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FOR RECYCLING PURPOSES ONLY

Disassembly Instructions

Motorized switch-disconnectors OTM160–250



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Important information

This document shows the disassembly process of OTM160–250 motorized switch-disconnectors. 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 switch-disconnector in open position.

Disassembly of motorized switch-disconnectors 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 switch-disconnectors.

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 switch-disconnectors 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 switch-disconnector

Phase 1,2,3,4,5 – End plates, mounting plates, top cover, side covers, handle kit

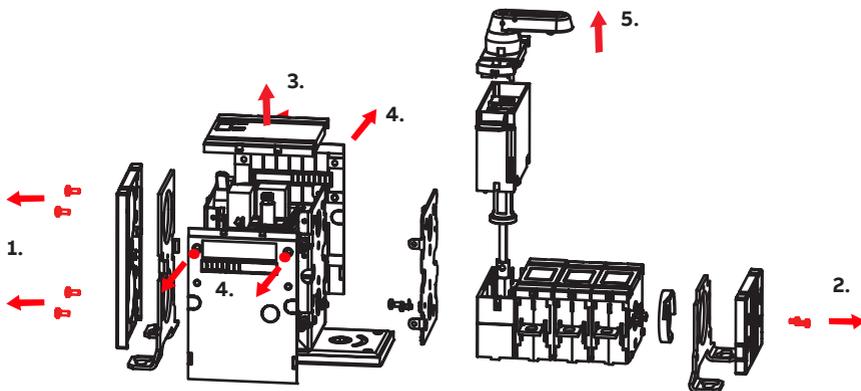
1. Use a torx key (size 15) to unscrew the 4 screws fixing end plate and mounting plate to the motor operator.

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

5. Separate the handle kit from the box (see instructions on the page 6).

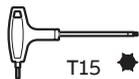
2. Use a torx key (size 15) to unscrew the 2 screws fixing end plate, mounting plate and contact guide support to the switch-disconnector.

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



Tools

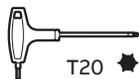
Torx key (size 15)



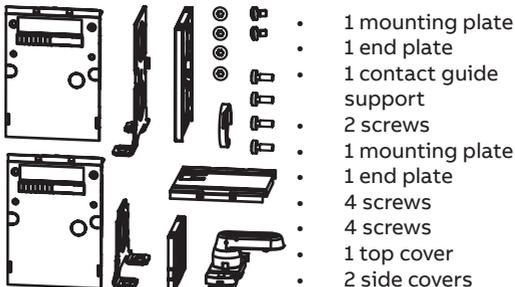
Flat screwdriver



Torx key (size 20)



Disassembled parts



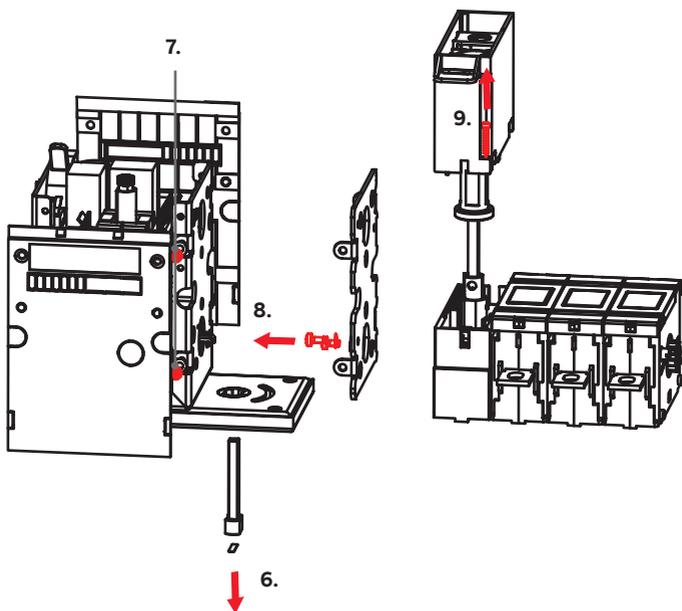
Phase 6,7,8,9 – Box, pipeshaft, shaft, motor operator, assembling plate

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

7. Unscrew the 4 screws fixing the assembling plate to the motor operator.

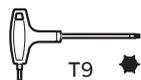
8. Unscrew the 4 screws fixing the assembling plate to the switch-disconnector.

9. Use a torx key (size 9) to unscrew the 2 screws fixing box, shaft, pipeshaft and handle kit to the switch-disconnector.



Tools

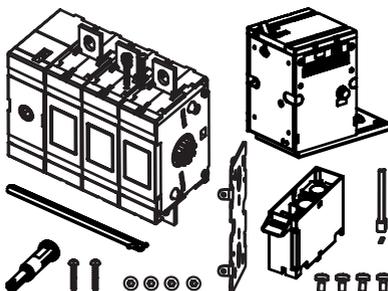
Torx key (size 9)



Pliers



Disassembled parts



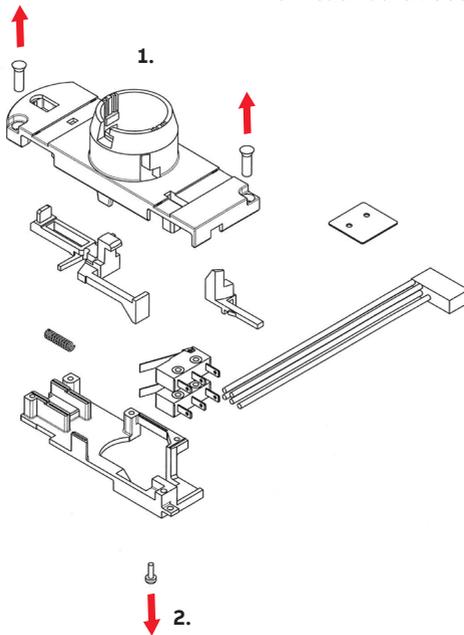
- 1 shaft
- 1 pipeshaft
- 1 box
- 2 screws
- 1 switch-disconnector
- 1 motor operator
- 1 assembling plate
- 4 screws
- 4 screws
- 1 retaining plate
- 1 transmission shaft

Disassembly of the handle kit

Phase 1 & 2 – Handle kit

1. Use a Pozidriv screwdriver (size 0) to unscrew the 2 screws.

2. Use a Pozidriv screwdriver (size 0) to unscrew the 1 screw. Separate the parts from each other. Use pliers if needed.



Tools

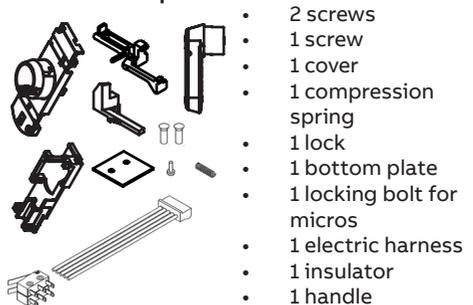
Pozidriv screwdriver



Pliers



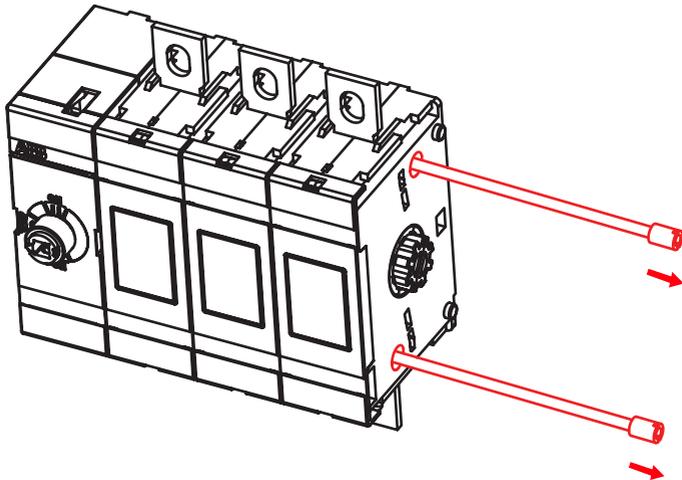
Disassembled parts



Disassembly of the switch-disconnector

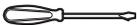
Phase 1 – Stud screws

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

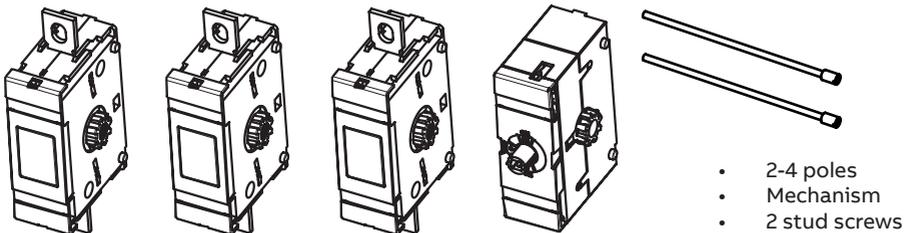


Tools

Flat screwdriver



Disassembled parts

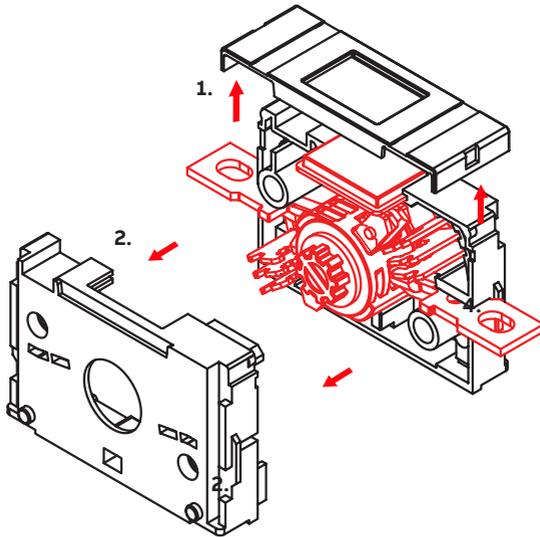


Disassembly of the pole

Phase 1 & 2 – Cover, frames and inner parts

1. Use a flat screwdriver to remove the cover.

2. Separate the frames and remove contact construction, arc plates, fixed contacts and window manually.

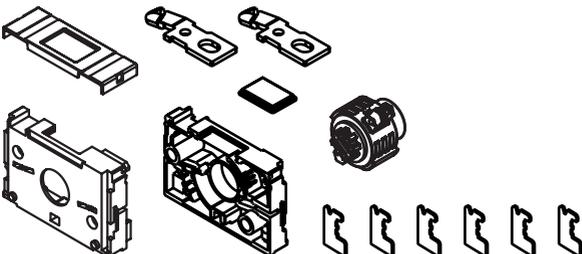


Tools

Flat screwdriver



Disassembled parts

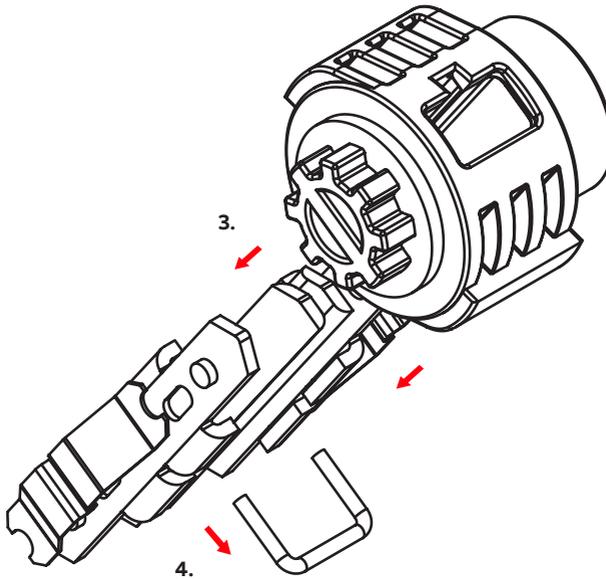


- Frame A
- Frame B
- Contact construction
- 2 fixed contacts
- 6 arc plates
- Cover
- Window

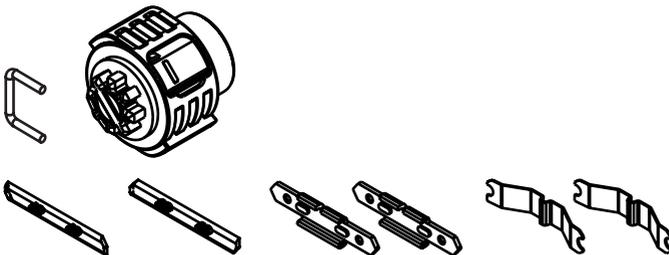
Phase 3 & 4 – Contact construction

3. Remove the knife structure from the roll manually.

4. Remove the spring guide and separate contact knives, contact springs and contact irons from each other manually.



Disassembled parts



- Roll
- 1 contact knife
- 1 contact knife
- 2 contact irons
- 2 contact springs
- 1 spring guide

Disassembly of the mechanism

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

2. Unscrew the 2 screws with a torx key to remove the upper frame. Remove contact guide support and two steel nuts manually.

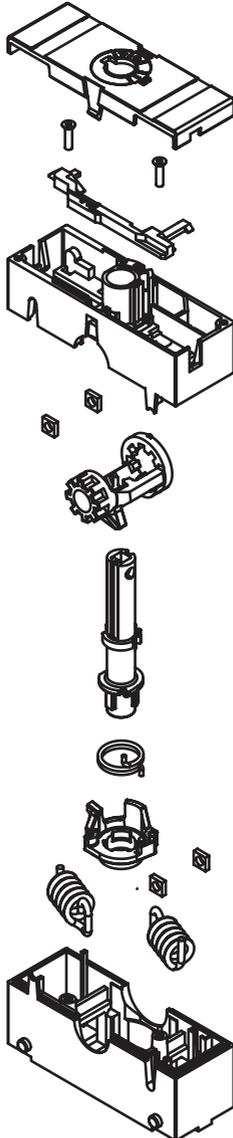
3. Remove the lever.

4. Remove pipesaft, lever and rhythm spring.

5. Remove the springs using pliers. Remove the two steel nuts manually.

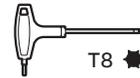


Note! Pay special attention to tensioned springs. Use personal protective equipment.



Tools

Torx key (size 8)



Flat screwdriver



Pliers



Disassembled parts

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

Component list

Motorized switch-disconnector

Component name	Quantity	Material(s)	Weight (g/pc)
Switch-disconnector	1	See component list	1213
Motor operator	1	Assembly	3000
Transmission shaft	1	Steel	20
Retaining plate	1	Steel	1
Shaft	1	Polycarbonate	40
Pipeshaft	1	Zinc alloy	85
Box	1	Polycarbonate	66
Screw	2	Steel	1
Handle kit	1	See component list	90
Mounting plate	1	Steel	120
End plate	1	Polycarbonate	24
Contact guide support	1	Polyamide	9
Screw	2	Steel	1
Mounting plate	1	Steel	220
End plate	1	Polycarbonate	49
Screw	4	Steel	2

Handle kit

Component name	Quantity	Material(s)	Weight (g/pc)
Cover	1	Polycarbonate	16
Screw	2	Steel	1
Compression spring	1	Steel	1
Lock	1	Polycarbonate	2
Bottom plate	1	Polycarbonate	7
Locking bolt for micros	1	Polycarbonate	5
Electric harness	1	Assembly	1
Screw	1	Steel	1
Insulator	1	Polycarbonate	1
Handle	1	Polyamide	41

Switch-disconnector

Component name	Quantity	Material(s)	Weight (g/pc)
Mechanism	1	See component list	229
Pole	2-4	See component list	320
Stud screw	2	Steel	10-15

Pole

Component name	Quantity/pole	Material(s)	Weight (g/pc)
Frame A	1	Polyest-resin	79
Frame B	1	Polyest-resin	78
Contact knife	1	Copper	9
Contact knife	1	Copper	9
Contact iron	2	Steel	12
Contact spring	2	Chromium steel	2
Spring guide	1	Chromium steel	1
Roll	1	Polyest-resin	34
Arc plate	6	Steel	4
Fixed contact	2	Copper	24
Window	1	Polycarbonate	3
Cover	1	Polycarbonate	7

Mechanism

Component name	Quantity	Material(s)	Weight (g/pc)
Frame	1	Polyamide	54
Frame	1	Polyamide	38
Cover	1	Polycarbonate	8
Pipeaxis	1	Steel	42-50
Lever	1	Zinc alloy	25
Lever	1	Zinc alloy	36
Spring	2	Steel	10
Rhythm spring	1	Steel	3
Steel nut	4	Steel	1
Screw	2	Chromium 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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