EasyPact EXE

Medium Voltage Disconnecting Device (DD)
Up to 17.5 kV - 31.5 kA - 630 to 2500 A
For MCset Switchboard

User Guide

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Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

As standards, specifications, and designs change from time to time, please ask for confirmation of the information given in this publication.
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Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.
Before You Begin

- This user guide is meant for qualified person who will operate the disconnecting device: panel builder, installer or end user. The generic term used in this guide for any such person is the USER.
- This user guide cannot be used to define or check the device’s compatibility with every single user’s application, nor its reliability within it. It is the duty of every user or panel builder to perform a complete risk analysis, evaluation and testing of the products in specific applications in accordance with applicable standards.
- When the products are used in applications with specific technical, you must follow the integration and protection rules for the specific application.

<table>
<thead>
<tr>
<th><strong>DANGER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH</strong></td>
</tr>
<tr>
<td>- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See standards or local equivalent.</td>
</tr>
<tr>
<td>- This disconnecting device and the MCset equipment must only be installed and serviced by qualified electrical personnel.</td>
</tr>
<tr>
<td>- Perform work only after reading and understanding all of the instructions contained in this guide.</td>
</tr>
<tr>
<td>- Turn off all power supplying this disconnecting device before working on or inside the disconnecting device.</td>
</tr>
<tr>
<td>- Always use a properly rated voltage sensing device to confirm power is off.</td>
</tr>
<tr>
<td>- Use only genuine Schneider Electric specific tools (operating crank, extraction table, ...).</td>
</tr>
<tr>
<td>- Check all devices, covers and doors are in correct position before turning on power to this circuit breaker and MCset equipment.</td>
</tr>
<tr>
<td>- Beware of potential hazards and carefully inspect the work area for tools and objects that may have been left inside the disconnecting device and the MCset equipment.</td>
</tr>
<tr>
<td>- Do not modify the mechanical or electrical parts.</td>
</tr>
<tr>
<td>- Do not operate the system with interlocks and protective barriers removed.</td>
</tr>
</tbody>
</table>

**Failure to follow these instructions will result in death or serious injury.**

<table>
<thead>
<tr>
<th><strong>CAUTION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HAZARD OF DEGRADED EQUIPMENT PERFORMANCE</strong></td>
</tr>
<tr>
<td>- Respect the handling rules and avoid any shocks to the device.</td>
</tr>
<tr>
<td>- Perform the maintenance and servicing operations described in the maintenance section of this guide.</td>
</tr>
<tr>
<td>- Observe the normal service conditions described in this manual.</td>
</tr>
<tr>
<td>- Respect the storage conditions of the Disconnecting Device.</td>
</tr>
</tbody>
</table>

**Failure to follow these instructions can result in injury or equipment damage.**
Overall information

Purpose of the document
This user guide is an integral part of the device. It describes the operation and use of the EasyPact EXE disconnecting device, as well as its storage and handling conditions, and its Basic Level Preventive Maintenance operations. This document must be available at any time to those required to use or work on the disconnecting device. If the device is sold after installation, this document must be given to the new owner.

It is required to read this manual carefully and follow its recommendations. However, this manual cannot describe every single condition of use or every variant specific to the customer.

Access to the technical documentation
Visit our website www.se.com:
- for downloading additional documents
- for contacting Schneider Electric customer support if you need information not contained in this document
- if you have any suggestions on how to improve this document.

Connect to https://saferepository.schneider-electric.com
Enter the reference number and the serial number of the device:
- for downloading "public documents" regarding EasyPact EXE
- for downloading "private documents" specific to the device.

You can access this information using the QR code located on the front cover of the disconnecting device.

Limitation of liability
Schneider Electric cannot be held responsible for damage due to:
- failure to follow the instructions in this guide and additional documents
- improper use of the device
- improper assembly, testing, installation, connection or misuse of the device
- use of components or spare parts other than those recommended by Schneider Electric.
Introduction to EasyPact EXE

Presentation of Disconnecting Device (DD)

Function

The Disconnecting Device enables the upper and lower part of the cubicle to be short-circuited. It is installed instead of the circuit breaker and has the same interlock possibilities.

Nameplate

The serial number (SN) located on the nameplate is using 18 characters in order to be easy to understand.
Example: SE-2016-W44-5-0019.
To access to Safe Repository, enter the SN with its simplified 11 characters’ format.
Example: SE164450019.
If you type the long description, it will be automatically converted in short description.
The QR code link implement the simplified format.

How to use the QR code

The QR code located on the nameplate grants access to all data relating to your disconnecting device, from a Smartphone or a connected tablet:
• serial number
• operating characteristics
• user guide
• warranty period...

To access this information, flash the QR code with your Smartphone or your connected tablet; you will be directed to the website containing the data relating to your device.
Follow the instructions to obtain personal access.
The serial number and the commercial reference also allow to access the information without Smartphone or connected tablets.

Identification plate

The serial number is also located on the right side of the disconnecting device. This allows to associate the front covers to the device.
The datamatrix is used for internal Schneider Electric traceability.
Reminder
A disconnecting device, as any disconnector, is designed to operate a circuit with no current. The disconnecting device is always interlocked with a circuit breaker insuring the switching of the main circuit. This interlocking is done by a keylock or by an electromagnet.

Front view of disconnecting device
**Customization label**

As the customization label is the same for all EasyPact EXE devices, only the "Trolley motor" column will be useful for disconnecting device.

**Operating instruction label**

This label, located on the door of the MCset cubicle, gives a pictorial guide to the manual racking-in/out operations.
Introduction to EasyPact EXE

Service conditions

Normal service conditions

The device is designed to operate according to its rated characteristics and the service conditions below:

<table>
<thead>
<tr>
<th>Indoor device</th>
<th>IEC 62271-200: 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient air temperature:</td>
<td></td>
</tr>
<tr>
<td>• minimum value</td>
<td>-25 °C</td>
</tr>
<tr>
<td>• maximum value</td>
<td>+40 °C</td>
</tr>
<tr>
<td>• average measured over a 24-hour period</td>
<td>≤ 35 °C</td>
</tr>
<tr>
<td>Average relative humidity:</td>
<td></td>
</tr>
<tr>
<td>• measured over a 24-hour period</td>
<td>≤ 95 %</td>
</tr>
<tr>
<td>• measured over a 1-month period</td>
<td>≤ 90 %</td>
</tr>
<tr>
<td>Average water vapor pressure:</td>
<td></td>
</tr>
<tr>
<td>• measured over a 24-hour period</td>
<td>≤ 2.2 kPa</td>
</tr>
<tr>
<td>• measured over a 1-month period</td>
<td>≤ 1.8 kPa</td>
</tr>
<tr>
<td>Altitude above sea level</td>
<td>≤ 1000 m</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>The ambient air is not significantly polluted by dust, smoke, corrosive and/or flammable gases, vapours or salt.</td>
</tr>
</tbody>
</table>

Other service conditions

If operated beyond the normal service conditions, the disconnecting device is submitted to accelerated aging.

The disconnecting device may only be used under conditions other than the normal service conditions with express written permission from Schneider Electric.
Storage conditions and arrangements

Storage conditions

![Cloud and Sun with Temperature Indications]

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HAZARD OF INAPPROPRIATE STORAGE CONDITIONS</strong></td>
</tr>
</tbody>
</table>
| • If the device is to be stored, observe all storage instructions. The device must remain in the packaging until the final installation.  
• Never install the device if damaged. |

Failure to follow these instructions can result in injury or equipment damage.

In order to preserve all of the device’s characteristics when stored for prolonged periods, we recommend to store the device in its original packaging, in dry conditions, and sheltered from the sun and rain at a temperature of between -40°C and +70 °C. The maximum storage period is 12 months.

If the device was stored:
• between 6 and 12 months, perform basic level preventive maintenance to ensure a correct device operation.  
• beyond 12 months, contact your Schneider Electric Service local representative for device check-up.

After unpacking, check the device carefully for:
• absence of broken or damaged parts  
• absence of condensation marks or droplets  
• absence of visible degradation (color change, rust, deposits, etc.).

In case of any degradation detected, the disconnecting device must not be installed.

Devices must be stored in racked-out position.

Storage arrangements - Stacking

![Stacking Diagram]

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HAZARD OF HEAVY LOAD STACKING</strong></td>
</tr>
<tr>
<td>Do not place any heavy objects on the packaging that could either deform it or apply mechanical stress to the device’s structure.</td>
</tr>
</tbody>
</table>

Failure to follow this instruction can result in equipment damage.
Handling

⚠️ WARNING
HAZARD OF FALL OR TIPPING OF THE DEVICE DURING UNLOADING OR HANDLING
- Apply appropriate personal protective equipment (PPE) and provide collective protection equipment (CPE) whenever required. Follow all safe work practices.
- Do not try to catch the parcel if it falls.
- Use handling equipment suitable for the dimensions and weight of the device.
- Take into account the position of the center of gravity when handling the parcels or the device.
Failure to follow these instructions can result in death, serious injury or equipment damage.

⚠️ CAUTION
HAZARD OF INAPPROPRIATE HANDLING
Move the device with the utmost caution and avoid shocks.
Failure to follow this instruction can result in injury or equipment damage.

Mass

<table>
<thead>
<tr>
<th>Maximum mass</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="DM104158.ai" alt="Image 1" /> 160 kg</td>
</tr>
<tr>
<td><img src="DM106054.ai" alt="Image 2" /> 143 kg</td>
</tr>
</tbody>
</table>

Position of center of gravity

[Image]
Before energizing for the first time

A general check of the device takes only a few minutes and reduces the risk of mistakes due to errors or negligence. It must be carried out:
- before energizing following switchboard installation
- before re-energizing following an extended period during which the device has not been in service.

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Perform all the checks with the entire switchboard de-energized.
- Check on the switchboard that the disconnecting device’s clamping elements have been removed.
- Check that the rear lifting eye was removed and the front lifting eyes have been put back in their down position.
- Check that nameplate data is compatible with that of electrical installation.

*Failure to follow these instructions will result in death or serious injury.*

The installer of your MCset equipment must deliver a commissioning report before the first energizing of your electrical installation.

**Switchboard inspection**

Check that the switchboard and devices are in good serviceable condition. It must be clean, free of any installation scraps or items (tools, electrical wires, broken parts or shreds, metal objects, etc.).

The withdrawable disconnecting devices are shipped in their cubicles and they are attached by the two locking tabs of the racking device and a clamp. The transport clamp, placed on the top of the disconnecting device close to the interchange stop, must be removed before any operation on the switchboard. Refer to your MCset documentation to identify the location of the clamp.
**How to use the lifting eyes**

It may be necessary to lift the device (for example in case of device delivery on pallet). In this case please follow the instructions below.

**Label and its location on the disconnecting device.**

Lift the device using the 3 lifting eyes.

Never lift using a forklift from below the device.

When handling, guide the device by the recessed handles of the front cover.

Do not lift the disconnecting device by the power connections.

Do not move the disconnecting device on the floor.

Remember to remove the rear lifting eye prior to device insertion in the switchboard and store it close to the device’s operating area.
Conformity with the installation electrical diagram

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD OF NON COMPLIANT VOLTAGE</td>
</tr>
<tr>
<td>The assigned voltage for the control auxiliaries must be applied and checked directly on the auxiliary terminals.</td>
</tr>
<tr>
<td>Failure to follow this instruction can result in death, serious injury or equipment damage.</td>
</tr>
</tbody>
</table>

Check that the devices match the installation diagram:
- ratings indicated on the nameplates
- presence of optional functions (racking device motor control, blocking magnet, etc.) and conformity of their electrical characteristics.

Operating

Refer to the MCset documentation and follow your switchboard commissioning rules.
The disconnecting device initial state is:

![Initial state for disconnecting device.](DM106463.ai)

Check the mechanical operation of the devices in every control modes (local mechanical and electrical controls and remote control) and for every possible operation:
- rack-in and rack-out your device (according to the configuration of your switchboard)
- in case of racking device motor control:
  - energize the motorization from the LV cabinet
  - rack-in and rack-out your device (according to the configuration of your switchboard)
  - de-energize the motorization from the LV cabinet.
- check the operation of the locking and interlocking.
Place back the disconnecting device in its initial state waiting for the switchboard energizing.

Initialization of the maintenance information

Initialize the maintenance information in the maintenance log of your installation.
Using EasyPact EXE

Understanding the disconnecting device controls and indicators

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Installation, repair and maintenance work on the device must only be carried out by qualified personnel.
- Beware of potential danger, apply appropriate personal protective equipment and take appropriate safety precautions.

Failure to follow these instructions will result in death or serious injury.

Local control

A control of an operation is performed at a point on or adjacent to the controlled device.

Mechanical control

A mechanical operation on the racking device allows you:
- to perform the disconnecting device racking-in/racking-out
- to operate the red pushbutton of the racking device.

Electrical control

In order to use the electrical control functions, either local or remote, the rack-in/rack-out motorization option must be installed.

Possible configurations for electrical control of the device:
- racking device motorization: optional
- electromagnet padlocking: optional

Refer to the MCset equipment's documentation to find out where the disconnecting device control buttons are located.

Remote electrical control

A control of an operation is performed at a point distant from the controlled device.

In order to use the electrical control functions, the rack-in/rack-out motorization option must be installed.

Refer to your MCset equipment's and supervision system's documentation to find out the available communication functions.
The different states

<table>
<thead>
<tr>
<th>Racking position indicator</th>
<th>Disconnecting device position</th>
<th>State description</th>
<th>Command available</th>
</tr>
</thead>
</table>
| ![Racking-out](DM103935_1.ai) | ![Racking-in](DM106009.ai) | **Disconnected/test**  
The disconnecting device is inside the compartment; its power connections are separated from the switchboard contacts by shutters, the LV auxiliary circuit is connected and it is possible to open the compartment door. | • Racking-in (refer to page 30) |
| ![Racking-out](DM103936.ai) | ![Racking-in](DM106008.ai) | **Intermediate**  
The disconnecting device is moving from the disconnected position to the service position or vice versa. The compartment door is closed and locked and the LV auxiliary circuit is connected | • Racking-in (refer to page 30)  
• Racking-out (refer to page 31) |
| ![Racking-out](DM103940.ai) | ![Racking-in](DM106007.ai) | **Disconnected/test**  
The disconnecting device is inside the compartment; its power connections are separated from the switchboard contacts by shutters, the LV auxiliary circuit is connected and it is possible to open the compartment door. | • Racking-in (refer to page 30) |

The following table describes the functions available on EasyPact EXE disconnecting device:

<table>
<thead>
<tr>
<th>Parts Service</th>
<th>Intermediate</th>
<th>Disconnected/test</th>
<th>Removed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locking tabs</td>
<td>Locked</td>
<td>Locked / Unlocked</td>
<td>Locked</td>
</tr>
<tr>
<td>LV connection plug</td>
<td>Connected</td>
<td>Connected / Disconnected</td>
<td>Disconnected</td>
</tr>
<tr>
<td>Compartment door</td>
<td>Closed and Locked</td>
<td>Closed and Locked</td>
<td>Unlocked</td>
</tr>
<tr>
<td>Racking device keylocking</td>
<td>Key removal possible to allow lockout</td>
<td>Key removal impossible</td>
<td>Key removal impossible</td>
</tr>
<tr>
<td>Earthing Switch mechanical link position</td>
<td>Earthing Switch OPEN</td>
<td>Earthing Switch CLOSED</td>
<td>Earthing Switch CLOSED</td>
</tr>
</tbody>
</table>

[1] For details, please refer to the MCset documentation.
Opening pushbutton

The red opening pushbutton of the racking device \(\text{L}\) allows clearing the access to the crank hole \(\text{K}\).

The three positions of the red opening pushbutton are shown opposite:
- \(\text{L}_1\) pressed-in position after the button was pushed or while the crank is inserted in the racking device
- \(\text{L}_2\) resting position
- \(\text{L}_3\) pulled-out position for the device padlocking; this position interrupt the motor power supply and forbid the access to the crank hole.

Operation of locking tabs

The locking tabs allow the locking of the disconnecting device inside the compartment or on the extraction table.

At rest (without any manual action on the locking handles), the locking tabs are out.

To unlock the disconnecting device, manually push the locking handles to pull in the locking tabs.

When the device is in intermediate or service positions the locking tabs are blocked and cannot be operated.

Motorization of racking device (option)

The racking-in and racking-out operations can be done manually using the genuine Schneider Electric racking crank or remotely if the racking device is equipped with a motor option.

The motor is mounted at the rear of the racking device and its power supply is positioned on the LV cabinet.
**Interchange stop mechanism**

**DANGER**

**HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

Make sure you have installed the correct circuit breaker in the correct cubicle.  
**Failure to follow these instructions will result in death or serious injury.**

If the device and the cubicle are equipped with rating interchange stop mechanism, the insertion of a device not fitting the cubicle performance will be limited. However, Schneider Electric recommends a visual check of the performance of the device.

The interchange stop mechanism is made of a mechanical arrangement that prevent the insertion of a device in a compartment not corresponding to the cubicle.

*Example of a rating interchange stop.*

1. Fixed part on the cubicle  
2. Mobile part on the disconnecting device top

Use the following table to check the correct coding.

**Rating interchange stop table: bolt location on the mobile and fixed parts**

<table>
<thead>
<tr>
<th>Circuit Breaker Phase Distance and ratings</th>
<th>Recommended position</th>
</tr>
</thead>
<tbody>
<tr>
<td>145 mm</td>
<td>185 mm</td>
</tr>
<tr>
<td>1250 A</td>
<td>1250 A</td>
</tr>
<tr>
<td>1600 A</td>
<td></td>
</tr>
<tr>
<td>2000 A</td>
<td></td>
</tr>
</tbody>
</table>
Insertion and extraction of a withdrawable device

This section is describing the insertion and extraction operations of your device that can be used during installation or maintenance phases.

Your withdrawable device will be shipped inside your MCset equipment and it will be in "Disconnected/test" position.

In order to enable an easy insertion of the device in the MCset compartment, Schneider Electric recommends the use of an extraction table designed to carry the device, locked in position, to its insertion point and adapted to your MCset equipment configuration.

Extraction table width modification

1. Unlock the sliding system by turning the lever counter-clockwise.
2. Remove the lever from the locking hole.
3. Pull on the left table side.
   Insert the lever into one of the width adjustment holes:
   • A for phase distance 145 mm
   • B for phase distance 185 mm
   • C for phase distance 240 mm.
4. Constrict the table until the cover of the sliding system rest against the lever.
5. Remove the lever from the adjustment hole.
6. Insert the lever into the locking hole and turn it clockwise to lock the sliding system.
Disconnecting Device implementation on the extraction table

1. Check the alignment of the rails when they are high up.

2. If the alignment is not good:
   - insert the table crank into one side hole
   - turn the crank to make the adjustment
   - then check the alignment.

3. Insert the table crank into the holes on both table sides (insertion can be done starting either from the right or from the left side).

4. Turn the crank to move down the rails.

5. This step requires two persons:
   - push manually the racking device’s locking handles to pull in completely the locking tabs
   - move carefully the extraction table to engage the racking device rolls on the table rails.

6. Keep moving the extraction table until the locking of the racking device.

7. Turn the crank to lift a little bit the disconnecting device.

8. Lock the two extraction table wheels.
9. Remove the table crank.
10. Store the table crank in the provided holes of one table side.

Insertion of a device
Before insertion, check:
- the correspondence of the device with the cubicle performances
- the front lifting eyes are put back to their down position
- the rear lifting eye is removed and stored close to the device's operating area.

1. Open the compartment door by pulling then turning the handle towards the right.
   **NOTE:** for MCset switchboards, the compartment door opening is up to 110°. For ease of understanding, this door is no longer shown on the following drawings.

2. Check the compartment cleanliness in accordance with the service conditions and that no installation scraps or items have been left inside (tools, electrical wires, broken parts or shreds, metal objects, etc.)

3. Check that the female LV connection plug is properly secured in the fixed part of the rating interchange stop located on the upper side of the compartment and the cable harness is maintained in the clip.
4. Remove the table crank from its stored location and insert it into the holes on both table sides.
5. Turn the crank to lift the device until the table rails line up to those of the compartment.
6. Move the extraction table for coupling the rails.
7. Turn toward the right the two table handles to lock the rails and check that the extraction table is locked.
8. Remove the table crank and store it in the provided holes of one table side.
9. Lock the two extraction table wheels.

**CAUTION**

**CRUSH HAZARD**
Ensure not to get your fingers caught when pushing the device inside the compartment.
Failure to follow this instruction can result in injury or equipment damage.

10. Unlock the disconnecting device by pushing the racking device locking handles and push gently to start the disconnecting device insertion.
11. Fully insert the disconnecting device.
**NOTE:** if it is not the right device corresponding to the cubicle, the insertion will be blocked by the rating interchange stop mechanism (refer to page 20).
12. Check that the disconnecting device is locked on the compartment rails.
13. Turn towards the left then pull out the two table handles to dissociate the table rails.
14. Unlock the two extraction table wheels.
15. Remove the extraction table.

16. Connect the LV auxiliary connection plug on the device.
**NOTE:** To use the electrical control mode, auxiliary circuit must be energized.

17. Check that the door's shutter of the circuit breaker compartment door is raised and locked.
   If not, open the door's shutter and lock it by turning the screw.
18. Close the compartment door by turning the handle towards the left, then pushing it.
Extraction of a device
Before extraction, check:
• the device is in "Disconnected/test" position.

1. Open the compartment door by pulling then turning the handle towards the right.
   
   **NOTE:** For MCset switchboards, the compartment door opening is up to 110°. For ease of understanding, this door is no longer shown on the following drawings.

2. Disconnect the LV auxiliary connection plug.
   Secure it in the fixed part of the rating interchange stop located on the upper side of this compartment and clip the cable harness.

3. Check that the racking device indicator is in the "Disconnected/test" position.

4. Remove the table crank from its stored location and insert it into the holes on both table sides.

5. Turn the crank to lift the table rails until they line up to those of the compartment.

6. Move the extraction table for coupling its rails to those of the compartment.

7. Turn inward the table rail handles to lock the rails.

8. Remove the table crank and store it in the provided holes of one table side.

9. Lock the two extraction table wheels.
10. Unlock the disconnecting device by pushing the racking device locking handles.
11. Bring out the disconnecting device.
12. Keep moving until the locking of the racking device and check that the disconnecting device is locked on the extraction table.

**WARNING**

**LOSS OF PROTECTION HAZARD**

Close the door’s shutter when the Disconnected Device is extracted.

Failure to follow these instructions can result in death or serious injury.

13. Turn towards the left then pull out the table handles to dissociate the table rails.
14. Unlock the two extraction table wheels.
15. Remove the extraction table.
16. Turn the screw to unlock the circuit breaker compartment door’s shutter. And move it down until closed.
17. Close the compartment door by turning the handle towards the left, then pushing it.
Door interlocking mechanism

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Perform Racking in Racking out operation only with door closed.
- Perform Disconnecting Device operations only with door closed.

Failure to follow these instructions will result in death or serious injury.

When the door of the circuit breaker compartment is closed and locked, the door locking mechanism interacts mechanically with the racking device mushroom and enables the racking-in movement.

During the racking-in or the racking-out, the door handle is locked to prevent the door opening. The door handle can be unlocked only if the circuit breaker is in the "Disconnected/test" position

![Racking device mushroom fitted in its connecting rod.](image)

Assembly that forbids the opening of the compartment door as soon as the withdrawable device left the test position.

The fork and the racking device mushroom which prevent the device racking-in while the compartment door is not closed.
The following table resumes the opening and closing operations of the circuit breaker compartment door.

<table>
<thead>
<tr>
<th>Door and its handle</th>
<th>Connecting rod &amp; Mushroom</th>
<th>Door handle device</th>
<th>Disconnecting Device and its compartment status</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="Door1.png" alt="Image" /></td>
<td><img src="Connecting1.png" alt="Image" /></td>
<td><img src="DoorHandle1.png" alt="Image" /></td>
<td><img src="Disconnecting1.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="Door2.png" alt="Image" /></td>
<td><img src="Connecting2.png" alt="Image" /></td>
<td><img src="DoorHandle2.png" alt="Image" /></td>
<td><img src="Disconnecting2.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="Door3.png" alt="Image" /></td>
<td><img src="Connecting3.png" alt="Image" /></td>
<td><img src="DoorHandle3.png" alt="Image" /></td>
<td><img src="Disconnecting3.png" alt="Image" /></td>
</tr>
<tr>
<td><img src="Door4.png" alt="Image" /></td>
<td><img src="Connecting4.png" alt="Image" /></td>
<td><img src="DoorHandle4.png" alt="Image" /></td>
<td><img src="Disconnecting4.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Manual racking-in

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Ensure before racking operation, that no current can flow through the disconnecting device.
- Ensure to reach the complete rack-in or rack-out position.
- Operate the racking device, only with the genuine Schneider Electric racking crank.
- Turn off the power supplying the motor of the racking device before performing a manual racking-in or racking-out using the crank.

Failure to follow these instructions will result in death or serious injury.

**NOTICE**

HAZARD OF EXCESSIVE ROTATION SPEED

For motorized racking device, don’t exceed 120 rev/min when performing racking-in or racking-out in manual mode.

Failure to follow these instructions can result in equipment damage.

1. If racking device control motor is installed, de-energize the motor.
2. If any, remove the padlock from the racking device red pushbutton.
3. If any, unlock electrically the electromagnet.
4. Press the racking device red pushbutton.

If all interlocks are implemented, the following conditions are needed to open the crank insertion hole:

- the racking device is locked in position
- the LV auxiliary connection plug is connected and locked
- the door is closed and locked
- if any, the Earthing Switch is open.

5. Maintain the effort on the pushbutton and insert the crank.

6. Turn the crank clockwise until to the racking device state indicator move to the position below.

<table>
<thead>
<tr>
<th>Device stroke (mm)</th>
<th>Nos. of crank turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>53</td>
</tr>
</tbody>
</table>

Note: The crank can be extracted from the hole at any time prior the end of the racking-in, but this action stops the operation. Operation can be resumed by reinserting the crank after pushing the racking device pushbutton.

7. Remove the crank. The device is in the "Service" position.
Using EasyPact EXE

**Manual racking-out**

<table>
<thead>
<tr>
<th><strong>HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ensure before racking operation, that no current can flow through the disconnecting device.</td>
</tr>
<tr>
<td>• Ensure to reach the complete rack-in or rack-out position.</td>
</tr>
<tr>
<td>• Operate the racking device, only with the genuine Schneider Electric racking crank.</td>
</tr>
<tr>
<td>• Turn off the power supplying the motor of the racking device before performing a manual racking-in or racking-out using the crank.</td>
</tr>
<tr>
<td><strong>Failure to follow these instructions will result in death or serious injury.</strong></td>
</tr>
</tbody>
</table>

**NOTICE**

<table>
<thead>
<tr>
<th><strong>HAZARD OF EXCESSIVE ROTATION SPEED</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>For motorized racking device, don’t exceed 120 rev/min when performing racking-in or racking-out in manual mode.</td>
</tr>
<tr>
<td><strong>Failure to follow these instructions can result in equipment damage.</strong></td>
</tr>
</tbody>
</table>

1. If a racking device motor control is installed, de-energize the motor.
2. If any, remove the padlock from the racking device red pushbutton and unlock the keylock.
3. If any, unlock electrically the electromagnet.
4. Press the racking device pushbutton.

If all interlocks are implemented, the following conditions are needed to open the crank insertion hole:
- the LV auxiliary connection plug is connected and locked
- the door is closed and locked.

5. Maintain the effort on the pushbutton and insert the crank.

6. Turn the crank counter clockwise until the racking device state indicator move to the position below.

<table>
<thead>
<tr>
<th><strong>Device stroke (mm)</strong></th>
<th><strong>Nos. of crank turns</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>53</td>
</tr>
</tbody>
</table>

**Note:** The crank can be extracted from the hole at any time prior the end of the racking-out, but this action stops the operation. Operation can be resumed by reinserting the crank after pushing the racking device pushbutton.

7. Remove the crank. The device is in the "Disconnected/test" position.
Remote racking-in

<table>
<thead>
<tr>
<th>CAUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD OF UNEXPECTED EQUIPMENT OPERATION</td>
</tr>
<tr>
<td>Remove the crank to allow rack-in / rack-out with racking device motor control.</td>
</tr>
<tr>
<td>Failure to follow these instructions can result in injury or equipment damage.</td>
</tr>
</tbody>
</table>

Operation is done by local electrical control or by remote electrical control.

1. Ensure that the racking device red pushbutton is not padlocked.

2. If any, unlock the electromagnet.

3. Activate the rack-in of the device.
   If all interlocks are implemented, the following conditions are needed for the racking-in:
   • the LV auxiliary connection plug is connected and locked
   • the door is closed and locked
   • the keylock is captive
   • if any, the Earthing Switch is open
   Wait until you have the rack-in position feedback.

<table>
<thead>
<tr>
<th>Device stroke (mm)</th>
<th>Duration (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>&lt; 60</td>
</tr>
</tbody>
</table>

4. Lock the device in the "Service" position.
Remote racking-out

⚠️ CAUTION

HAZARD OF UNEXPECTED EQUIPMENT OPERATION
Remove the crank to allow rack-in / rack-out with racking device motor control.
Failure to follow these instructions can result in injury or equipment damage.

Operation is done by local electrical control or by remote electrical control.

1. Ensure that the racking device red pushbutton is not padlocked.

2. If any, unlock the electromagnet.

3. Activate the rack-out of the device.
If all interlocks are implemented, the following conditions are needed for the racking-out:
- the LV auxiliary connection plug is connected and locked
- the door is closed and locked
- insert and turn the key. The key is captive.
- if any, the Earthing Switch is open.
Wait until you have the rack-out position feedback.

<table>
<thead>
<tr>
<th>Device stroke (mm)</th>
<th>Duration (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>325</td>
<td>&lt; 60</td>
</tr>
</tbody>
</table>
Locking the Disconnecting Device

Schneider Electric recommends that the disconnecting device has been locked during service.

Electromagnetical locking of the racking device

This function is achieved using a coil which blocks racking-in operation. When the electromagnet is energized, the red pushbutton can be activated and the racking device can be racked in (either manually or by motorization). When the electromagnet is not energized or the power supply is lost, the red pushbutton can't be activated and the racking device can't be racked in manually.

The consignment and locking procedures must be defined by operating company.

Lock
When the coil is not energized, the red pushbutton is blocked and cannot be pushed.

Unlock
When the coil is energized, the red pushbutton is unlocked and can be pushed.

Racking-out operations with Electromagnetical locking.
The electromagnet has to be energized during the complete racking-out operation, including removal of the racking handle, to ensure correct operation of the racking device.
Locking the Disconnecting Device positions

The racking device can be locked in service or disconnected positions: pull out the red pushbutton and then place in the provided hole an adapter or a multiple locking system with one or several padlocks (not supplied, refer to the drawing for dimensions). Make sure that the multiple locking system fits properly through the door extrusion.

When the pushbutton is locked:
- the manual racking-in or racking-out is not possible
- the electrical racking-in or racking-out is not possible.

**Lock**
- Pull-out the red pushbutton and padlock it.

**Check**
- The red pushbutton is blocked.

**Unlock**
- Remove the padlocking elements to release the red pushbutton.

---

Locking the device in service position

When the racking device is key locked, the disconnecting device is locked in service position.

When locked, the mechanical and electrical rack-in/rack-out of the device is impossible.

Locking procedures must be defined by the operating company.

**Lock**
- The key is free after locking of the device in racked-in position (service position only).

**Check**
- Push the red pushbutton and check that it is blocked.

**Unlock**
- Insert and turn the key. The key is captive and the disconnecting device is ready for racking-out.
Discovering the electrical auxiliaries

Identification of auxiliary labels

Label of racking device position contacts.
Discovering the electrical auxiliaries

**Electrical diagrams for disconnecting device**

### RACKING DEVICE POSITION CONTACTS

**Disconnecting Device in disconnected/test position**

**Service position switches (Rack-In)**

**Disconnected position switches (Rack-Out)**

[1]: LV plug pin number
[2]: Racking position block designation

**RI1-4**: Racking-in position contacts, closed when the circuit breaker is in the service position.

**RO1-4**: Racking-out position contacts, closed when the circuit breaker is in disconnected/test position.

### Motorized option

**OPTION : MOTORIZATION**

[1]: LV plug pin number (if applicable)
[2]: 12 pin connector

**SC1**: Pushing of the red pushbutton opens microswitch

**SC2**: Key lock detection opens microswitch (option)

**SC3**: Door not closed opens microswitch

**SC5**: VI not open opens microswitch

**SC6**: No LV plug detection opens microswitch

**SC7**: Pulling of the red pushbutton opens microswitch

[3]: 2 pin motor connector


**SP1**: Microswitch for Rack-in motor stop

**SP2**: Microswitch for Rack-out motor stop

**Reminder**

The motor monitoring must be carried out only by the SP1 and SP2 microswitches.

RI1-4 & RO1-4 are only used for position information and not for racking device motor control.
Electromagnet option

<table>
<thead>
<tr>
<th>OPTION : ELECTROMAGNET</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1]: LV plug pin number (if applicable)</td>
</tr>
<tr>
<td>LM: Locking Magnet (Electromagnetic locking)</td>
</tr>
<tr>
<td>[2]: 2 pin connector for locking magnet</td>
</tr>
</tbody>
</table>

[Diagram showing Electromagnet option connections with labels [1], [2], LM, and X05]
Maintenance

General information

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH
- Electrical equipment may only be maintained by qualified personnel.
- The disconnecting device must not be completely disassembled for maintenance work, except of those accessories described in this maintenance section.

**Failure to follow these instructions will result in death or serious injury.**

Medium-Voltage devices must be installed in accordance with appropriate professional practices. Similarly, preventive maintenance operations must be strictly and regularly observed.

Certain maintenance operations can be carried out independently by the User. Two skills are essential:
- electrical qualifications,
- knowledge of the equipment to be maintained.

This user guide is not intended to be used by anyone who has not completed the relevant training.

Other very complex operations are however exclusively the responsibility of Schneider Electric. This allows our customers to benefit from optimized maintenance with regards of the economic perspective and the availability of electric power:
- Schneider Electric's engineers are highly qualified and have a thorough knowledge of Schneider Electric's equipment and its various technical levels; they have all the methods and procedures specific to the different types of devices at their disposal, as well as the advantage of feedback from the whole company,
- they have the relevant diagnostic tools and equipment for the system they are working on,
- they carry with them the appropriate consumables and spare parts for each device, which are available from local or regional stocks.

On request, Schneider Electric will be able to provide at any time:
- an installation diagnosis,
- if required, an appropriate maintenance programme,
- an appropriate maintenance contract,
- adjustments, where necessary.

**Maintenance definitions**

**Preventive**
Preventive maintenance consists in carrying out, at predetermined intervals or according to prescribed criteria, checks intended to reduce the probability of a failure or deterioration in the operation of a system.

**Corrective**
Corrective maintenance repairs a system in view of fulfilling a required function.
**Intervention levels**

Different skill levels have been established to define the persons who are qualified to work on Medium-Voltage equipment.

**Level 1**

Maintenance operations that can be carried out by persons with basic electrician skills doing operations according to instructions provided with the device by Schneider Electric (Open, Close, Racking-in/out...)

**Level 2**

Preventive maintenance operations requiring simple procedures and / or support equipment that can be carried by professional electrical persons performing actions according to Schneider Electric documentation.

**Level 3**

Preventive or curative maintenance operations that can be carried out by an authorized person performing actions delegated by Schneider Electric.

**Level 4**

Preventive or curative maintenance operations that may affect the device performances that can be carried out by Schneider Electric local entities, either in charge of adaptation or Services.

**Level 5**

Curative maintenance operations that can be carried out by the Schneider Electric global entities. The device will generally have to be returned to the factory.

**Trainings**

Schneider Electric offers a wide choice of training courses on how to operate or maintain its equipment. Level 1-2 operations require training on the equipment. This training is delivered in our training centres by Schneider Electric’s accredited qualified staff.
Adaptation of the device and component replacement

End users are only allowed to replace the components listed below. These kit components must only be assembled, installed, used, tested, repaired or maintained by qualified personnel.

Schneider Electric shall not be held responsible for damage which occurs if:

- the instructions provided in the instruction document were not followed,
- any other component than genuine Schneider Electric was installed.

Quality and performances of final assembly is under the End User responsibility. After each operation, conduct electric tests according to the standards in force.

**DANGER**

HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

Replace imperatively following accessories, in case of parts replacement: Nylstop (self-stopping nut), contact washer, stop ring and mechanical pin.

**Failure to follow these instructions will result in death or serious injury.**

<table>
<thead>
<tr>
<th>Component replacement</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removable Top Cover</td>
<td>NVE1860701</td>
</tr>
<tr>
<td>Main Front Cover</td>
<td>NVE1862101</td>
</tr>
<tr>
<td>Racking Device Front Cover</td>
<td>NVE1862201</td>
</tr>
<tr>
<td>Cam for Racking Device Keylock</td>
<td>NVE1843901</td>
</tr>
<tr>
<td>LV 64-pin Plug Withdrawable</td>
<td>NVE1851301</td>
</tr>
<tr>
<td>Racking Device Locking Magnet</td>
<td>NVE1849101</td>
</tr>
</tbody>
</table>

Schneider Electric supplies original spare parts and can provide assistance with identifying the spare parts required for your electrical distribution equipment.

To order spare parts, please contact your Schneider Electric local representative or your MCset manufacturer.

For any modification or upgrade of the disconnecting device, contact Schneider Electric or your MCset manufacturer.

**Products and consumables**

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Designation</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCHNEIDER ELECTRIC</td>
<td>Electrical lubricant Amblygone TA 15/2</td>
<td>18327916</td>
</tr>
<tr>
<td>SCHNEIDER ELECTRIC</td>
<td>Mechanical lubricant Isoflex Topas L 152</td>
<td>18315110</td>
</tr>
<tr>
<td>LOCAL</td>
<td>Chloride free degreasing agent</td>
<td>-</td>
</tr>
<tr>
<td>LOCAL</td>
<td>Lint-free wipe</td>
<td>-</td>
</tr>
<tr>
<td>LOCAL</td>
<td>Brush for lubricant application</td>
<td>-</td>
</tr>
<tr>
<td>LOCAL</td>
<td>3M green Scotch-Brite GP-SH</td>
<td>-</td>
</tr>
</tbody>
</table>

[1] To order products, please contact your Schneider Electric local representative.
Recommended maintenance program

Preventive maintenance operations

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAZARD OF INSUFFICIENT MAINTENANCE</td>
</tr>
<tr>
<td>• Comply with specified maintenance intervals.</td>
</tr>
<tr>
<td>• Perform maintenance according to the actual operating and ambient conditions.</td>
</tr>
<tr>
<td>• Contact your Schneider Electric local representative or your MCset manufacturer for any queries.</td>
</tr>
<tr>
<td>Failure to follow these instructions can result in death or serious injury.</td>
</tr>
</tbody>
</table>

Different maintenance programs must be carried out:

- Basic level of preventive maintenance: every year [1]
- Advanced level of preventive maintenance: every two years [1]
- Exclusive level of preventive maintenance: every five years [1].

[1] Recommended under normal operating conditions. However, this recommended frequency should be increased according to the level of criticality (low, major, critical) and the severity of environment conditions. To define appropriate Maintenance program for your MCset equipment, contact your Schneider Electric Maintenance Service local representative.

EasyPact EXE installed in normal service condition and with preventive maintenance program is designed up to:

<table>
<thead>
<tr>
<th>Racking device</th>
<th>Mechanical interlocks</th>
</tr>
</thead>
</table>

[2] The number of racking operation can be monitored by relay positioned in LV cabinet.
Basic level preventive maintenance program to be performed every year

Basic level preventive maintenance tasks

Basic preventive maintenance corresponds to maintenance levels 1 and 2. Basic preventive maintenance tasks such as operational checks, as well as repairs by standard exchange of certain assemblies can be carried out by qualified customer personnel with basic training. There is no dismounting of parts of the disconnecting device.

<table>
<thead>
<tr>
<th>Part</th>
<th>Check</th>
<th>Frequency: every year[^1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>• Check the general condition of the device (Cover, Frame, Poles, Racking device and Shutter Ramp, MV connection &amp; Cluster, LV Connection)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check the cleanliness of the device (Chair, Insulating cover)</td>
<td></td>
</tr>
<tr>
<td>Auxiliaries</td>
<td>Check auxiliary wiring and insulation</td>
<td></td>
</tr>
<tr>
<td>Racking Device for Disconnecting Device</td>
<td>Check the device racking operation (Rack In/Rack Out)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Check the device racking interlock (operation of the red opening pushbutton)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operate the racking device manually</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operate the racking device electrically for motorized disconnecting device</td>
<td></td>
</tr>
<tr>
<td>Racking Device Padlocking</td>
<td>Operate keylocking system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operate padlocking system</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Operate the electromagnet</td>
<td></td>
</tr>
</tbody>
</table>

[^1] Every fifth year diagnostic checks is carried out by Schneider Electric Service.

Tools
Performing the procedure of the maintenance program requires the following:
- a standard toolbox with electrical tools and equipment for an electrician
- specific tools, detailed in the Instruction Sheet and Maintenance Procedure.

Time Required
The global time required to perform this maintenance program is as follows:
- 15 minutes typically for a disconnecting device without racking motorization
- 30 minutes typically for a disconnecting device with racking motorization.

Safe Repository
For better follow-up of your MCset equipment, upload your Maintenance Reports in Safe Repository.
## Troubleshooting and solutions

<table>
<thead>
<tr>
<th>Diagnose the problem</th>
<th>Identify the probable causes</th>
<th>Find the solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Racking-in or Racking-out</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Impossible to insert the crank in "Disconnected/test" or "Service" position | Device padlocked or locked in "Disconnected/test" or "Service" position | • Check possibility to release the padlock, electromagnetic lock in accordance with the status of the installation.  
• Bring installation into compliance to release locked state. |
| | A lock is present on the racking device in the "Service" position | • Check possibility to release the lock in accordance with the status of the installation.  
• Bring installation into compliance to release locked state. |
| | The auxiliaries connection plug is not locked in the correct position | Lock the auxiliaries connection plug in the correct position. |
| | The racking device is not properly locked in the correct position in the cubicle | Lock the racking device in the correct position in the cubicle. |
| | An interlock with Earthing Switch is present | • Check the position of the Earthing Switch.  
• Check the condition of the switchgear before opening the Earthing Switch.  
• Bring installation into compliance to release locked state. |
| | The pushbutton located on the racking device is padlocked | Check the condition of pushbutton located on the racking device and remove the padlock. |
| | The door is open or the "door interlock" is ineffective | Close the cubicle door or check the operation of the "door interlock". |
| Impossible to press the pushbutton located on the racking trolley | The auxiliaries connection plug is not locked in the correct position | Lock the auxiliaries connection plug in the correct position. |
| | The racking trolley is not properly locked in the correct position in the cubicle | Lock the racking device in the correct position in the cubicle. |
| | An interlock with Earthing Switch is present | Bring installation into compliance to release locked state. |
| | The pushbutton located on the racking device is locked | Check the condition of the pushbutton located on the racking device and disable the lock. |
| | The door is open or the "open door" interlock is ineffective | Close the switchboard door or check the operation of the "open door" interlock. |
| Impossible to turn the crank | Wrong direction of rotation | Check the direction of rotation according to the "position indicator". |
| **Device cannot be racked to "Service" position** | Mechanical problem on the insulating shutters | Check the operation of the insulating shutters. |
| | Clusters are incorrectly positioned | Replace clusters. |
| | The auxiliaries connection plug is not locked in the correct position | Lock the auxiliaries connection plug in the correct position. |
| | The racking device is not properly locked in the correct position in the cubicle | Lock the racking device in the correct position into the cubicle. |
| | An interlock with Earthing Switch is present | • Check the position of the Earthing Switch.  
• Check the condition of the switchgear before opening the Earthing Switch.  
• Bring installation into compliance to release locked state. |
| | The pushbutton located on the racking device is padlocked | Check the condition of the pushbutton located on the racking device and remove the lock. |
| | The door is open or the "door interlock" is ineffective | Close the cubicle door or check the operation of the "door interlock". |
| **Device cannot be racked out** | A keylock is present on the racking device in the "Service" position | • Check possibility to release the keylock in accordance with the status of the installation.  
• Bring installation into compliance to release locked state. |
<table>
<thead>
<tr>
<th>Diagnose the problem</th>
<th>Identify the probable causes</th>
<th>Find the solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device cannot be pulled out</td>
<td>Device is not in the &quot;Disconnected/test&quot; position</td>
<td>• Turn the crank until the device reaches the &quot;Disconnected/Test&quot; position</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Check device to cubicle lock is disengaged on both sides.</td>
</tr>
<tr>
<td><strong>Device insertion or extraction</strong></td>
<td><strong>Device cannot be locked in &quot;Service&quot; or &quot;Disconnected/test&quot; position</strong></td>
<td><strong>Device insertion or extraction</strong></td>
</tr>
<tr>
<td>Withdrawable device cannot be inserted into the cubicle</td>
<td>An interchange stop system between the cubicle and the device is present</td>
<td>Check concordance between the cubicle and the device.</td>
</tr>
<tr>
<td></td>
<td>A lock is present on the shutters</td>
<td>• Check possibility to release the lock in accordance with the status of the installation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Bring installation into compliance to release locked state</td>
</tr>
<tr>
<td>Device cannot be locked in &quot;Service&quot; or &quot;Disconnected/test&quot; position</td>
<td>Device is not in the correct position</td>
<td>Turn the crank until the device reaches the wanted position (&quot;Service&quot; or &quot;Disconnected/test&quot; position).</td>
</tr>
<tr>
<td></td>
<td>Crank remains in the racking device</td>
<td>Remove crank and store it.</td>
</tr>
<tr>
<td>Cubicle door cannot be opened</td>
<td>The racking device is not in the &quot;Disconnected/test position&quot;</td>
<td>Turn the crank until the device reaches the wanted position (&quot;Service&quot; or &quot;Disconnected/test&quot; position).</td>
</tr>
<tr>
<td>Cubicle door cannot be closed</td>
<td>The racking device is not properly locked in the correct position in the cubicle</td>
<td>Lock the racking device in the correct position in the cubicle.</td>
</tr>
<tr>
<td></td>
<td>The &quot;door interlock&quot; is ineffective</td>
<td>Check the operation of the &quot;door interlock&quot;.</td>
</tr>
<tr>
<td><strong>Door interlock</strong></td>
<td><strong>Door interlock</strong> stuck in wrong position</td>
<td>Release &quot;door interlock&quot; manually.</td>
</tr>
<tr>
<td>Not possible to close the door in order to operate &quot;door interlock&quot; on racking device (door handle movement is blocked)</td>
<td>&quot;Door interlock&quot; stuck in wrong position</td>
<td>Release &quot;door interlock&quot; manually.</td>
</tr>
<tr>
<td><strong>Device motorization</strong></td>
<td><strong>Inverse voltage at connection terminal</strong></td>
<td>De-energize the motorization from the LV cabinet. This may damage the permanent magnet of the motor.</td>
</tr>
<tr>
<td>Racking-in without de-energizing the racking device motorization</td>
<td>Racking-out without de-energizing the racking device motorization</td>
<td>De-energize the motorization from the LV cabinet. This may damage the permanent magnet of the motor.</td>
</tr>
<tr>
<td>No complete racking-in with motorization</td>
<td>Motor fault during racking-in</td>
<td>De-energize the motorization from the LV cabinet. Rack-out manually the racking device.</td>
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<tr>
<td><strong>Electromagnet</strong></td>
<td><strong>Impossible to press red pushbutton of racking device despite electromagnet activation</strong></td>
<td><strong>Electromagnet</strong></td>
</tr>
<tr>
<td>Electromagnet is not supplied or power supply value is inadequate</td>
<td>The electromagnet is mechanically locked</td>
<td>Contact your Schneider Electric representative to replace the electromagnet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Check the shaft movement obstruction, and if needed contact your Schneider Electric representative to replace the electromagnet.</td>
</tr>
<tr>
<td>Red pushbutton of racking device can be operated despite electromagnet is powered off</td>
<td>Electromagnet shaft is blocked and does not lock anymore the red pushbutton</td>
<td>Check the shaft movement obstruction, and if needed contact your Schneider Electric representative to replace the electromagnet.</td>
</tr>
</tbody>
</table>
Disconnecting Device operation in a nutshell

- **Service position**
  - **Insert key**
  - **Unlock**
  - **Rack-out**
  - **Disconnected position**
  - **Remove key**
  - **Lock**
  - **Rack-in**

= motorized operation

This diagram does not describe the usage of padlocking, keylocking and electromagnetic locking; please refer to associated pages.