instructions for use

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symbols and conventions

Caution: you will find all the symbols below throughout the document, indicating the hazard levels depending on the different types of situation.

**DANGER**

DANGER: failure to follow this instruction will result in death or serious injury.

**WARNING**

WARNING: failure to follow this instruction may result in death or serious injury.

**CAUTION**

CAUTION: failure to follow this instruction may result in injuries. This alert signal can also be used to indicate practices that could damage the SM6 unit.

**INFORMATION-ADVICE**

We draw your attention to this specific point.
contact the Schneider Electric service unit for diagnosis and advice

Call your sales representative who will put you in contact with the closest SCHNEIDER ELECTRIC group service centre. You can log on to: www.schneider–electric.com

distribution rules

The aim of this publication is to enable the SF6 unit to be installed correctly. This document is not a commercial document. It is a strictly technical document drawn up by Schneider Electric.

safety rules

CAUTION

All the operations described below must be performed in compliance with applicable safety standards, under the responsibility of a competent authority.

WARNING

The contractor must be certified and authorised to manipulate and perform work on the SF6 unit.

CAUTION

Only undertake the work after having read and understood all the explanations given in this document. If you have any difficulty complying with these rules, please contact Schneider Electric.
fixed circuit-breaker
RI operating mechanism
side A1 position

RI operating mechanism
side B1 position

RI operating mechanism
front C1 position
fixed circuit-breaker

A : poles.
B : supporting structure.
C : pole mechanism protective plate.
D : RI operating mechanism.
E : operating mechanism cover.
F : operating mechanism cover predrilled for adaptation of a VIP relay (in B1 position).
G : operating mechanism plate.
H : wiring outlet.

operating mechanism plate

1 : operating mechanism charging lever
2 : closing pushbutton
3 : opening pushbutton
4 : operation counter
5 : "open or closed" device status mechanical indicator
6 : "charged or uncharged" operating mechanism charging status mechanical indicator
7 : keylock (option)
**support frame**

SF1 630A – 1250A

righthand side operating mechanism

The support frame is optional and is delivered unassembled.

The assembly manual is found inside the packing.

lefthand side operating mechanism

front operating mechanism

---

**SFset 630 A 36 kV**

NB: this device is delivered with the support frame without option.

righthand side operating mechanism

lefthand side operating mechanism

front operating mechanism
identification

Check:
- that the technical data marked on the rating plates match the information given on the order form.
- that the connection diagram is enclosed with the device manual.

locating the identification plates

IEC standard
A: characteristics and auxiliaries
B: serial number and year of manufacture

ANSI standard
A: characteristics
C: auxiliaries
D: undervoltage tripping option
E: keylocking option

contactor and auxiliaries rating plates

1: device type designation
2: rated voltage
3: rated lightning impulse withstand voltage
4: rated continuous operating current
5: rated breaking capacity for CC 3s
6: no-load breaking capacity
7: rated operating sequence
8: class
9: SF6 mass
10: reference standard
11: characteristics information plates

voltage indication

Warning affixed to the plate for a device equipped with the undervoltage option.
Label indicating the keylocking option.
storage

The circuit-breakers are dispatched in the “O” open position with the operating mechanism “deactivated”.

Store the devices in their original packing.

prolonged storage

In the event of prolonged storage, the device must remain in its original packing.

Following prolonged storage, all insulating parts must be thoroughly cleaned before use. The enclosure will be dusted using a clean, dry cloth.

handling preparation

Unpack equipment at the installation site. Avoid chocks.

by lifting

1 : Insert the eye bolts.
2 : Remove the two eye bolts F using a 13 mm wrench.

WARNING

poles are under pressure. Once packing has been removed, hold the circuit-breaker using slings that are attached to handling elements.

Note:

These elements should be kept for handling other equipment.
by rolling

To assemble the rolling frame and assemble the SF1 or Sfset on the frame, refer to the kit manual found in the frame package.

rolling direction

For the side operating mechanism in position A1 or B1.

For the front operating mechanism in position C1.
overall dimensions
SF1 630A – 1250A

NB: the support frame (optional) shown on the figures,...
.... is mounted on all the device types included in this manual.

righthand side operating mechanism

lefthand side operating mechanism

front operating mechanism

| fixed SF1 SF1 | phase to phase A | B | C | dimensions without support frame D | E | F | dimensions with support frame SF1 | weight in Kg Frame |
|---------------|-----------------|---|---|---------|----|---|-------------------|-----------------|-------------------|
| righthand or lefthand side operating mechanism | | | | | | | | |
| 630 A and 1250 A | 220 | 1008 | 290 | 750 | 1175 | 1065 | 600 | 78 | 25 |
| 280 | 1158 | 290 | 750 | 1175 | 1215 | 600 | 80 | 27 |
| 380 | 1575 | 365 | 750 | 1175 | 1632 | 600 | 88 | 27 |
| front operating mechanism | | | | | | | | |
| 630 A and 1250 A | 220 | 766 | 490 | 745 | 1175 | 853 | 600 | 78 | 25 |
| 280 | 886 | 490 | 745 | 1175 | 973 | 600 | 80 | 27 |
| 380 | 1260 | 429 | 745 | 1175 | 1317 | 600 | 88 | 27 |
SFset 630 A – 1250 A

**NB:** the support frame (optional) shown on this figure,... is mounted on all the device types included in this manual.

righthand side operating mechanism

![Righthand side operating mechanism diagram](image)

lefthand side operating mechanism

![Lefthand side operating mechanism diagram](image)

front operating mechanism

![Front operating mechanism diagram](image)

<table>
<thead>
<tr>
<th>fixed SF1</th>
<th>phase to phase</th>
<th>dimensions without support frame</th>
<th>dimensions with support frame</th>
<th>weight in Kg</th>
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<td>righthand or lefthand side operating mechanism</td>
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<td>front operating mechanism</td>
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</table>
SFset 630 A 36 kV

righthand side operating mechanism

lefthand side operating mechanism

front operating mechanism

<table>
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<tr>
<th>SFset</th>
<th>phase–to–phase</th>
<th>dimensions with support frame</th>
<th>weight in Kg</th>
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<td>front operating mechanism</td>
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<tr>
<td>630 A</td>
<td>380</td>
<td>960</td>
<td>1138</td>
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</tbody>
</table>
fitting a circuit-breaker with support frame

**CAUTION**

On no account must this frame be used to convert a fixed circuit-breaker into a draw-out circuit-breaker.

Fixed circuit-breakers with support frame are secured to the ground and attached using fastening lugs.

Insert the right number of washers to prevent deforming the lug.

without support frame

Fit the circuit-breaker and secure it using standard screws. (4 fasteners diameter 10.1)

connecting the earth busbar

Connection A is placed to the bottom right of the poles support.
HV electrical connection at the end of the pole

**CAUTION**

compulsory tightening torque: 28 Nm.

Incomer or feeder
- an M8 tap hole

Upper insert
- according to performance

Incomer or feeder
- two M8 tap holes

Upper insert
- according to performance

side

**CAUTION**

compulsory tightening torque: 28 Nm.

Incomer or feeder
- two M8 tap holes

Lower insert
- B: connecting holes.

Incomer or feeder
- two diameter 9 holes for M8 screws

Lower insert
- C: connecting holes
LV electrical connection

CAUTION

the “customer” low voltage connection requires removal of the protective cover.

The cover is removed by withdrawing the 4 marked screws.

circuit-breaker

LV wiring insertion

The wiring leaves the case through the 3 predrilled holes. The case can be installed to the right or left of the cover.

The outlet for unused wiring is blocked by a blanking plate.

LV connecting terminal

D : rotating auxiliary contacts.
E : LV terminal block and pressure indication option.

operating mechanism in the side position

operating mechanism in the front position
A: SF6 pressure signalisation/ common source of power supply for end of charging signalisation and opened or closed CB signalisation/common point for release interlock and anti-pumping relay

B: common point for end of charging signalisation/SF6 pressure signalisation/ opened or closed CB signalisation supervision of continuity release circuit

C: common point for end of charging signalisation/SF6 pressure signalisation/ opened or closed CB signalisation

D: common point for end of charging signalisation/SF6 pressure signalisation supervision of continuity release circuit

E: common point for end of charging signalisation/SF6 pressure signalisation

F: end of charging signal / supervision of continuity release circuit / common point for SF6 pressure and opened or closed CB signalisation

G: end of charging signalisation / common point for SF6 pressure and opened or closed CB signalisation

H: SF6 pressure signalisation / common point for end of charging signalisation and opened or closed CB signalisation supervision of continuity release circuit

J: SF6 pressure signalisation / common point for end of charging signalisation and opened or closed CB signalisation

P: end of charging signalisation / supervision of continuity of release circuit

The bridges are only possible on the circuit breaker with low voltage connectors

<table>
<thead>
<tr>
<th>type of connection (1 th letter of diagram)</th>
<th>A</th>
<th>B</th>
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electrical diagram n° 889460
The bridges are only possible on the circuit breaker with low voltage connectors.

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A: SF6 pressure signalisation/ common source of power supply for end of charging signalisation and opened or closed CB signalisation/common point for release interlock and anti-pumping relay SF6 pressure signalisation

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operating mechanism plate

1: operating mechanism charging lever
2: closing pushbutton
3: opening pushbutton
4: operation counter
5: "open or closed" device status mechanical indicator
6: "charged or uncharged" operating mechanism charging status mechanical indicator
7: keylock (option)

---

circuit-breaker manual operation

completion of Opening – Closing charging the operating mechanism

Charge the operating mechanism by an alternating motion until it clicks in place.

The circuit-breaker position indicator remains on “O” (device open).
The operating mechanism indicator moves to the charged position.

---

closing

CAUTION

if the circuit-breaker is equipped with an undervoltage release (optional), the latter must be powered in order to close the circuit-breaker (except in the case of downstream supply).

Press the push button to close the circuit-breaker.
The circuit-breaker position indicator moves to "I" (device closed). The operating mechanism indicator moves to the deactivated position.

Opening

Press the push button to open the circuit-breaker. The circuit-breaker position indicator moves to "O" (device open). The operating mechanism indicator indicates that the mechanism is deactivated.

Completion of Opening – Closing – Opening cycle

Charging the operating mechanism

Charge the operating mechanism by an alternating motion until it clicks in place. The circuit-breaker position indicator remains on "O" (device open). The operating mechanism indicator moves to the charged position.

Closing

CAUTION

If the circuit-breaker is equipped with an undervoltage release (optional), the latter must be powered in order to close the circuit-breaker (except in the case of downstream supply). Press the push button to close the circuit-breaker. The circuit-breaker position indicator moves to "I" (device closed). The operating mechanism indicator moves to the deactivated position.
charging the operating mechanism

Charge the operating mechanism by an alternating motion until it clicks in place.

The circuit-breaker position indicator moves to "I" (device closed).
The operating mechanism indicator moves to the charged position.

opening

Press the push button to open the circuit-breaker.

The circuit-breaker position indicator moves to "O" (device open).
The operating mechanism indicator moves to the charged position.

closing

Press the push button to close the circuit-breaker.

The circuit-breaker position indicator moves to "I" (device closed).
The operating mechanism indicator moves to the deactivated position.

circuit-breaker remote operation

electrical charging of the operating mechanism (optional).
A gear motor unit automatically recharges the operating mechanism after circuit-breaker closing.

opening and closing
Release opening and closing operations are remote controlled.
interlocking the circuit—breaker
(optional)

The circuit—breaker is locked in the open position using the keylock.

To interlock:
- press the opening button
- keep the "O" opening button depressed
- turn and remove the key.
**introduction**

**safety instructions**

All the operations described below must be carried out in accordance with applicable safety standards under the supervision of a competent authority.

To reach the various devices:

- open the circuit-breaker
- cut the supply to the auxiliary circuits and main circuit
- close and open using the push buttons in order to uncharge the operating mechanism
- avoid impacts (pressurised enclosure).

**general rules**

Our equipment is designed to guarantee the best possible service provided that the servicing operations described in this document are complied with.

Servicing requires removal of the protective panels (front plate and operating mechanism plate).

Removal and fitting of the front panel plate is described in the “installation instructions” chapter.

The operating mechanism plate is removed by undoing the clips.

**cycle and servicing operations**

This device is designed to operate for 10 years or 10,000 operations under normal operating conditions in accordance with the IEC 694 standard.

The following are recommended:

- an O/I operation every year at least
- a visual inspection every 5 years at least to be determined with the Groupe Schneider service centres.

**summarising table**

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preventive maintenance and cleaning instructions

The pressurised SF6 gas inside the pole retains all its dielectric properties after breaking. Electrical durability is limited by contact wear. This wear depends on device use. We draw your attention to the risk of cleaning processes, consisting of spraying solvents at high pressure.

The main drawbacks of such processes are:
- damage due to jet pressure and impossibility of re-lubricating inaccessible fixing points.
- risk of overheating due to solvent presence on contact areas.
- elimination of special protections.

![CAUTION](image)

Never use solvents and alcohol.

If the insulating parts are dusty, it is recommended that you remove the dust using a dry cloth.

checking arcing contact wear

NB: this procedure must be performed with an operating mechanism without a closing spring.

In position A1 and C1, the check is made at the linkage of the 3 poles, just as for the operating mechanism device in position B1.

The end of link A acts as a reference.

Check that the circuit-breaker is open and that the operating mechanism is deactivated.
removing the closing springs

Slightly charge the operating mechanism in order to neutralise the closing springs.

The springs will be compressed.

Insert a screw or pin, 6 mm diameter or 40 mm long min. into the hole shown above. On no account must it be free. *(do not exceed the first notch of the operating mechanism: otherwise carry out a full cycle and start again).*

Remove the washer and the circlips B.
Release and withdraw the spring. Remove the ring C taking care not to damage it (Teflon coating).

checking

Connect in series the three phases of the device and insert a bell type indicator in the circuit.

Charge the operating mechanism until it clicks into place at the end of charging.
Maintain pressure on the lever and at the same time pull towards you the righthand crank handle until the ratchet wheel latches.

At the same time press closing button 1 and the charging lever in order to release the latching mechanism.

If the position is overshot, repeat the operation.

Slowly close the circuit—breaker using the lever. Stop charging when **the lamp comes on**: the arcing contacts of the three phases are in contact.

CAUTION

Keep the lever in this position, with the bell activated. Proceed in the same manner for the other poles.

If one of the poles activates the bell when the indicator is in the red area, **the 3 poles** must be replaced.
fitting the closing springs

Fit the spring and the ring C on pin D of the operating mechanism.

CAUTION
Assemble without lubricating, do not scratch the teflon ring.

Press the closing button and at the same time...

...continue charging...

... in order to bring crank handle E into the axis of the lower fixing hole of the spring guide.
Fit the washer and the circlips B.

Check that the circuit-breaker is open and that the operating mechanism is deactivated.

Slightly charge the operating mechanism in order to unflange the springs.

Remove the locking system made on the springs with the 6 diameter screw or pin.

Check:
Close then open using the “I” and “O” push buttons to uncharge the operating mechanism.

Continue charging the operating mechanism until it clicks in place.
lubricating the spring guides

Charge the operating mechanism by an alternating motion until it clicks in place. The circuit-breaker position indicator remains on “O” (device open). The operating mechanism indicator moves to the charged position. The springs will be compressed.

- lubricate the guides
- oil the phosphatised springs

CAUTION: do not lubricate teflon ring A.

WARNING: A brush must be used to lubricate. Do not dismantle the spring to perform this operation.

opening spring

local manual closing of the circuit-breaker

Press the “I” push button to close the circuit-breaker. The circuit-breaker position indicator moves to “I” (device closed). The operating mechanism indicator moves to the deactivated position.

if the circuit-breaker is equipped with an undervoltage release (optional), the latter must be powered in order to close the circuit-breaker (except in the event of downstream supply).
The springs will be compressed.
- lubricate the guides
- oil the phosphatised springs

**WARNING**
A brush must be used to lubricate. Do not dismantle the spring to perform this operation.

local manual opening of the circuit-breaker

Press the push button to open the circuit-breaker.

The circuit-breaker position indicator moves to “0” (*device open*).
The operating mechanism indicator indicates that the mechanism is **deactivated**.

operating mechanism unit

Clean the entire subassembly.
Oil all the phosphatised parts.
Check that “baumann” type hoops are fitted.
Lubricate the pins and hinges.

**WARNING**
A brush must be used to lubricate. Do not dismantle the operating mechanism to perform this operation.

gear motor

Clean the entire subassembly.
Oil all the phosphatised parts.
Lubricate the gears

**WARNING**
A brush must be used to lubricate. Do not dismantle the gear motor to perform this operation.
Corrective maintenance

Introduction

The corrective maintenance operations are designed to replace faulty subassemblies.

The operations listed in the summarising table below can be performed either by the customer or by the Groupe Schneider After-Sales representatives.

For any other operations contact your nearest Groupe Schneider centre.

After each operation carry out the electrical tests in accordance with applicable standards.

**CAUTION**

When replacing parts, the accessories listed below MUST be replaced by new equipment:
- Nylstop
- Contact washer
- Hoop
- Circlips
- Clips
- Mechanical pin

Summarising table

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replacing a keylock

removal

Remove the 2 keylock fixing screws and separate the keylock from its support.

fitting and checking

Fit the keylock on its support. Fit and tighten the keylock fixing screws.

Part A must not be flanged by the bolt of keylock B.

replacing the closing springs

Check that the circuit-breaker is open and that the operating mechanism is deactivated.

removal

Charge the operating mechanism by an alternating motion until it clicks in place.

The springs will be compressed.
Insert a screw or pin, 6 mm diameter or 40 mm long min. into the hole shown above. On no account must it be free. *(do not exceed the first notch of the operating mechanism: otherwise carry out a full cycle and start again).*

Remove the washer and the circlips D. Release and withdraw the spring. Remove the ring C taking care not to damage it *(Teflon coating).*

---

**fitting**

Fit the spring and the ring E on pin D of the operating mechanism.

**CAUTION**

assemble without lubricating: do not scratch the teflon ring.

Press the closing button and at the same time....

... continue charging...

.... in order to bring the crank handle F into the axis of the lower fixing hole of the spring guide.
Fit the washer and the circlips B.

Check that the circuit breaker is open and that the operating mechanism is deactivated.

Slightly charge the operating mechanism in order to unflange the springs.

Remove the locking mechanism made on the springs with the 6 diameter screw or pin.

Check:
Close then open using the “I” and “O” push buttons to uncharge the operating mechanism.

Continue charging the operating mechanism until it clicks in place.
replacing a release
the various positions of the releases in the operating mechanism

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simple closing
according to position I
removal

Mark and disconnect the wires.
Remove the two M6 fixing screws.
Remove the release.

fitting and checking

Assemble in reverse order to disassembly.
**Tightening torque: 13 Nm.**
Position the release with the cylindrical rod directed towards the latching crank handle.
Check that the coil rod does not flange the crank handle in the tripped position and ensures transfer of the closing latch A onto the half–moon B.
undervoltage trip according to position II removal

Mark and disconnect the wires. Remove the two M6 fixing screws. Remove the trip device.

fitting and checking

Position the trip device in the tripped position. Position the crank handle in the limit stop position. There must be a clearance of 0.5 to 1 mm between the crank handle and the trip device. Place M6 fixing screw A on the trip unit. Install the trip unit Place M6 fixing screw B. Tightening torque: 13 Nm.

shunt release or overcurrent trip device according to position III removal

Mark and disconnect the wires. Remove the two M6 fixing screws. Remove the release.

fitting and checking

Assemble in reverse order to disassembly. Tightening torque: 13 Nm. Position the release with the cylindrical rod directed towards the latching crank handle. Check that the coil rod does not flange the crank handle in the tripped position and ensures transfer of the closing latch A onto the half-moon B.
according to position IV
removal

NB: the coil is mounted to the left or right of the operating mechanism according to the protection type. Mark and disconnect the wires. Remove the two M6 fixing screws. This assembly is compatible with the presence of an undervoltage release. Remove the release.

fitting and checking

Assemble in reverse order to disassembly. **Tightening torque: 13 Nm.** Position the release with the cylindrical rod directed towards the latching crank handle. Check that the coil rod does not flange the crank handle in the tripped position and ensures transfer of the closing latch A onto the half—moon B.

shunt release or overcurrent trip device (two coils)
according to position V
removal

Mark and disconnect the wires. Remove the two M6 fixing screws. Remove the release.

fitting and checking

Assemble in reverse order to disassembly. **Tightening torque: 13 Nm.** Position the release with the cylindrical rod directed towards the latching crank handle. Check that the coil rod does not flange the crank handle in the tripped position and ensures transfer of the closing latch A onto the half—moon B.
according to position VI
removal

Mark and disconnect the wires.
Remove the two M6 fixing screws.
Remove the release.

fitting and checking

Assemble in reverse order to disassembly.

**Tightening torque: 13 Nm.**

Position the release with the cylindrical rod directed towards the latching crank handle.
Check that the coil rod does not flange the crank handle in the tripped position and ensures transfer of the closing latch A onto the half-moon B.

replacement
gear motor and roller
on the ratchet holder
removing the gear motor

Unhook the ratchet holder return spring and lift the gear latching ratchet by means of a screwdriver.
Raise the motor ratchet holder as high as possible and lock it in place with the screwdriver.

Remove the gear motor (3 screws).
Disconnect the 2 motor supply wires.
removing the roller on the ratchet holder

- Remove the small column.
- Take out this rivet.
  Replace it with an M4 screw combined with washers and lock nut.

placing the roller on the ratchet holder

- Remove spring A.
  - Remove the roller.
  - Truarc B.
  - washers C.
  - bearing D.
  - internal bearing ring E.
  - pin F.

- Prepare and lubricate the parts:
  - bearing D.
  - internal bearing ring E.
  - pin F.
  - washers C.
  - Truarc B.
  - spring A.

Assemble the roller, with the part of the pin used to hook the spring turned towards the gear motor.

Place the spring on the ratchet holder.
fitting the gear motor

Stick (SR 270 strong loctite) and screw the HM6 length 12, class 12.9 stud in the yellow column on the tool mark side. Stick (SR 270 strong loctite) and screw the new column equipped with the stud into the operating mechanism column.

To fit the gear motor, raise the ratchet wheel as far as it will go and lock it using the screwdriver. Should a ratchet catch in the ratchet wheel, it will prevent this operation.

Raise the motor ratchet wheel as far as it will go and lock it using the screwdriver.

Insert the gear motor, taking care not to remove screw G so as not to lose spacer H placed between the two flanges.

Fit the screws class 10.9 (stick using SR 270 strong loctite) and secure the gear motor assembly to a torque of 13 Nm.

Hook the spring onto the gear motor pin.
-replacing an SE microswitch
removal

Mark and disconnect the wires. Remove the hexagon socket screws and the fixing nuts.

fitting and checking
Perform reverse operation to disassembly having first compensated clearance in an antilockwise direction and pushed the contact in the direction of the auxiliary contacts.

Tightening torque: 0.7 Nm.

-replacing an end of charging contact (M1/M2/M3) removal

Proceed in reverse order. Lock the contact fixing screws.

Tightening torque: 0.7 Nm.

Adjustment
- do not flange the contact, adjust travel A 0.7 mm.

NB: to adjust A,
- loosen nut B
- move the part along C
replacing the antipumping relay removal

Mark and disconnect the wires. Loosen the fixing screw and slide the relay so that the screw passes through the opening. Use a 7 mm wrench.

fitting

Fit the fixing screw on the relay and position the relay. Lock the fixing screw in place. **Tightening torque: 0.7 Nm.** Connect the wires according to the diagram and bind them.

replacing the auxiliary contact unit removal

Remove the operating mechanism cover
- locate the contact unit A.
- mark and disconnect the wires.
Remove the terminal block assembly B, secured by screws, washers and nuts C.
presentation

OLD rotary switch ENTRELEC.  NEW rotary switch MAFELEC.

dismantling the OLD rotary switch

1. Remove the 2 nylstop nuts D.
2. remove pin E and collar F
3. remove rotary switch A
4. remove rivet G which locks small plate J
5. remove crank H and small plate J
fitting of new rotary switch

Assemble on the new unit, crank H according to the assembly direction shown above:
- Reference "O" (engraved on the pin) in front of the hole of rivet G

Fit plate J and fix it by a rivet G (or a diameter 3 screw).

To end the assembly, the operation is the reverse to the dismantling:
- Fix rotary switch D on the operating mechanism
- Fix pin E and collar F

- Fix and lock the 2 nylstop nuts K
- Fix the assembly terminal block D, fix by screws, washers, nuts

dismantling of the new rotary switch

Remove the 2 nylstop nuts K.

Remove pin E and collar F, remove rotary switch D.
Remove rivet G which locks small plate J. Remove crank H and small plate J.
SF6 gas recovery

conformity rules

The SF6 must be removed before any dismantling operation can be carried out in compliance with the procedures described in IEC–61634 and according to the following instructions. The gas must be treated in compliance with IEC–60480.

intervention method

Tool necessary for the operation

Plug (A).

Connect the vacuum/filling device.

Wait until the pressure gauge shows 0 (15 min to empty the tank) before removing the connection.
problems, probable causes and solutions

The information given below reduces downtimes to a minimum. However if the solutions proposed are not effective, you must contact the **Groupe Schneider service centre**.

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group Schneider Electric service centers are there for:

- engineering and technical assistance
- start-up
- training
- preventive and corrective maintenance
- adaptation work
- spare parts

Call your sales representative who will put you in touch with your nearest group Schneider Electric service centers.