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FOR RECYCLING PURPOSES ONLY

Disassembly Instructions

Motorized change-over switches
OTM1000–1600_C

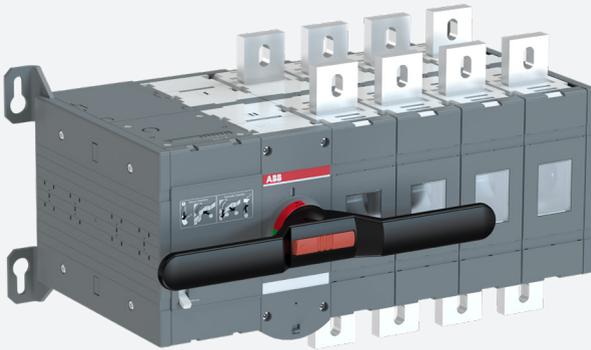


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Important information

This document shows the disassembly process of OTM1000–1600_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

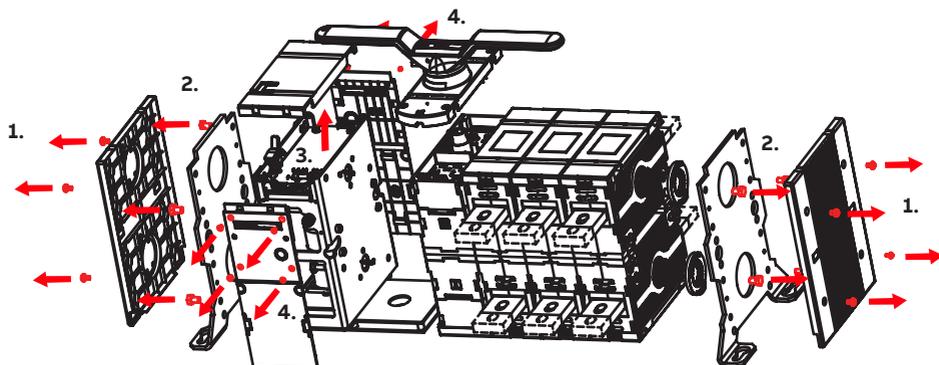
Phase 1,2,3,4,5 – End plates, mounting plates, top cover

1. Use a torx key (size 25) to unscrew the 8 screws fixing the end plates to the motorized change-over switch.

2. Use a socket wrench (13 mm) to unscrew the 8 screws fixing the mounting plates to the motorized change-over switch. Remove the contact guide supports.

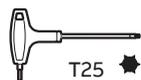
3. Remove the top cover of the motor operator with the help of a flat screwdriver.

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



Tools

Torx key (size 25)



T25

Flat screwdriver

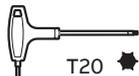


Socket wrench



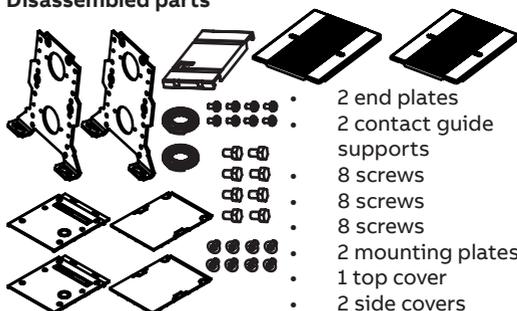
socket 13 mm

Torx key (size 20)



T20

Disassembled parts

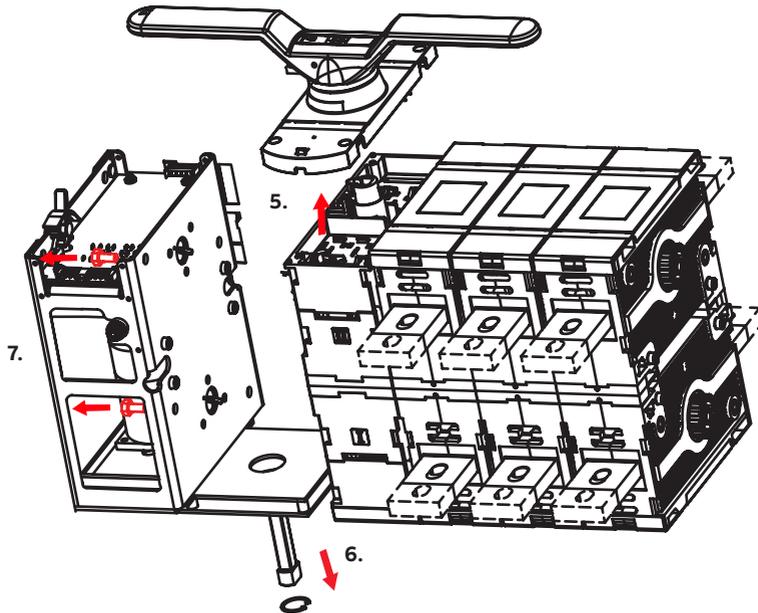


Phase 5,6,7 – Handle kit, transmission shaft, motor operator

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

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

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

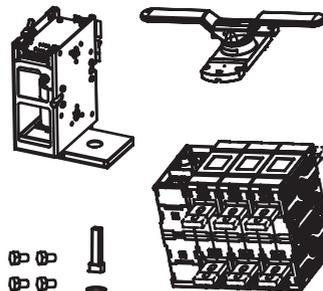


Tools

Pliers



Disassembled parts

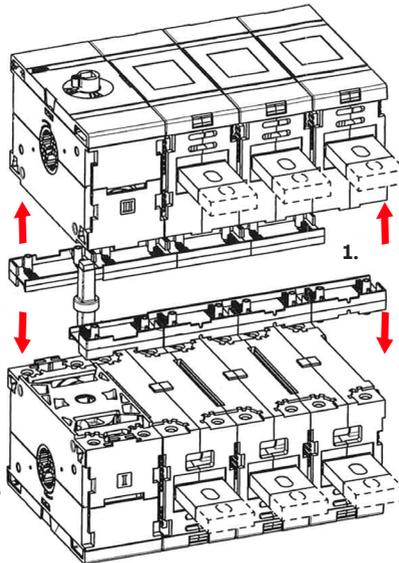


- 1 motor operator
- 4 screws
- 1 handle kit
- 1 change-over switch
- 1 transmission shaft
- 1 circlip

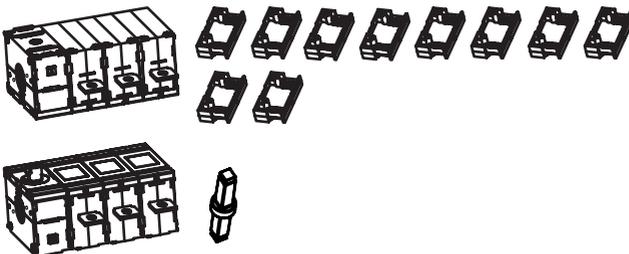
Disassembly of the change-over switch

Phase 1 – Switch-disconnectors and intern covers

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



Disassembled parts

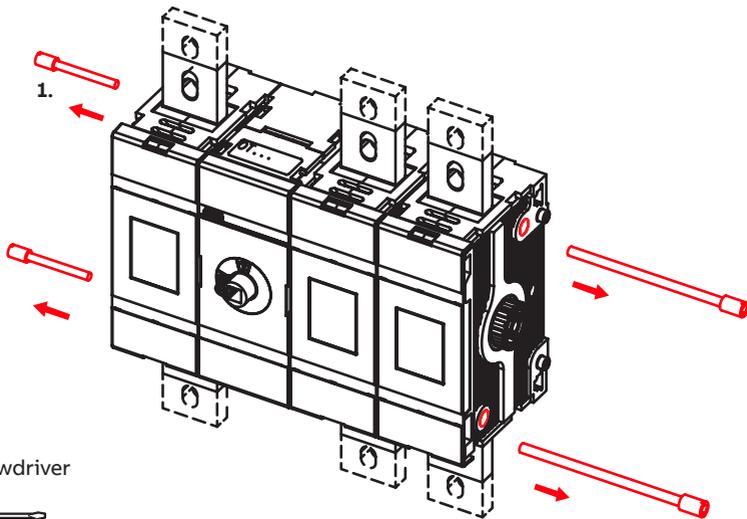


- 6-8 covers R4
- 2 cover mechanisms R4
- 2 switch-disconnectors
- 1 joint

Disassembly of the switch-disconnector

Phase 1 – Stud screws

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

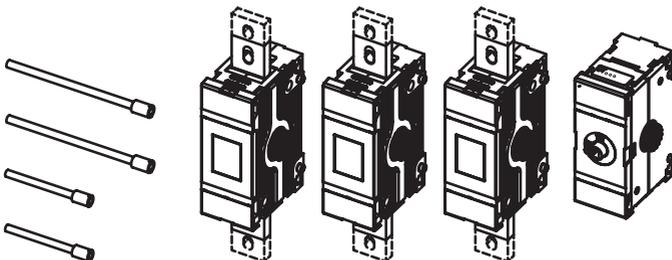


Tools

Flat screwdriver



Disassembled parts



- 2-4 stud screws
- 1 mechanism
- 1-4 poles

Disassembly of the handle kit

Phase 1,2,3 – Handle and other parts

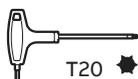
1. Remove the handle by pressing on the clip (marked with red) and pulling the handle up.

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

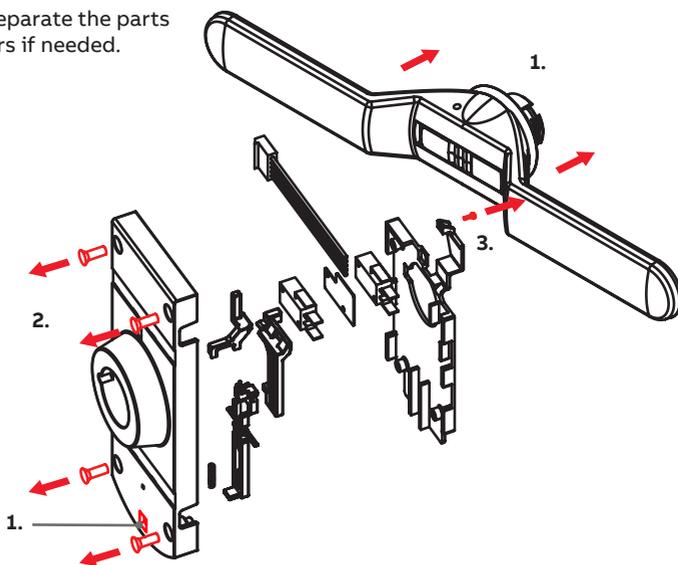
3. Unscrew the 1 screw. Separate the parts from each other. Use pliers if needed.

Tools

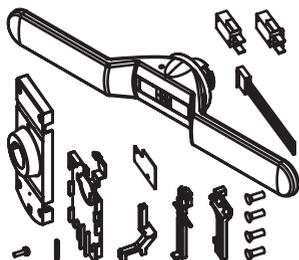
Torx key (size 20)



Pliers



Disassembled parts

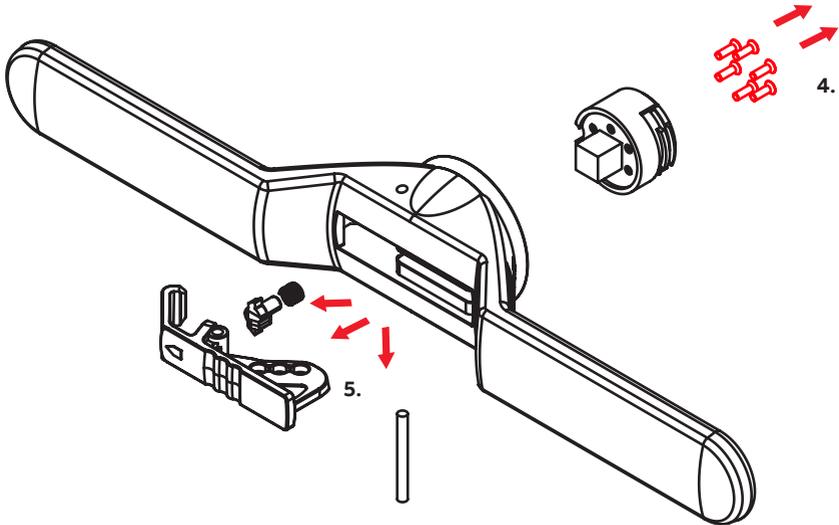


- 4 screws
- 1 screw
- 1 cover
- 1 guide
- 1 compression spring
- 1 lock
- 1 bottom plate
- 1 mechanism for micros
- 1 electric harness
- 1 insulator
- 1 handle

Phase 4 & 5 – Handle parts

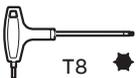
4. Use a torx key (size 8) to unscrew the 6 screws and to separate the shaft from the handle.

5. Separate rest of the parts from each other.

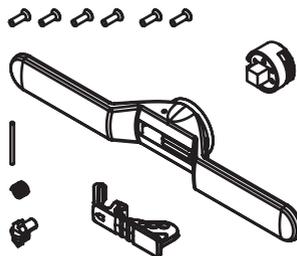


Tools

Torx key (size 8)



Disassembled parts



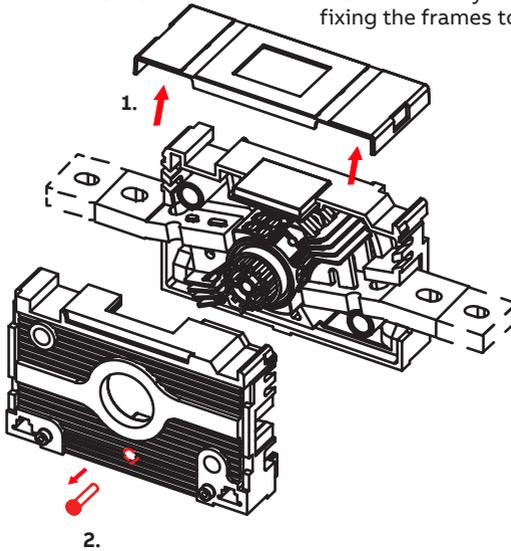
- 1 handle
- 1 compression spring
- 1 locking pin
- 1 lock plunger
- 1 slotted plug
- 1 shaft
- 6 screws

Disassembly of the pole

Phase 1 & 2 – Cover and frame

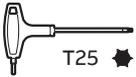
1. Use a flat screwdriver remove the cover.

2. Use a torx key to unscrew the screw fixing the frames to each other.



Tools

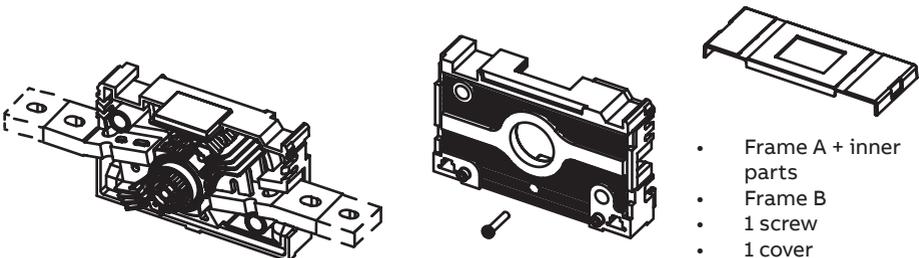
Torx key (size 25)



Flat screwdriver

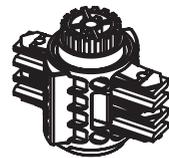
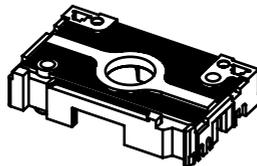
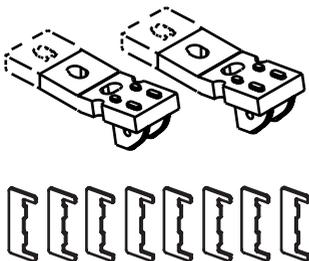
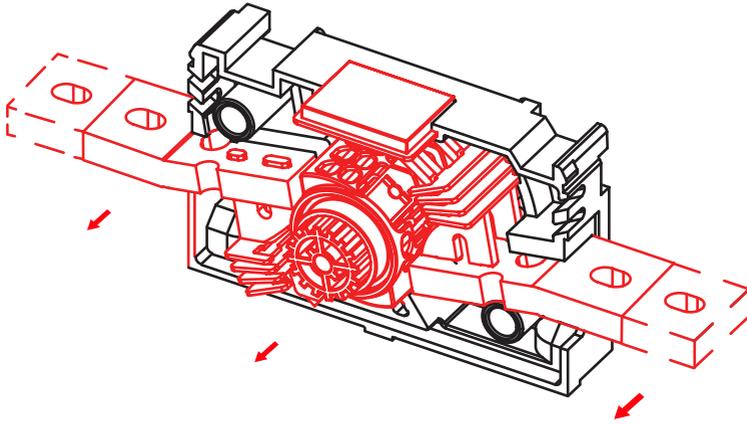


Disassembled parts



Phase 3 – Inner components of the pole

Remove rest of the components (arc plates, roll with knife structure, fixed contacts and window) from frame A manually.

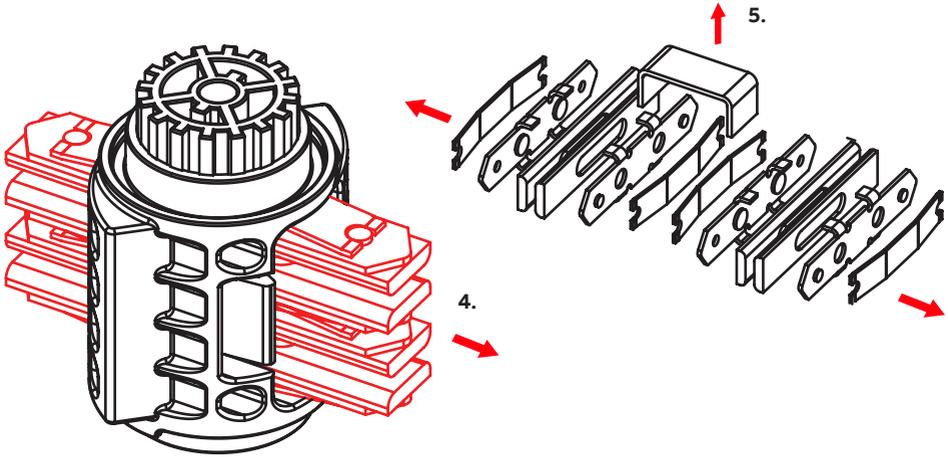


- Frame A
- Roll + knife structure
- Window
- 8 arc plates
- 2 fixed contacts

Phase 4 & 5 – The contact construction

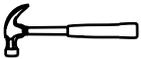
4. Remove the knife structure from the roll with a hammer.

5. Separate contact knives, contact springs and contact irons from each other by removing the guide support of spring.

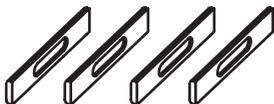


Tools

Hammer



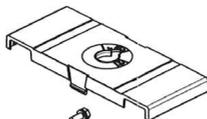
Disassembled parts



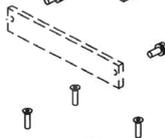
- Roll
- 4 contact knives
- 4 contact springs
- 4 contact irons
- Guide support of spring

Disassembly of the mechanism

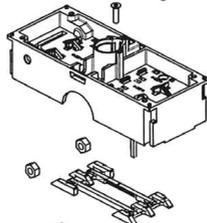
1. Remove the cover with the help of a flat screwdriver.



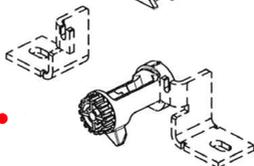
2. Unscrew the 4 screws with a torx key to remove the frame.



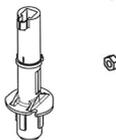
3. Remove hexnuts and contact guide support.



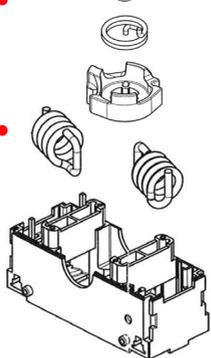
4. Remove the lever.



5. Remove pipeshaft, lever and rhythm spring.



6. Remove the springs using pliers.



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

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

Component list

Motorized change-over switch OTM1000–1600_C

Component name	Quantity	Material(s)	Weight (g/pc)
Change-over switch	1	See component list	
End plate	2	Polycarbonate	169
Mounting plate	2	Steel	1740
Steel hex screw	4	Steel	6
Steel hex screw	8	Steel	5
Contact guide support	2	Polyamide	18
Screw	8	Steel	1
Screw	8	Steel	1
Motor operator	1	Assembly	8402
Handle kit	1	See component list	690
Transmission shaft	1	Steel	20
Circlip	1	Steel	1

Change-over switch OT1000–1600E_C

Component name	Quantity	Material(s)	Weight (g/pc)
OT1000–1600E_C1	1	See component list	16825
OT1000–1600E_C2	1	See component list	16825
Joint	1	Steel	150
Cover R4	6-8	Polycarbonate	22
Cover mechanism R4	2	Polycarbonate	22

Switch-disconnector OT1000–1600_C1

Component name	Quantity	Material(s)	Weight (g/pc)
Mechanism	1	See component list	2075
Pole	3-4	See component list	5432
Stud screw	2-4	Steel	37-110

Switch-disconnector OT1000-1600_C2

Component name	Quantity	Material(s)	Weight (g/pc)
Mechanism	1	See component list	2076
Pole	3-4	See component list	5432
Stud screw	2-4	Steel	37-110

Handle kit

Component name	Quantity	Material(s)	Weight (g/pc)
Cover	1	Polycarbonate	108
Guide	1	Polycarbonate	1
Lock	1	Polyamide	5
Compression spring	1	Steel	1
Screw	1	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	
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

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Pole

Component name	Quantity/pole	Material(s)	Weight (g/pc)
Frame A	1	Polyest-resin	657
Frame B	1	Polyest-resin	698
Contact knife	4	Copper	86
Contact iron	4	Steel	36
Contact spring	4	Chromium steel	15
Guide support of spring	1	Chromium steel	42
Roll	1	Polyarylamide	94
Arc plate	8	Steel	14
Fixed contact	2	Copper	1607
Window	1	Polycarbonate	11
Cover	1	Polycarbonate	47
Screw	1	Steel	9

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Mechanism

Component name	Quantity	Material(s)	Weight (g/pc)
Frame	1	Polyamide	487
Frame	1	Polyamide	207
Cover	1	Polycarbonate	61
Pipeshaft	1	Zinc alloy	235
Lever	1	Zinc alloy	315
Lever	1	Zinc alloy	365
Spring	2	Steel	169
Rhythm spring	1	Steel	39
Steel hex nut	4	Steel	5
Screw	4	Chromium steel	2

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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