnectors and intern covers from each other manually.



Disassembled parts

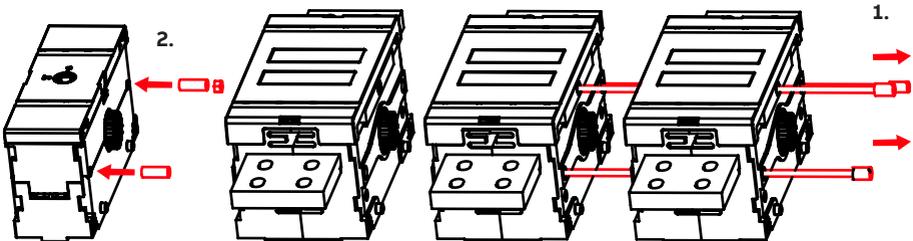


Disassembly of the switch-disconnector

Phase 1 & 2 – Stud screws and bushings

1. Use a flat screwdriver to unscrew the stud screws fixing the poles to the mechanism.

2. Remove the 2 bushings and steel hex nut (how?).

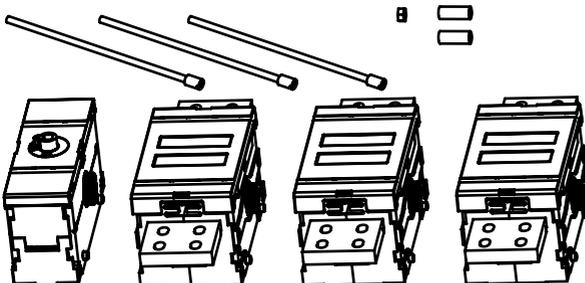


Tools

Flat screwdriver



Disassembled parts



- 3-6 stud screws
- 1 mechanism
- 1-4 poles
- 2 bushings
- 1 steel hex nut

Disassembly of the handle kit

Phase 1,2,3 – Handle and other parts

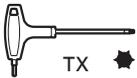
1. Remove the handle by pressing on the clip (marked with red) and pulling the handle up.

2. Use a torx key (size 20) to unscrew the 4 screws.

3. Unscrew the 2 screws. Separate the parts from each other. Use pliers if needed.

Tools

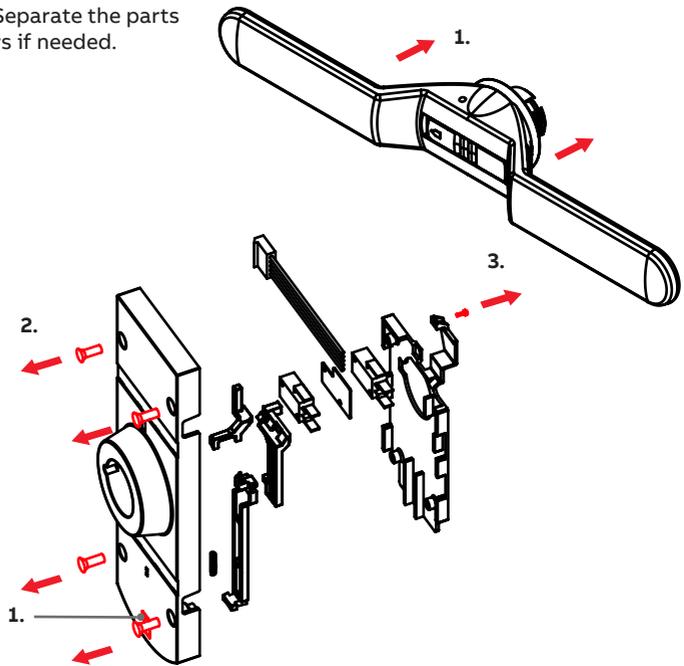
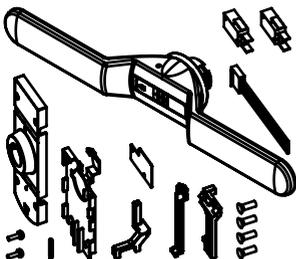
Torx key (size 20)



Pliers



Disassembled parts

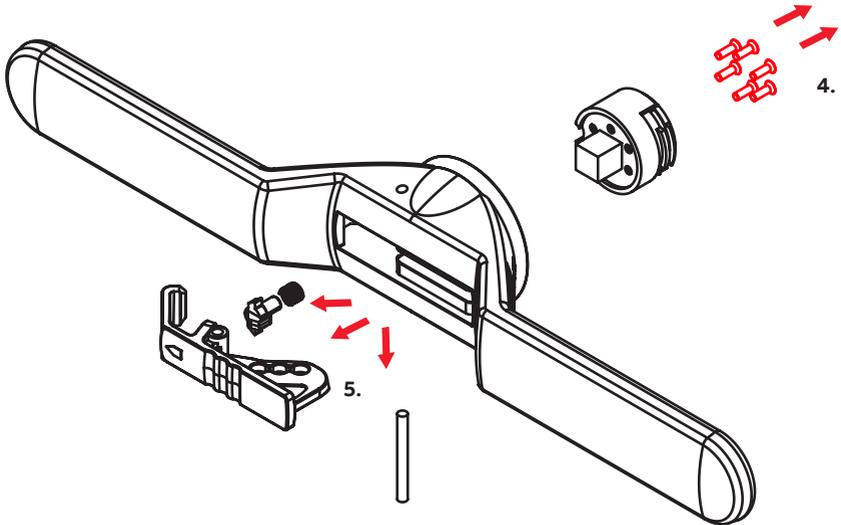


- 4 screws
- 2 screws
- 1 cover
- 1 guide
- 1 compression spring
- 1 lock
- 1 bottom plate
- 1 mechanism for micros
- 1 electric harness
- 1 insulator
- 1 handle

Phase 4 & 5 – Handle parts

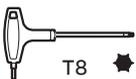
4. Use a torx key (size 8) to unscrew the 6 screws and to separate the shaft from the handle.

5. Separate rest of the parts from each other.

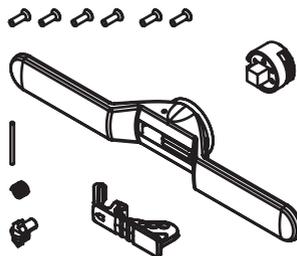


Tools

Torx key (size 8)



Disassembled parts

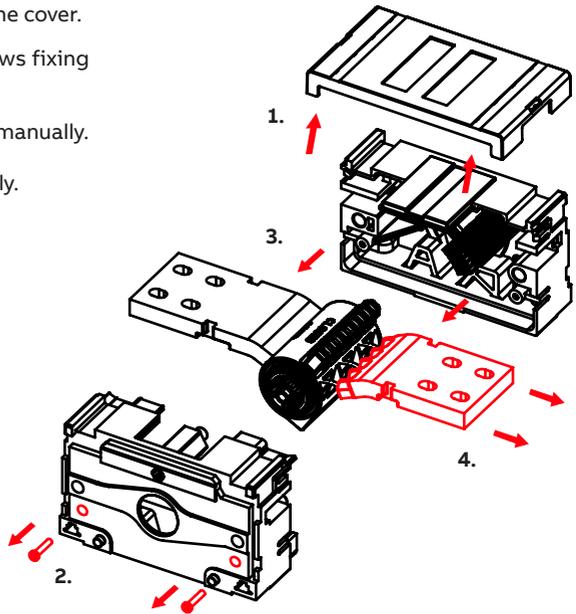


- 1 handle
- 1 compression spring
- 1 locking pin
- 1 lock plunger
- 1 slotted plug
- 1 shaft
- 6 screws

Disassembly of the pole

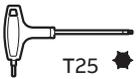
Phase 1 to 4 – Cover, frame and contact construction

1. Use a flat screwdriver to remove the cover.
2. Use a torx key to unscrew the screws fixing the frames to each other.
3. Remove the contact construction manually.
4. Remove one fixed contact manually.

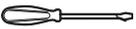


Tools

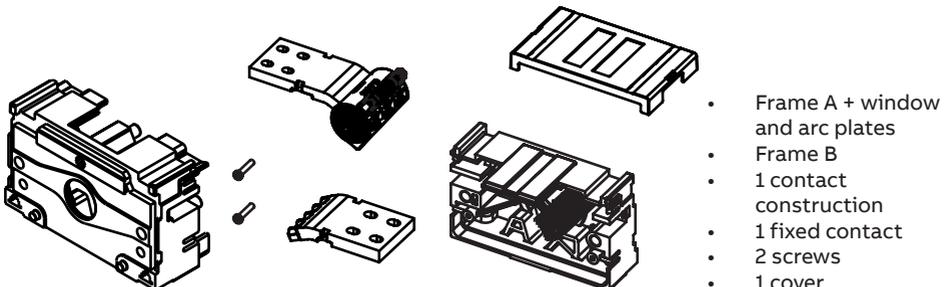
Torx key (size 25)



Flat screwdriver

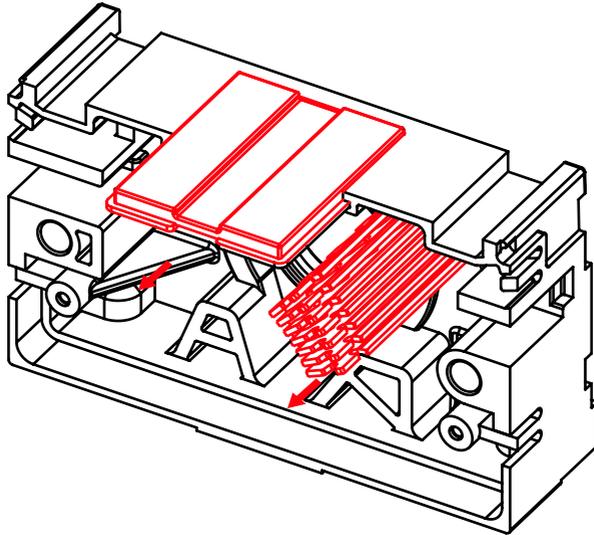


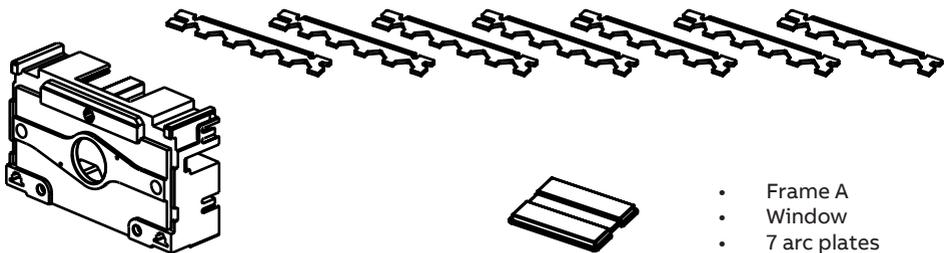
Disassembled parts



Phase 5 – Arc plates and window

Remove arc plates and window from frame A manually.



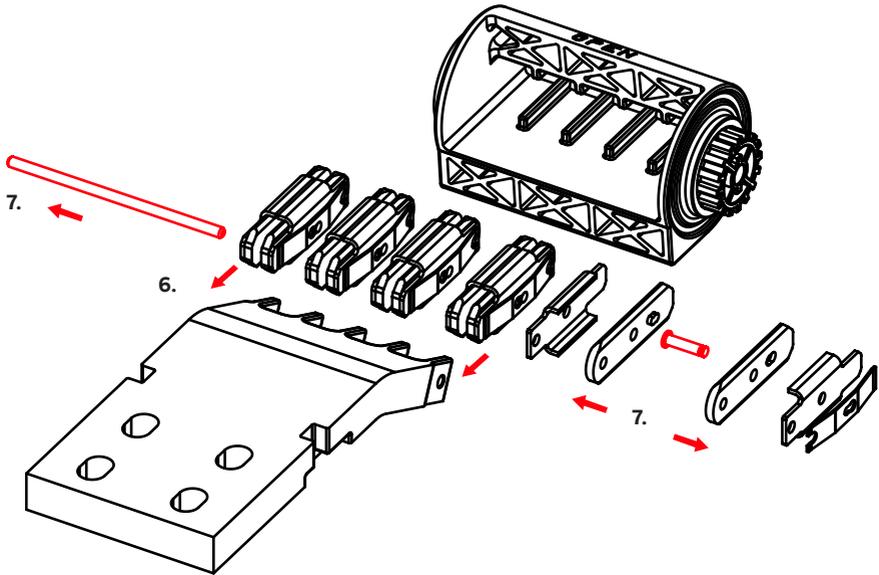
Disassembled parts

- Frame A
- Window
- 7 arc plates

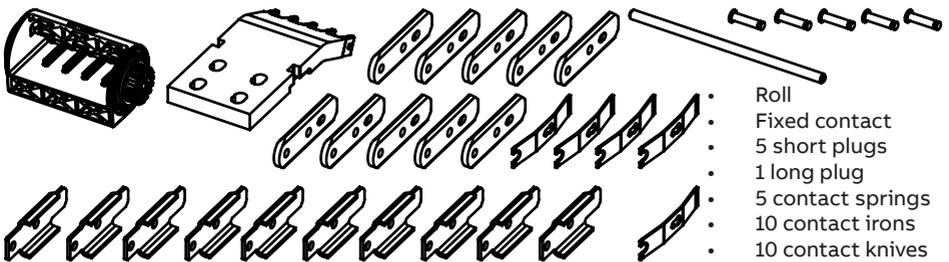
Phase 6 & 7 – The contact construction

6. Remove the second fixed contact and knife structures from the roll manually.

7. Separate contact knives, contact springs and contact irons from each other by removing plugs.

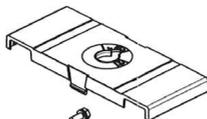


Disassembled parts

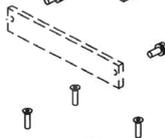


Disassembly of the mechanism

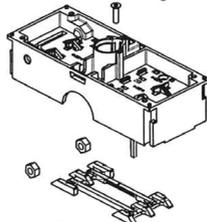
1. Remove the cover with the help of a flat screwdriver.



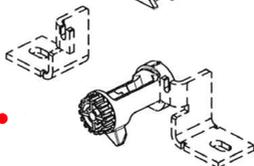
2. Unscrew the 4 screws with a torx key to remove the frame.



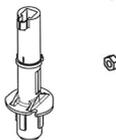
3. Remove hexnuts and contact guide support.



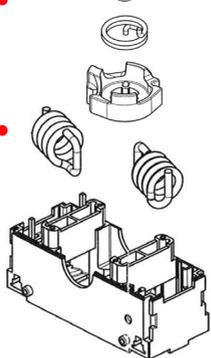
4. Remove the lever.



5. Remove pipeshaft, lever and rhythm spring.

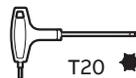


6. Remove the springs using pliers.



Tools

Torx key (size 20)



Flat screwdriver



Pliers



Disassembled parts

- Frame
- 2 springs
- 4 steel hex nuts
- Lever
- Pipeshaft
- Lever
- Rhythm spring
- Frame
- 4 screws
- Cover
- Contact guide support



Note! Pay special attention to tensioned springs. Use personal protective equipment.

Component list

Motorized change-over switch OTM3150–4000_C

Component name	Quantity	Material(s)	Weight (g/pc)
Change-over switch	1	See component list	77990
Motor operator	1	Assembly	
Mounting plate	1	Steel	2130
End plate	2	Polycarbonate	210
Contact guide support	1	Polyamide	18
Mounting plate	1	Steel	1850
End plate		Polycarbonate	169
Handle kit	1	See component list	710
Steel hex screw	8	Steel	5
Steel hex screw	4	Steel	1
Screw	10	Steel	1
Screw	4	Steel	6
Top cover	1	Polycarbonate	100
Transmission shaft	1	Steel	20
Circlip	1	Steel	1
Handle kit		See component list below	700

Change-over switch OT3150–4000E_C

Component name	Quantity	Material(s)	Weight (g/pc)
OT3150–4000E_C1	1	See component list below	36180
OT3150–4000E_C2	1	See component list below	36180
Joint	1	Steel	150
Interm cover	6-8	Polycarbonate	32
Interm cover	2	Polycarbonate	22

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Switch-disconnector OT3150-4000E_C1

Component name	Quantity	Material(s)	Weight (g/pc)
Mechanism	1	See component list	2188
Pole	3-4	See component list	799
Stud screw	3-6	Steel	52-187
Steel hex nut	1	Steel	7

—
Switch-disconnector OT3150-4000E_C2

Component name	Quantity	Material(s)	Weight (g/pc)
Mechanism	1	See component list	2188
Pole	3-4	See component list	7994
Stud screw	2-4	Steel	52-187
Steel hex nut	1	Steel	7

—
Handle kit

Component name	Quantity	Material(s)	Weight (g/pc)
Cover	1	Polycarbonate	116
Guide	1	Polycarbonate	1
Lock	1	Polyamide	1
Compression spring	1	Steel	1
Screw	2	Steel	1
Bottom plate	1	Polycarbonate	25
Screw	4	Steel	1
Mechanism for micros	1	Polycarbonate	5
Insulator	1	Polycarbonate	1
Electric harness	1	Assembly	1
Handle	1	Assembly	500

Handle

Component name	Quantity	Material(s)	Weight (g/pc)
Handle	1	Polyamide	265
Compression spring	1	Steel	1
Locking pin	1	Zinc	1
Lock plunger	1	Polycarbonate	12
Slotted plug	1	Chromium steel	1
Shaft	1	Steel	100
Screw	6	Steel	1

Pole

Component name	Quantity/pole	Material(s)	Weight (g/pc)
Frame A	1	Polyester	1200
Frame B	1	Polyester	1400
Contact knife	10	Copper	46
Contact iron	10	Steel	25
Contact spring	5	Steel	5
Short plug	5	Chromium steel	3
Long plug	1	Chromium steel	18
Roll	1	Polyamide	355
Arc plate	7	Steel	36
Fixed contact	1	Copper	3374
Window	1	Polycarbonate	400
Cover	1	Polycarbonate	110
Screw	2	Steel	1
Fixed contact	1	Copper	2380

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Mechanism

Component name	Quantity	Material(s)	Weight (g/pc)
Frame	1	Polyamide	700
Frame	1	Polyamide	281
Contact guide support	1	Polyamide	15
Cover	1	Polycarbonate	70
Pipeshaft	1	Zinc	250
Lever	1	Zinc	270
Lever	1	Zinc	360
Spring	2	Steel	190
Rhythm spring	1	Steel	40
Steel hex nut	4	Steel	7
Screw	4	Steel	1

Recycling information in accordance with the WEEE

The product is marked with the wheelie bin symbol. It indicates that at the end of life the product should enter the recycling system.

You should dispose of it separately at an appropriate collection point and not place it in the normal waste stream.

The figure below shows the wheelie bin symbol indicating separate collection for electrical and electronic equipment (EEE).



The horizontal bar underneath the crossed-out wheelie bin indicates that the equipment has been manufactured after the Directive came into force in 2005.

The wheelie bin symbol is added to the type designation label of the product since 2017.



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