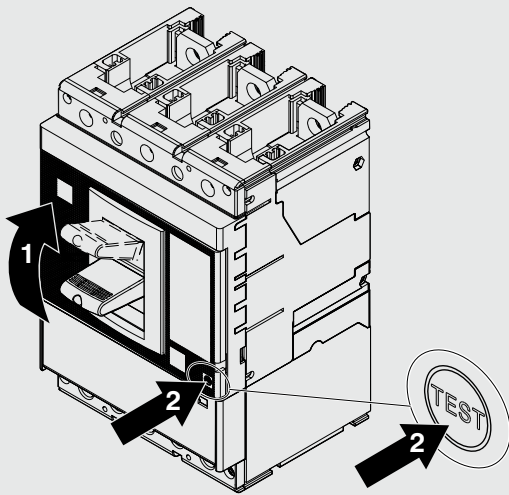


SACE Tmax XT



Istruzioni di installazione XT5 IEC  
Installation instructions XT5 IEC  
Installationsanleitung XT5 IEC  
Instructions pour l'installation XT5 IEC  
Instrucciones de instalación XT5 IEC  
安装说明书 XT5 IEC

XT5 3p-4p



|   |    | A                                              | B  | C                                | D             | E  | F  | G  | H                       | I                | L  | M  | N  | O  | P  |
|---|----|------------------------------------------------|----|----------------------------------|---------------|----|----|----|-------------------------|------------------|----|----|----|----|----|
|   |    | <br>5,3mm<br>H - Shape<br>LENGHT M M5<br>105mm |    | <br>CH 8<br>LENGHT M M10<br>25mm | <br>Ø 10,5x18 |    |    |    | <br>LENGHT M M5<br>18mm | <br>CH 8<br>M M5 |    |    |    |    |    |
| F | 3p | x4                                             | x4 | x6                               | x6            | x1 | x1 | x1 | -                       | x4               | x4 | x6 | x6 | x1 | -  |
|   | 4p | x4                                             | x6 | x8                               | x8            | x1 | x1 | x1 | -                       | x4               | x4 | x8 | x8 | x1 | -  |
| P | 3p | x4                                             | -  | -                                | -             | x1 | x1 | x1 | x4                      | x8               | x4 | -  | -  | x1 | -  |
|   | 4p | x4                                             | -  | -                                | -             | x1 | x1 | x1 | x4                      | x8               | x4 | -  | -  | x1 | -  |
| W | 3p | -                                              | -  | -                                | -             | -  | -  | -  | x4                      | x8               | x4 | -  | -  | -  | x1 |
|   | 4p | -                                              | -  | -                                | -             | -  | -  | -  | x4                      | x8               | x4 | -  | -  | -  | x1 |



- Usare cavi/barre isolate o capocorda isolati o eseguire prove di tipo specifiche sull'installazione.
- Use insulated cables/bars or insulated cable terminals or perform specific type tests on the installation.
- Isolierte Kabel/Sammelschienen oder isolierte Kabelschuhe verwenden oder spezifische Typprüfungen an der Anlage ausführen.
- Utiliser câbles/barres isolées ou des cosses isolées ou réaliser un test de type spécifique sur l'installation.
- Usar cables/barras aislados o terminales aislados o bien ejecutar pruebas de tipo específicas en la instalación.
- 在安装时使用绝缘电缆/绝缘杆，或绝缘接线片，或执行特定的测试。

| Terminal type |             |            |                | F                       | EF <sup>(3)</sup>             | ES                            | R              | FC CuAl<br>1x35...185mm <sup>2</sup><br>1x120...240mm <sup>2</sup> | FC CuAl<br>2x70...240mm <sup>2</sup> |
|---------------|-------------|------------|----------------|-------------------------|-------------------------------|-------------------------------|----------------|--------------------------------------------------------------------|--------------------------------------|
| Ue <500 V     | Supply side | BOTTOM/TOP | Back shield    | -                       | S <sub>T</sub> <sup>(2)</sup> | S <sub>T</sub> <sup>(2)</sup> | S <sub>T</sub> | -                                                                  | S <sub>T</sub>                       |
|               |             |            | Phase barrier  | -                       | S <sub>T</sub> - 100 mm       | S <sub>T</sub> - 200 mm       | -              | -                                                                  | S <sub>T</sub> - 100 mm              |
|               |             |            | Terminal cover | -                       | -                             | -                             | S <sub>T</sub> | -                                                                  | -                                    |
| Ue ≥500 V     | Supply side | TOP        | Back shield    | -                       | S <sub>T</sub>                | S <sub>T</sub>                | S <sub>T</sub> | -                                                                  | S <sub>T</sub>                       |
|               |             |            | Phase barrier  | S <sub>CB</sub> - 25 mm | S <sub>T</sub> - 100 mm       | S <sub>T</sub> - 200 mm       | -              | S <sub>CB</sub> - 25 mm                                            | S <sub>T</sub> - 100 mm              |
|               |             |            | Terminal cover | -                       | -                             | -                             | S <sub>T</sub> | -                                                                  | -                                    |
|               |             | BOTTOM     | Back shield    | Required <sup>(1)</sup> | S <sub>T</sub> <sup>(4)</sup> | S <sub>T</sub> <sup>(4)</sup> | S <sub>T</sub> | Required <sup>(1)</sup>                                            | S <sub>T</sub>                       |
|               |             |            | Phase barrier  | S <sub>CB</sub> - 25 mm | S <sub>T</sub> - 100 mm       | S <sub>T</sub> - 200 mm       | -              | S <sub>CB</sub> - 25 mm                                            | S <sub>T</sub> - 100 mm              |
|               |             |            | Terminal cover | -                       | -                             | -                             | S <sub>T</sub> | -                                                                  | -                                    |

(1) If back panel of the enclosure is bare metal, use back shield code 1SDA112971R1(3p), 1SDA112972R1(4p) or alternatively insulate back panel according to figure 3

(2) Mandatory only for XT5 with breaking capacity V, X

(3) At 690V insulate front panel of the enclosures only for XT5 with breaking capacity L, V, X according to figure 3

(4) In case of installation with double cable terminal, provide 100 mm additional insulation from breaker bottom edge downward

S<sub>CB</sub> - Mandatory installation - Supplied as standard with circuit-breaker, not available in the loose terminals kit

S<sub>T</sub> - Mandatory installation - Supplied as standard with the terminals kit



Different installation conditions shall be type tested

|                       | No accessories |    |    | Terminal cover (LTC) |    |    | High terminal cover (HTC) |    |                   | Phase barriers 25mm |                   |    | Phase Barriers 100mm |    |    | Phase barriers 200mm |   |                      |
|-----------------------|----------------|----|----|----------------------|----|----|---------------------------|----|-------------------|---------------------|-------------------|----|----------------------|----|----|----------------------|---|----------------------|
|                       |                |    |    |                      |    |    |                           |    |                   |                     |                   |    |                      |    |    |                      |   |                      |
|                       | T              | D  | L  | T                    | D  | L  | T                         | D  | L                 | T                   | D                 | L  | T                    | D  | L  | T                    | D | L / L <sup>(5)</sup> |
| U < 500V AC           | 30             | 25 | 25 | 5                    | 0  | 25 | 10                        | 10 | 25                | 10                  | 10                | 25 | 10                   | 10 | 25 | 0                    | 0 | 25                   |
| 500V AC ≤ U ≤ 690V AC | Not allowed    |    |    | 35                   | 20 | 25 | 40                        | 40 | 25 <sup>(7)</sup> | 35                  | 20 <sup>(6)</sup> | 25 | 10                   | 10 | 25 | 0                    | 0 | 50                   |

(5) In case of ES terminals, this distance shall be assumed from the most external edge of the terminals

(6) In case of supply side bottom, D=60mm

(7) With ES and HTC L=50mm

- Usare cavi/barre isolate o capocorda isolati o eseguire prove di tipo specifiche sull'installazione.
- Use insulated cables/bars or insulated cable terminals or perform specific type tests on the installation.
- Isolierte Kabel/Sammelschienen oder isolierte Kabelschuhe verwenden oder spezifische Typprüfungen an der Anlage ausführen.
- Utiliser câbles/barres isolées ou des cosSES isolées ou réaliser un test de type spécifique sur l'installation.
- Usar cables/barras aislados o terminales aislados o bien ejecutar pruebas de tipo específicas en la instalación.
- 在安装时使用绝缘电缆/绝缘杆，或绝缘接线片，或执行特定的测试。

| Terminal type                |             |                | F                       | EF                      | ES                      | R              | FC CuAl<br>1x35...185mm <sup>2</sup><br>1x120...240mm <sup>2</sup> | FC CuAl<br>2x70...240mm <sup>2</sup> |
|------------------------------|-------------|----------------|-------------------------|-------------------------|-------------------------|----------------|--------------------------------------------------------------------|--------------------------------------|
| U <sub>e</sub> ≤ 250V        | Supply side | BOTTOM/TOP     |                         |                         |                         |                |                                                                    |                                      |
|                              |             | Back shield    | -                       | S <sub>T</sub>          | S <sub>T</sub>          | S <sub>T</sub> | -                                                                  | S <sub>T</sub>                       |
|                              |             | Phase barrier  | -                       | S <sub>T</sub> - 100 mm | S <sub>T</sub> - 200 mm | -              | -                                                                  | S <sub>T</sub> - 100 mm              |
| 250V < U <sub>e</sub> ≤ 500V | Supply side | BOTTOM/TOP     |                         |                         |                         |                |                                                                    |                                      |
|                              |             | Back shield    | Required <sup>(1)</sup> | S <sub>T</sub>          | S <sub>T</sub>          | S <sub>T</sub> | Required <sup>(1)</sup>                                            | S <sub>T</sub>                       |
|                              |             | Phase barrier  | S <sub>CB</sub> - 25 mm | S <sub>T</sub> - 100 mm | S <sub>T</sub> - 200 mm | -              | S <sub>CB</sub> - 25 mm                                            | S <sub>T</sub> - 100 mm              |
| U <sub>e</sub> > 500V        | Supply side | BOTTOM/TOP     |                         |                         |                         |                |                                                                    |                                      |
|                              |             | Back shield    | Required <sup>(3)</sup> | S <sub>T</sub>          | S <sub>T</sub>          | S <sub>T</sub> | Required <sup>(3)</sup>                                            | S <sub>T</sub>                       |
|                              |             | Phase barrier  | S <sub>CB</sub> - 25 mm | S <sub>T</sub> - 100 mm | S <sub>T</sub> - 200 mm | -              | S <sub>CB</sub> - 25 mm                                            | S <sub>T</sub> - 100 mm              |
| U <sub>e</sub> > 500V        | Supply side | BOTTOM/TOP     |                         |                         |                         |                |                                                                    |                                      |
|                              |             | Terminal cover | (2)                     | -                       | -                       | S <sub>T</sub> | (2)                                                                | (2)                                  |

(1) Use back shield code 1SDA112971R1(3p), 1SDA112972R1(4p) or alternatively insulate back panel of the enclosure, if bare metal, according to figure 4

(2) Insulation of the panel, shown in figure 4, can be avoided if high terminal covers and back shield are used

(3) Use back shield code 1SDA112971R1(3p), 1SDA112972R1(4p)

(4) Insulation of the back panel, shown in figure 4, is mandatory

S<sub>CB</sub> - Mandatory installation - Supplied as standard with circuit-breaker, not available in the loose terminals kit

S<sub>T</sub> - Mandatory installation - Supplied as standard with the terminals kit

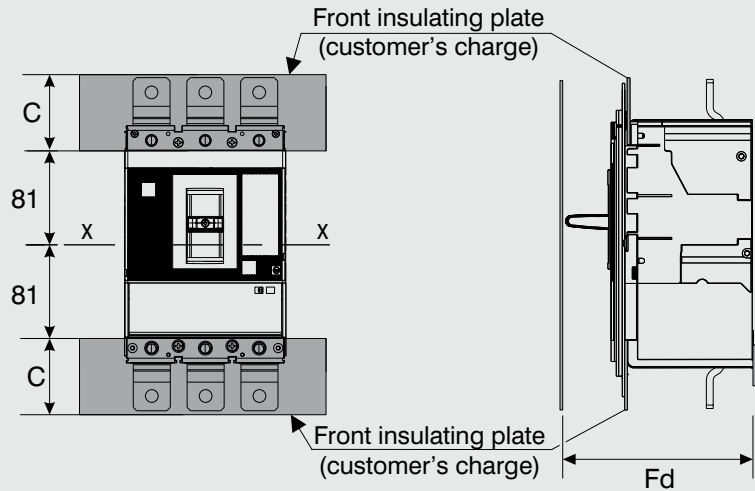
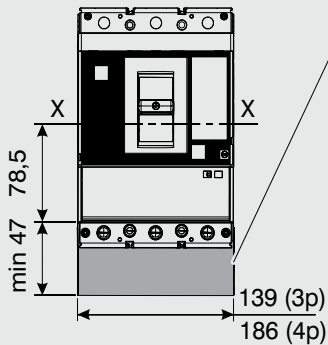


Different installation conditions shall be type tested

|                       | No accessories | Terminal cover (LTC) | High terminal cover (HTC) | Phase barriers 25mm | Phase Barriers 100mm | Phase barriers 200mm     |
|-----------------------|----------------|----------------------|---------------------------|---------------------|----------------------|--------------------------|
|                       |                |                      |                           |                     |                      |                          |
|                       | T D L          | T D L                | T D L                     | T D L               | T D L                | T D L / L <sup>(5)</sup> |
| U ≤ 500V DC           | Not allowed    | 40 0 25              | 40 40 25                  | 40 40 25            | 10 10 25             | 0 0 25                   |
| 500V DC < U ≤ 750V DC | Not allowed    | 40 20 25             | 60 60 50                  | 60 60 50            | 10 10 50             | 0 0 50                   |

(5) In case of ES terminals, this distance shall be assumed from the most external edge of the terminals

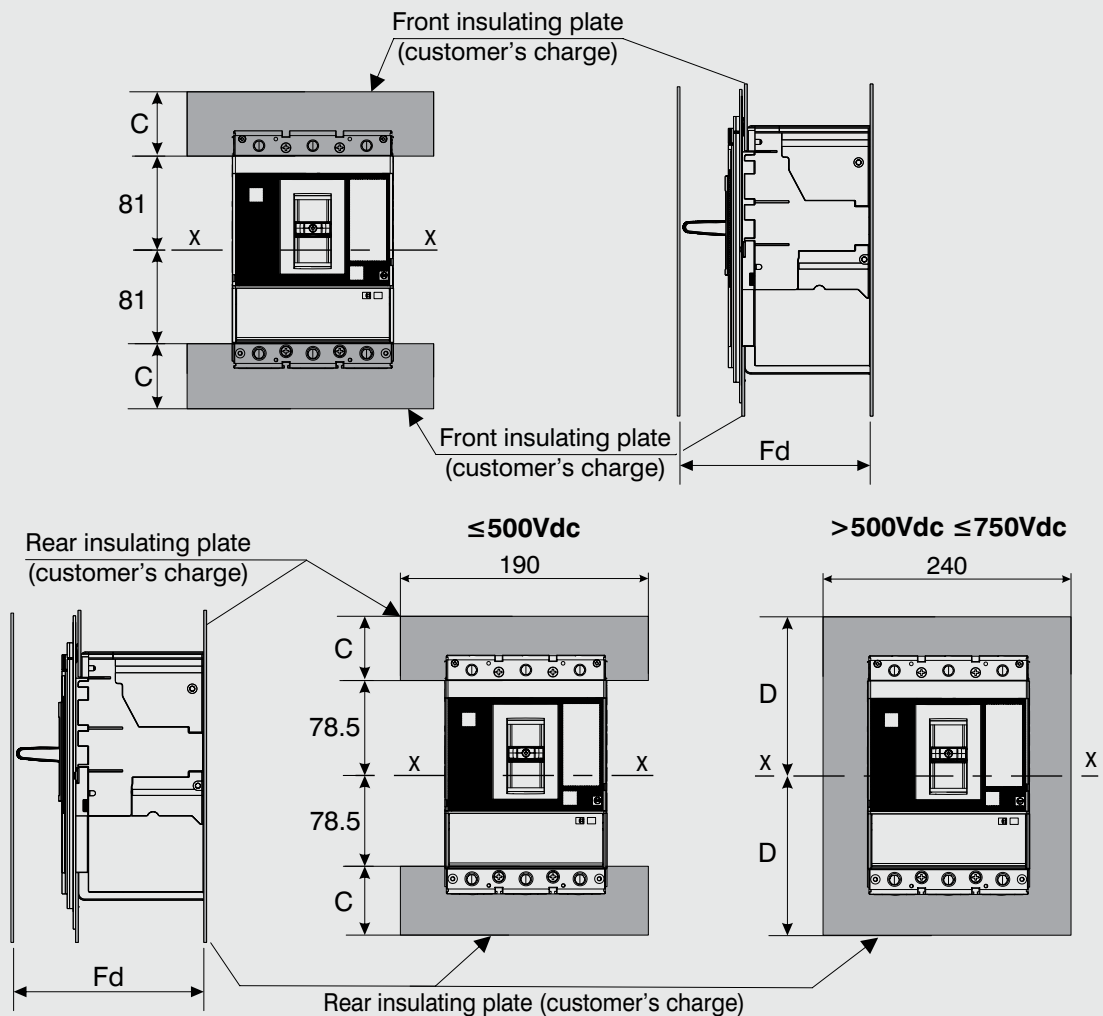
For fixed version at  $U_e \geq 500$  V, with supply from lower terminals use insulating plate at the customer's charge max thickness 1mm or alternatively code 1SDA112971R1 (3p), 1SDA112972R1 (4p) to be ordered separately.



At 690V insulate front panel of the enclosures only for XT5 with breaking capacity L, V, X

Dimension C must be chosen in order to cover all the height of the front door/back panel

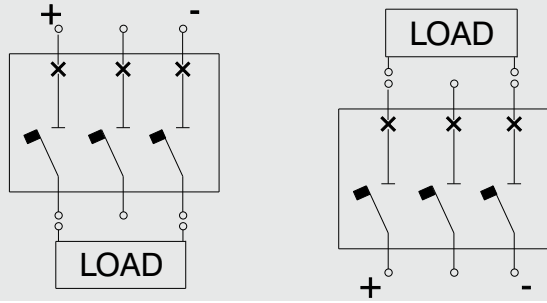
To avoid enclosures door insulation  $F_d \geq 156$ mm



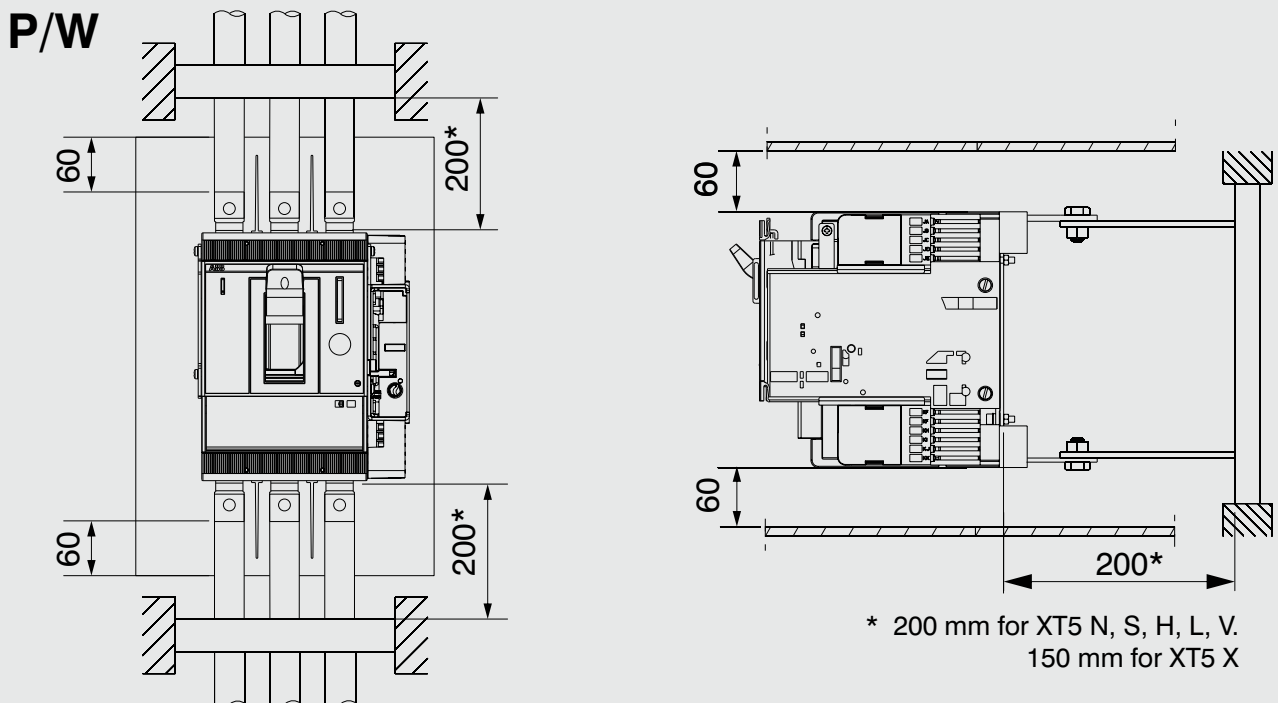
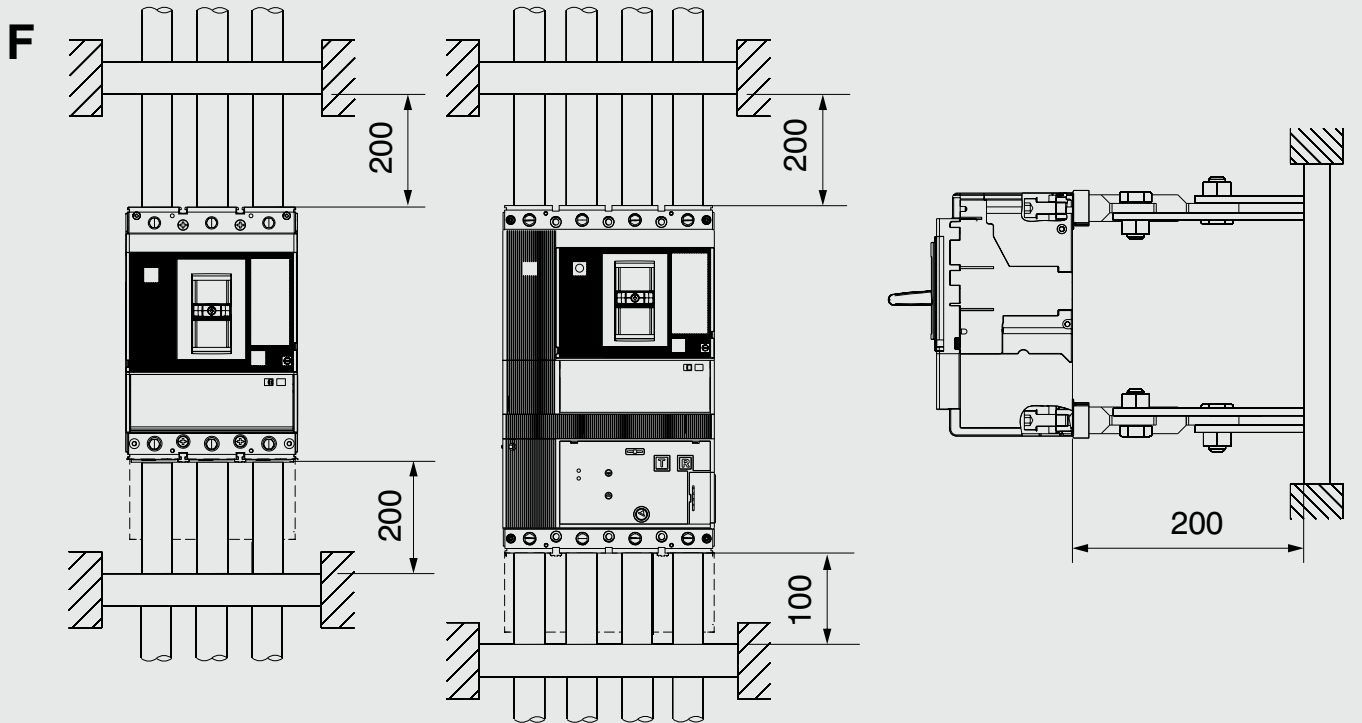
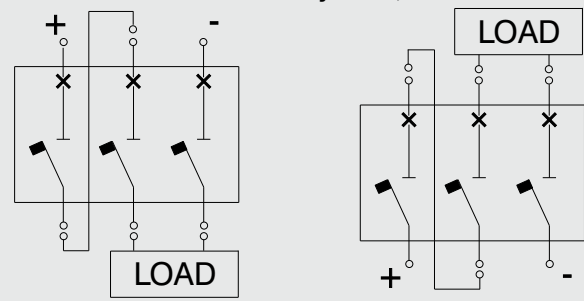
Dimension C,D must be chosen in order to cover all the height of the front door/back panel  
To avoid enclosures door insulation  $F_d \geq 156$ mm

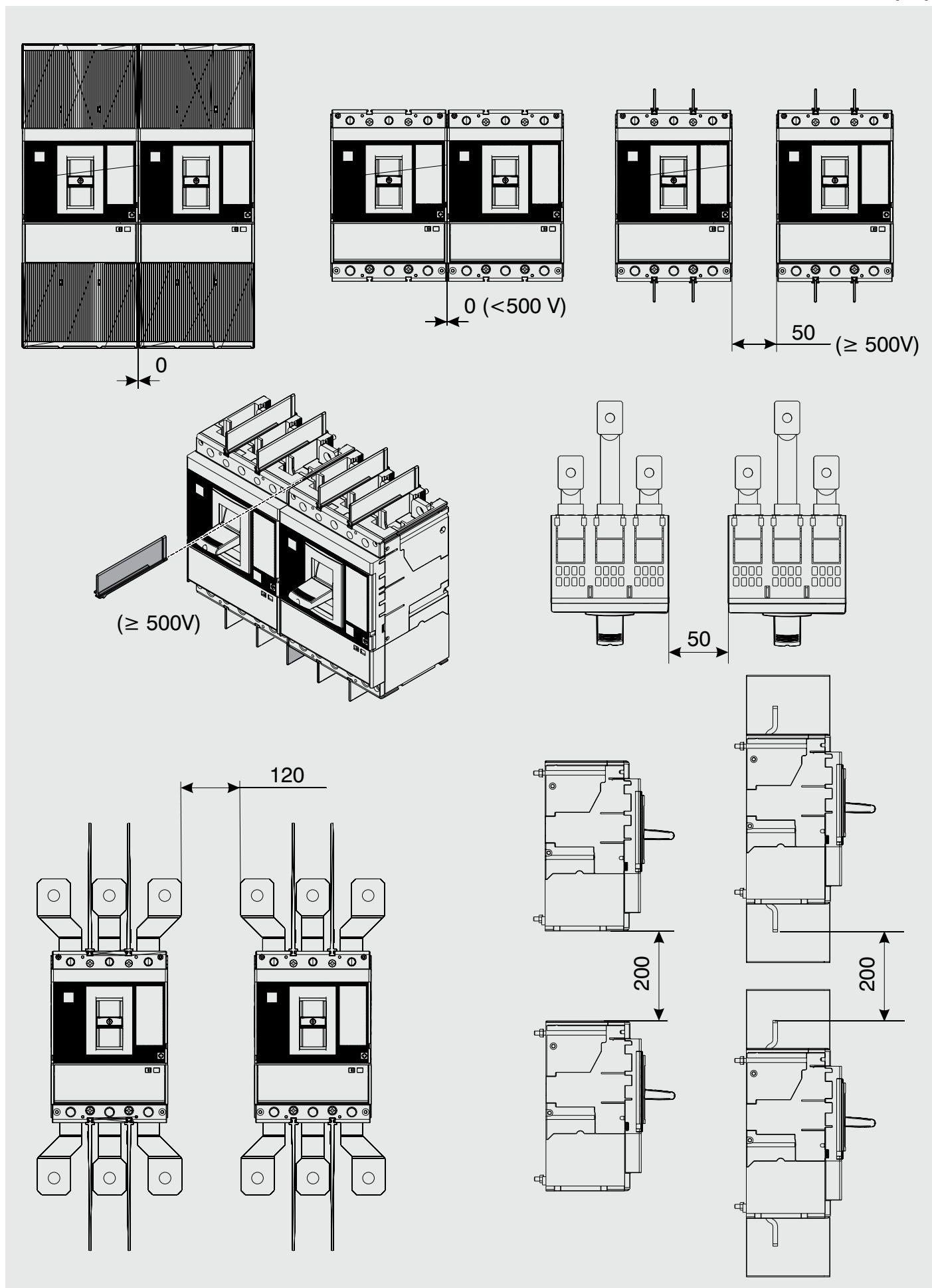


250V - GROUND - UNGROUND  
500V - UNGROUND

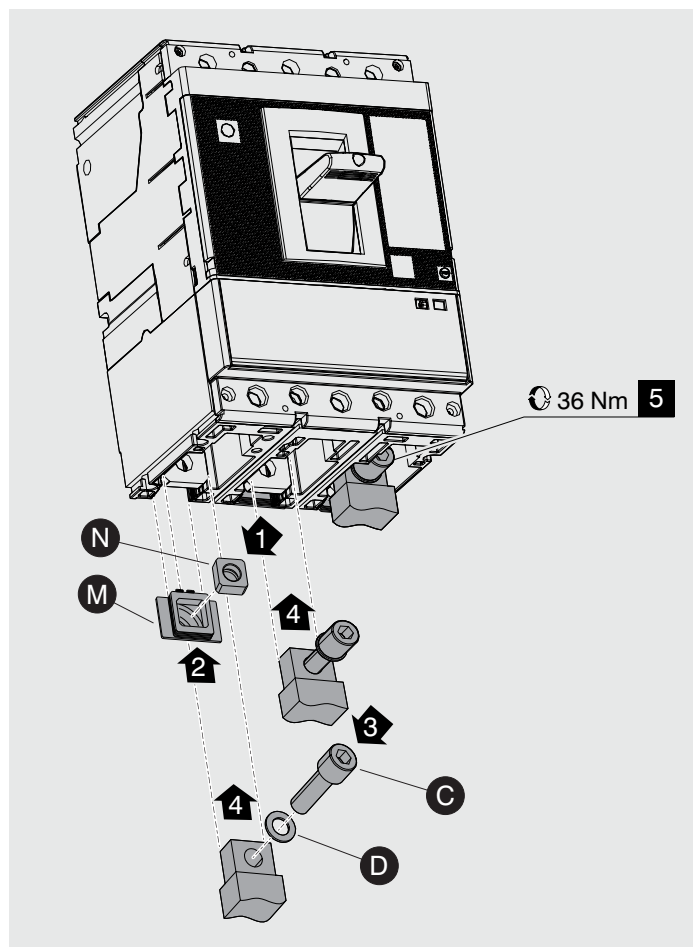


500V - GROUND  
750V UNGROUND - Only for V, X versions

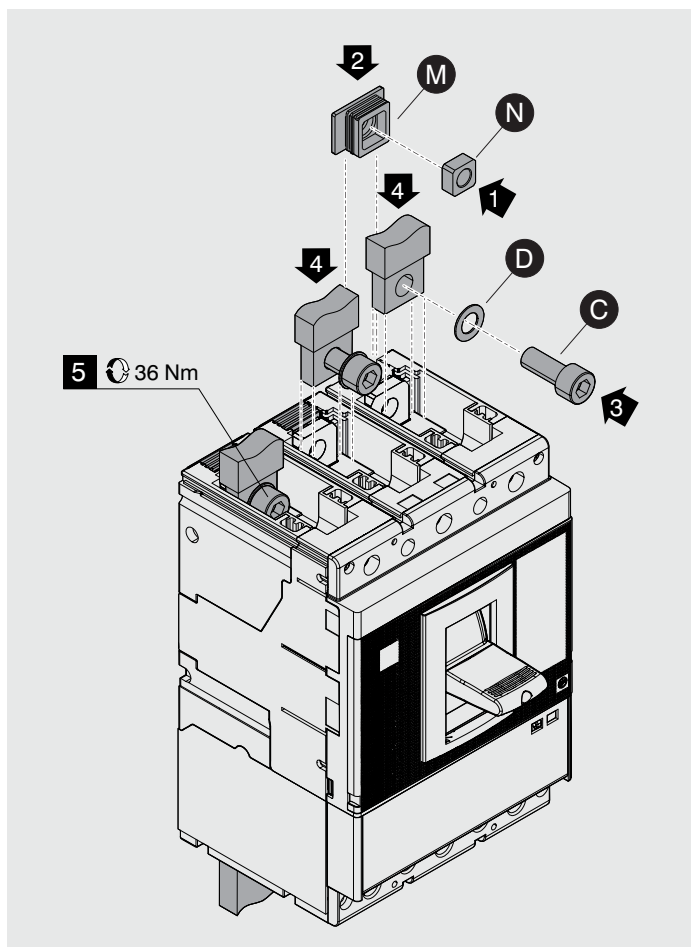




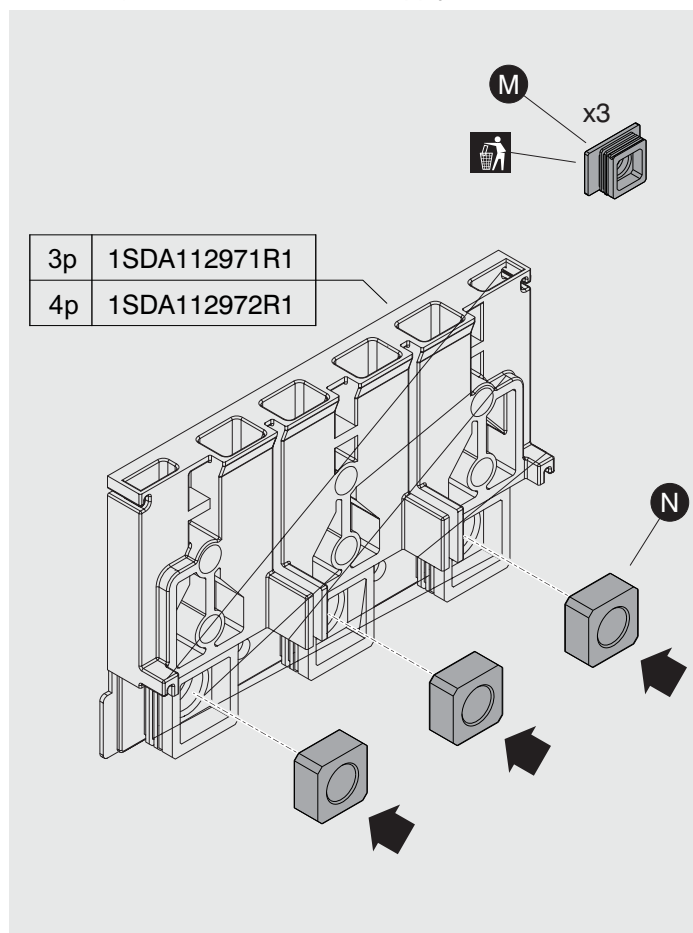
**8** Example for Fixed breaker with F terminals lower



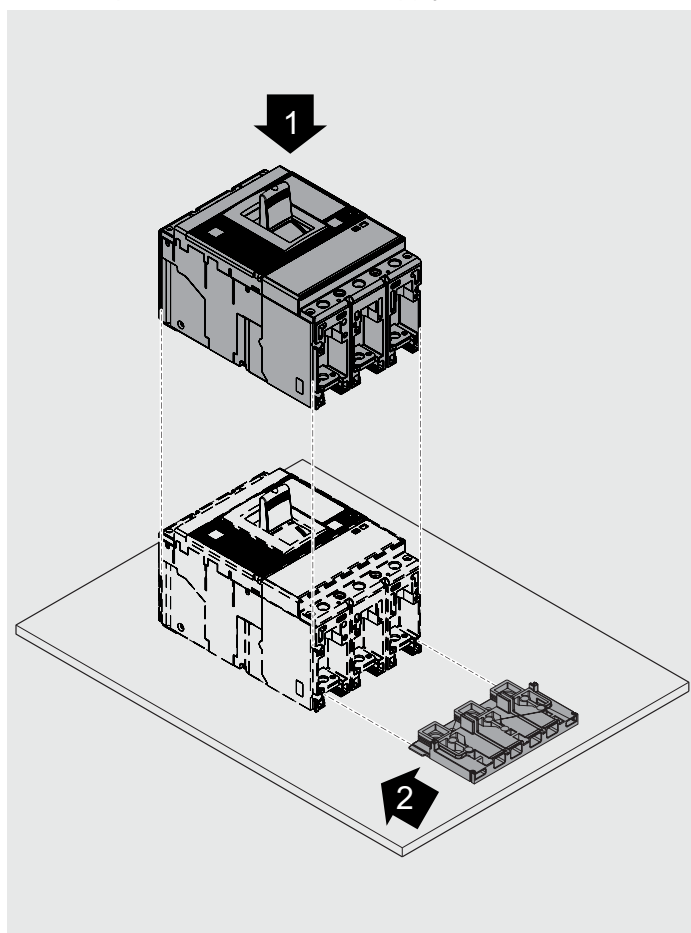
**9** Example for Fixed breaker with F terminals upper



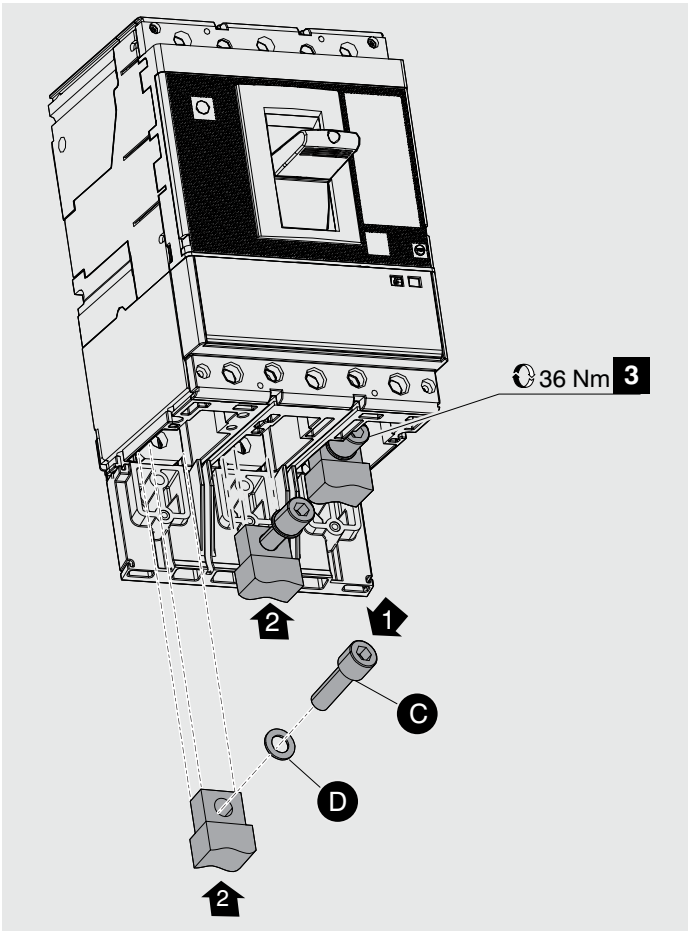
**10** Example for F and  $U_e \geq 500V$ , supply side on lower terminals



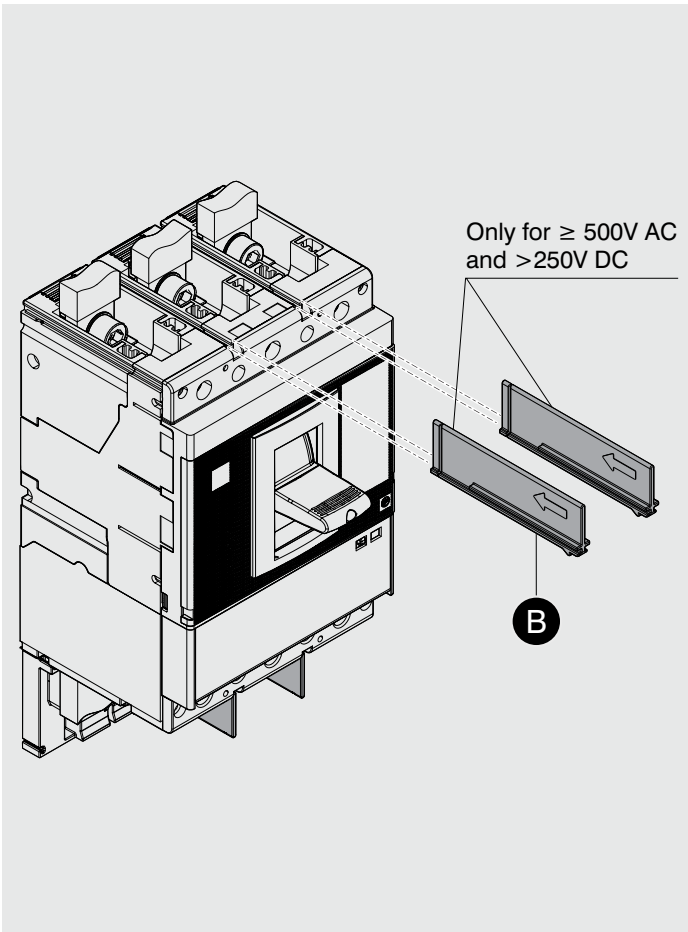
**11** Example for F and  $U_e \geq 500V$ , supply side on lower terminals



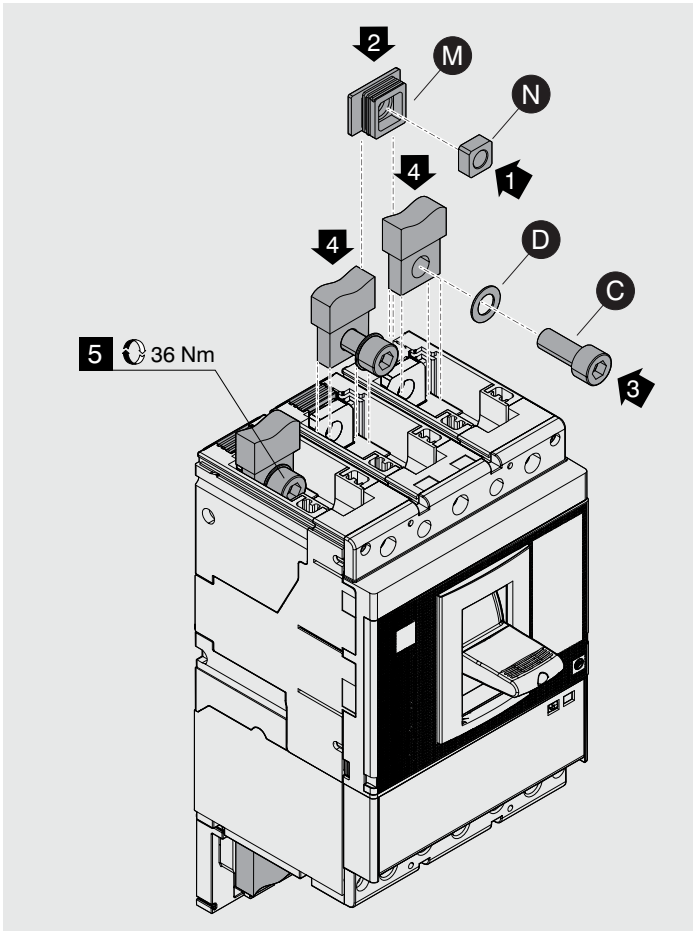
12 Example for F and  $U_e \geq 500V$ , supply side on lower terminals



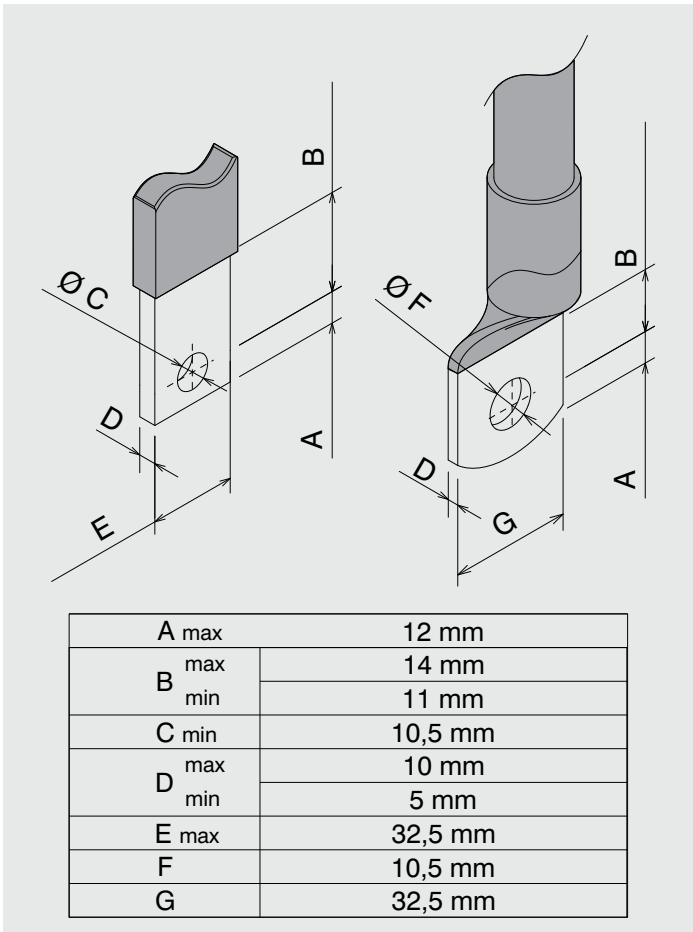
14

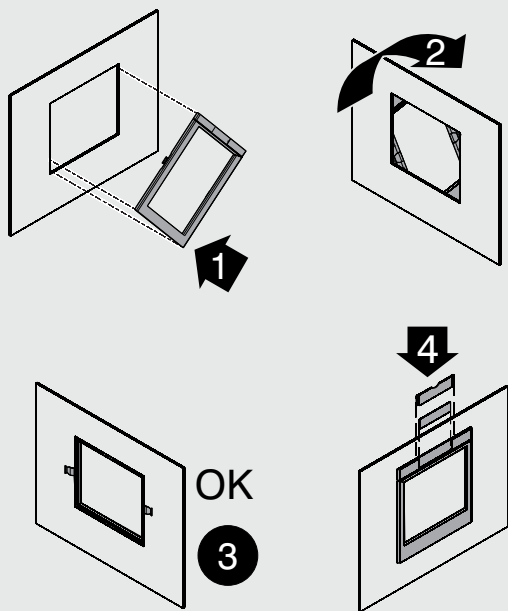
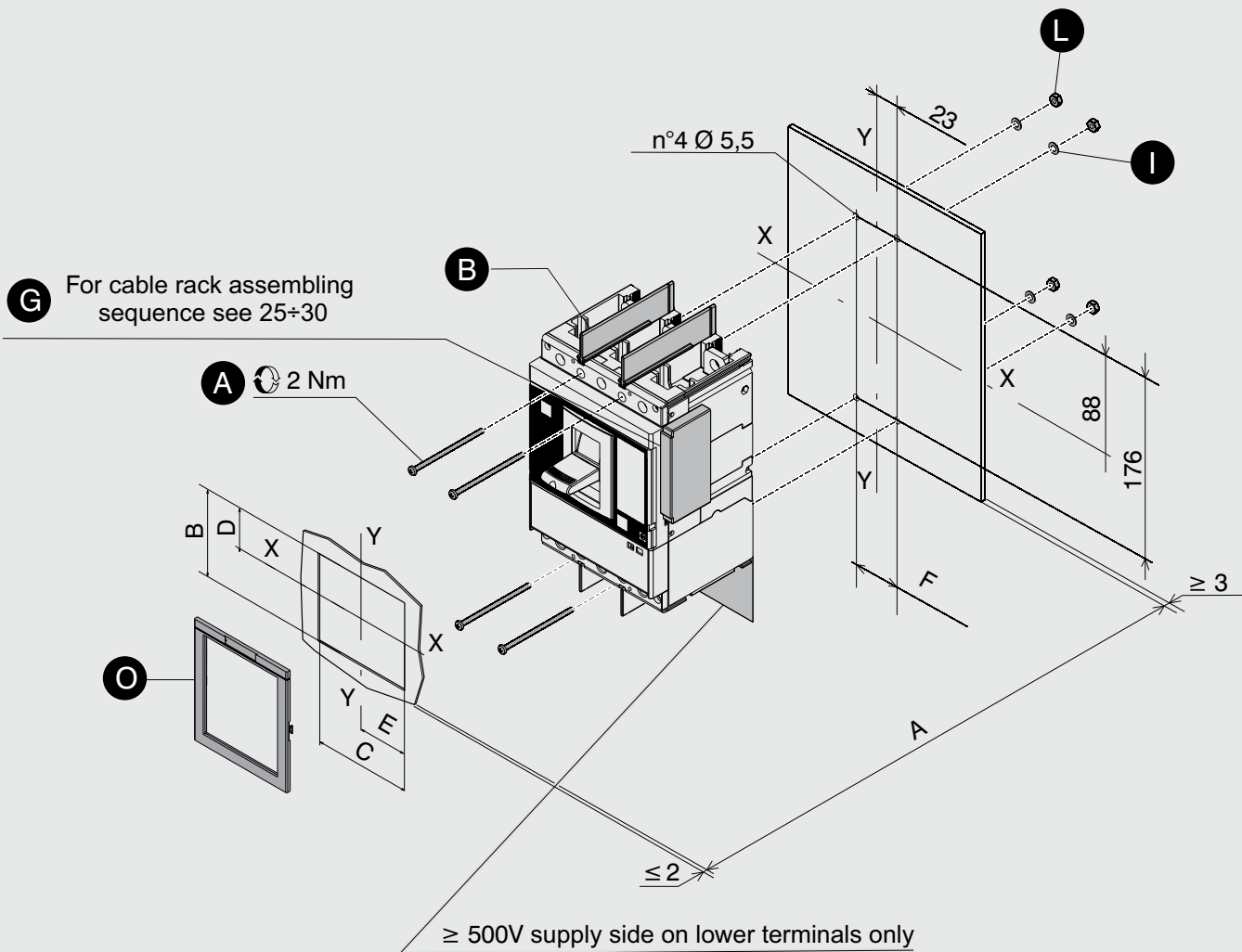


13 Example for F and  $U_e \geq 500V$ , supply side on lower terminals



15



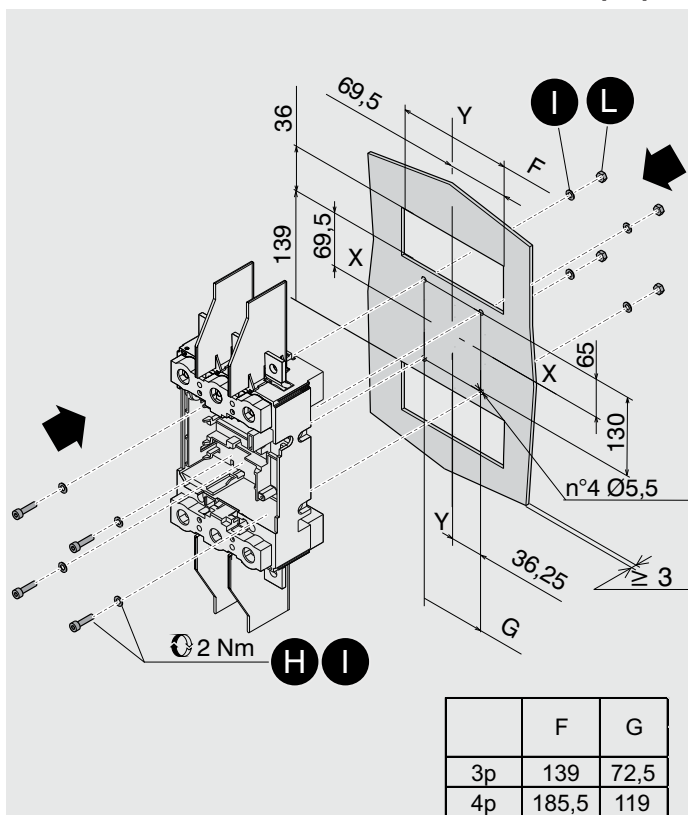


| WITHOUT<br>FLANGE<br>SENZA<br>MOSTRINA |          | A   | B   | C   | D    | E    | F          |
|----------------------------------------|----------|-----|-----|-----|------|------|------------|
|                                        | 3p<br>4p | 108 | 165 | 143 | 82,5 | 71,5 | 46,5<br>93 |

| WITH FLANGE<br>CON<br>MOSTRINA |          | A   | B   | C   | D  | E  | F          |
|--------------------------------|----------|-----|-----|-----|----|----|------------|
|                                | 3p<br>4p | 108 | 174 | 152 | 87 | 76 | 46,5<br>93 |

17

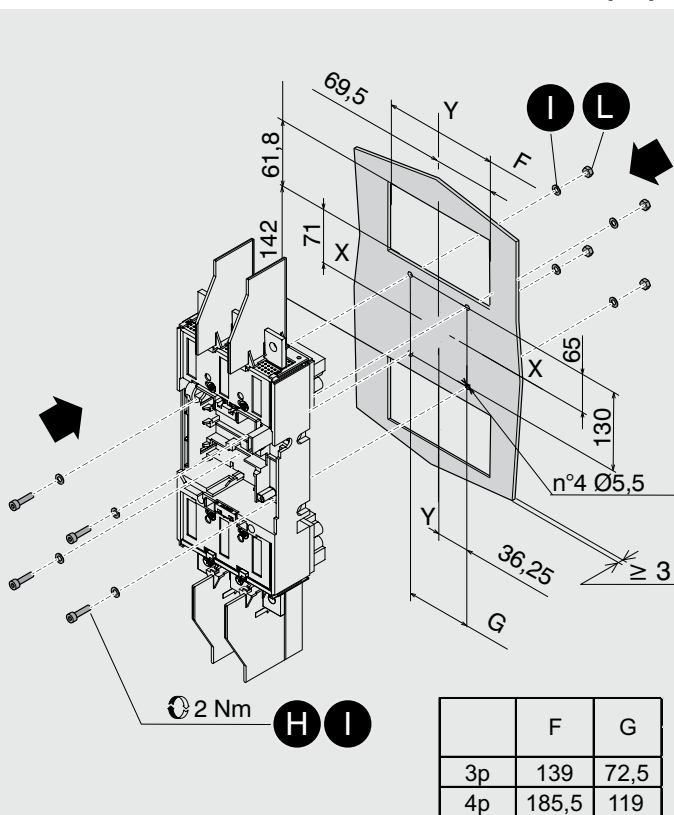
XT5 400 3p-4p P



Example for mounting at 50mm.  
For mounting at 72mm see 2TFH000004A1001

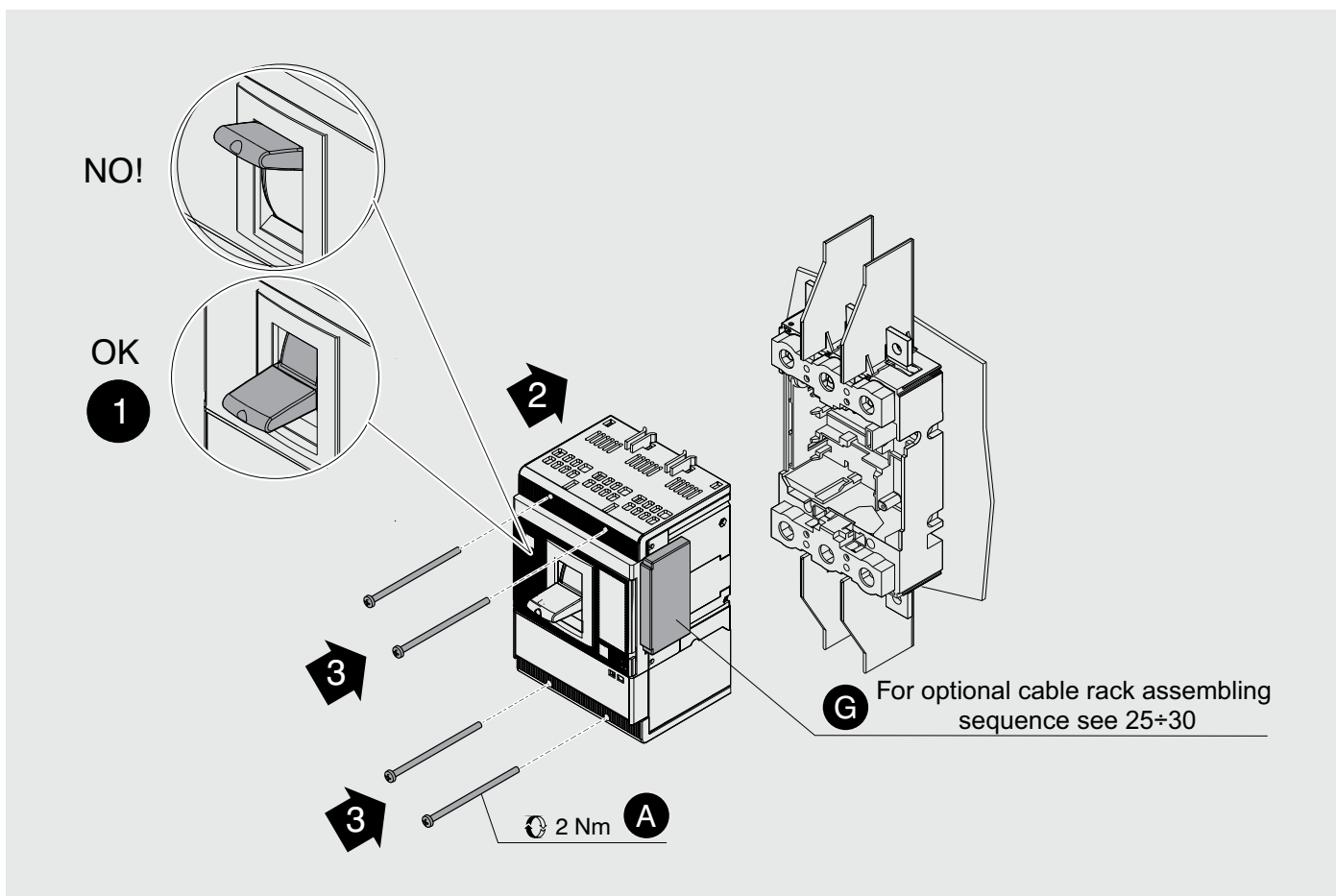
18

XT5 630 3p-4p P



19

XT5 3p-4p P



WITH FLANGE  
CON  
MOSTRINA

|       | A   | B   | C   | D  | E  |
|-------|-----|-----|-----|----|----|
| 3p-4p | 158 | 174 | 152 | 87 | 76 |

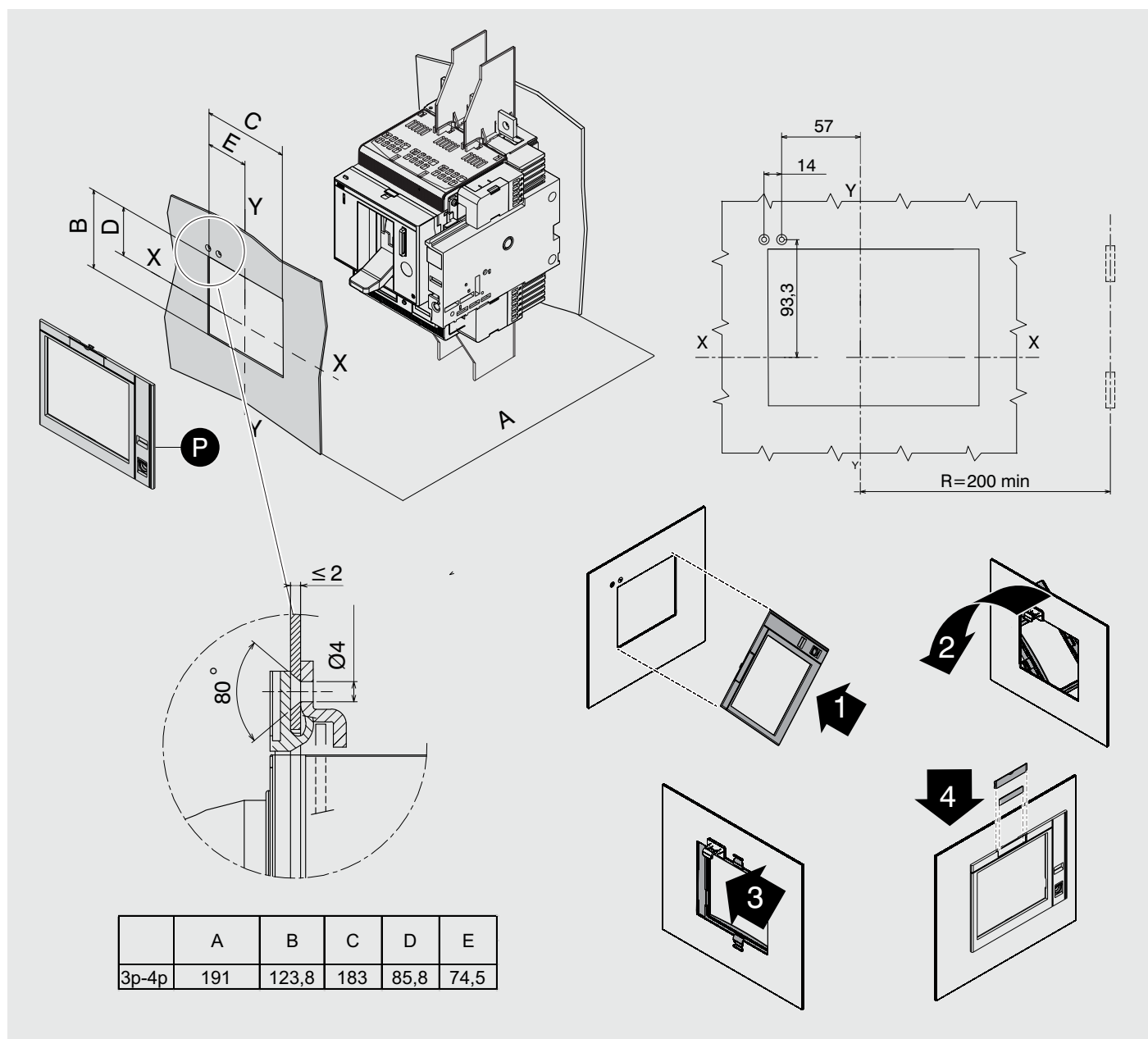
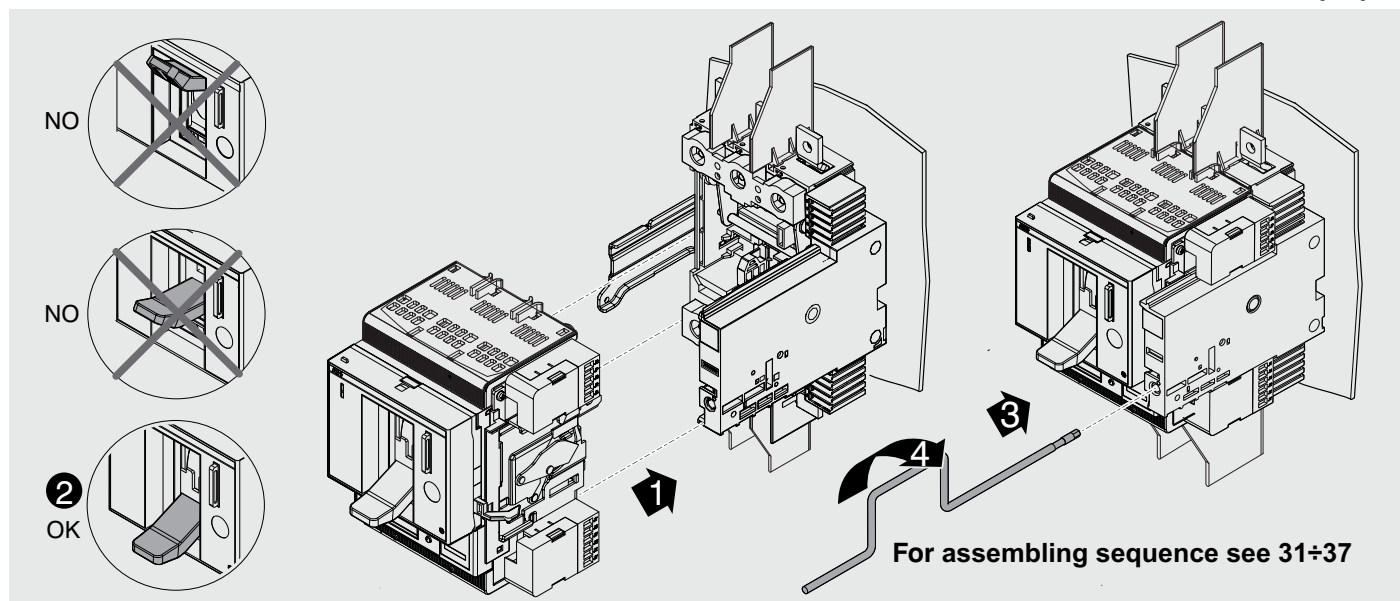
WITHOUT  
FLANGE  
SENZA  
MOSTRINA

|       | A   | B   | C   | D    | E    |
|-------|-----|-----|-----|------|------|
| 3p-4p | 158 | 165 | 143 | 82,5 | 71,5 |

Example for mounting at 50mm.  
For mounting at 72mm see 2TFH000005A1001

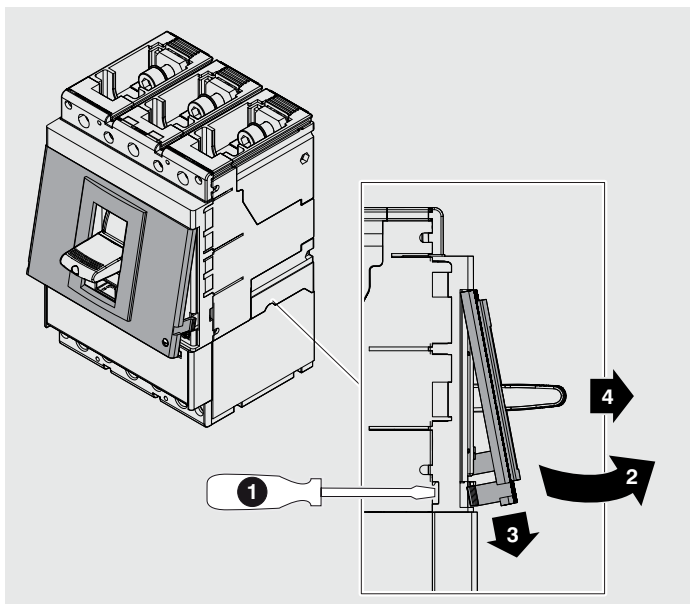
Example for mounting at 50mm.  
For mounting at 72mm see 2TFH000005A1001



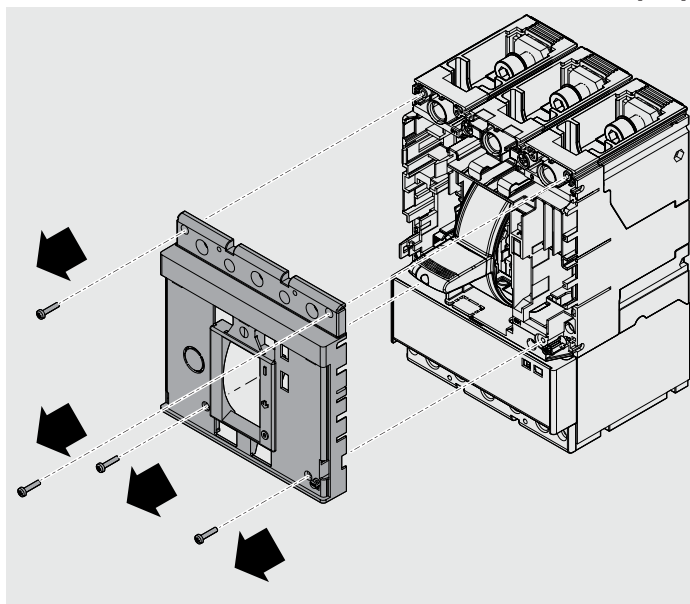




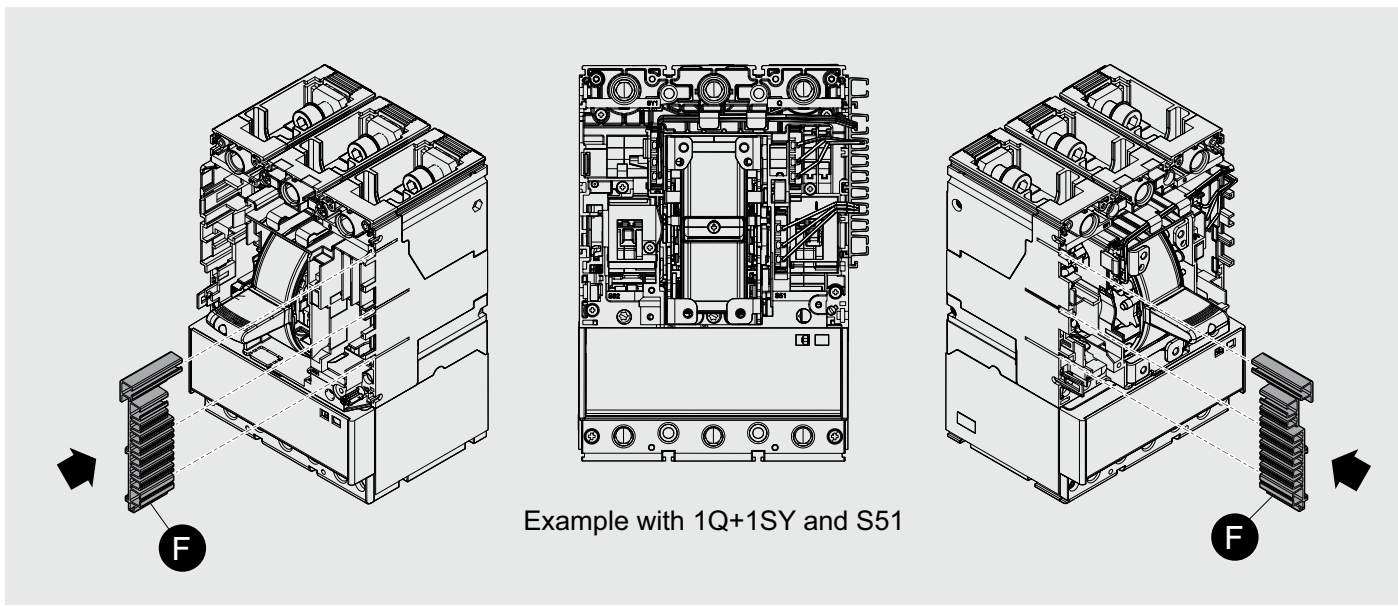
25

For cable rack assembling only **XT5 3p-4p**

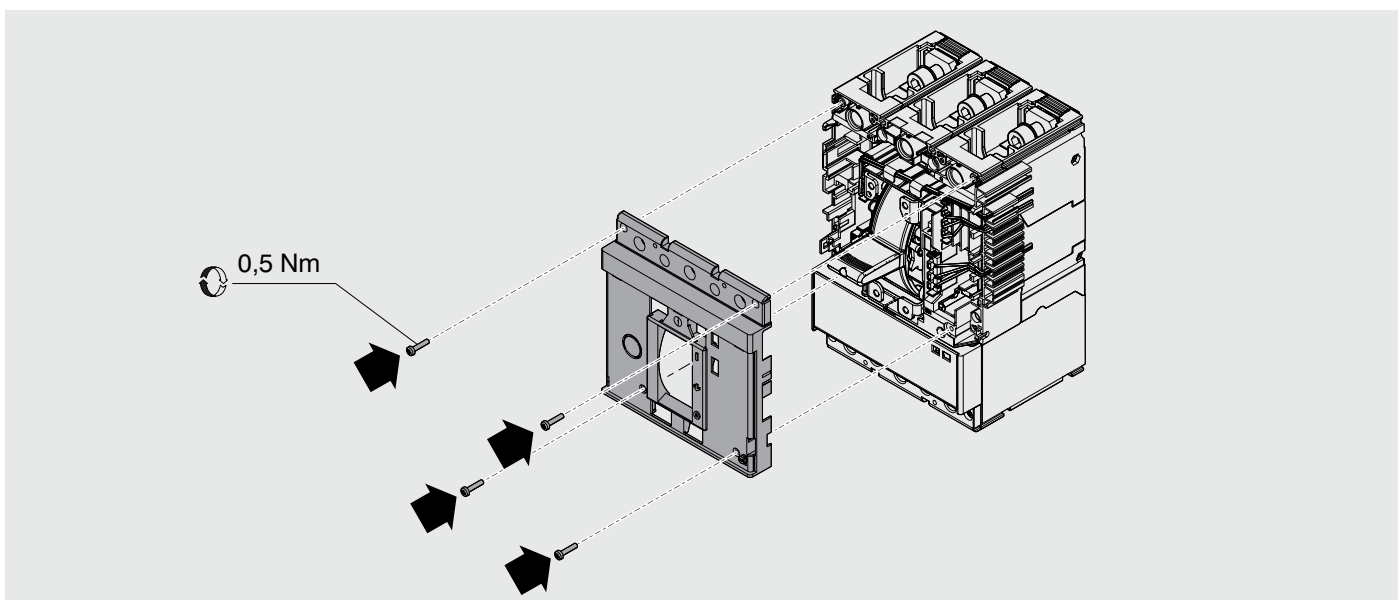
26

For cable rack assembling only **XT5 3p-4p**

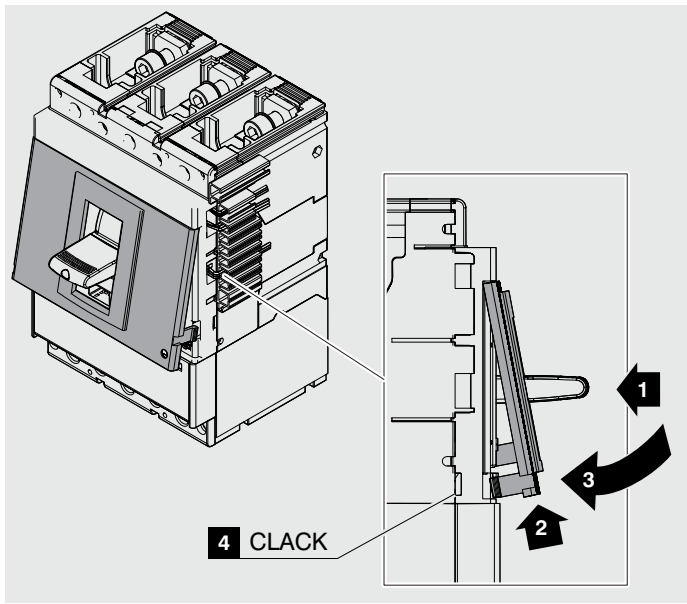
27

For cable rack assembling only **XT5 3p-4p**

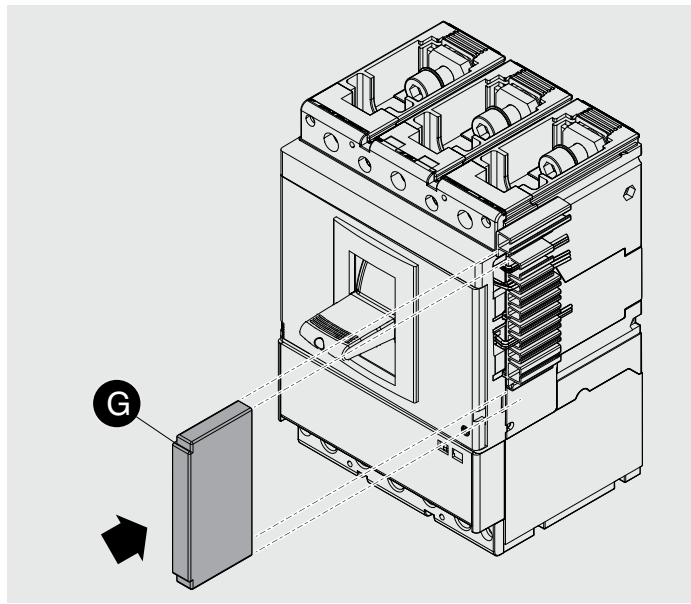
28

For cable rack assembling only **XT5 3p-4p**

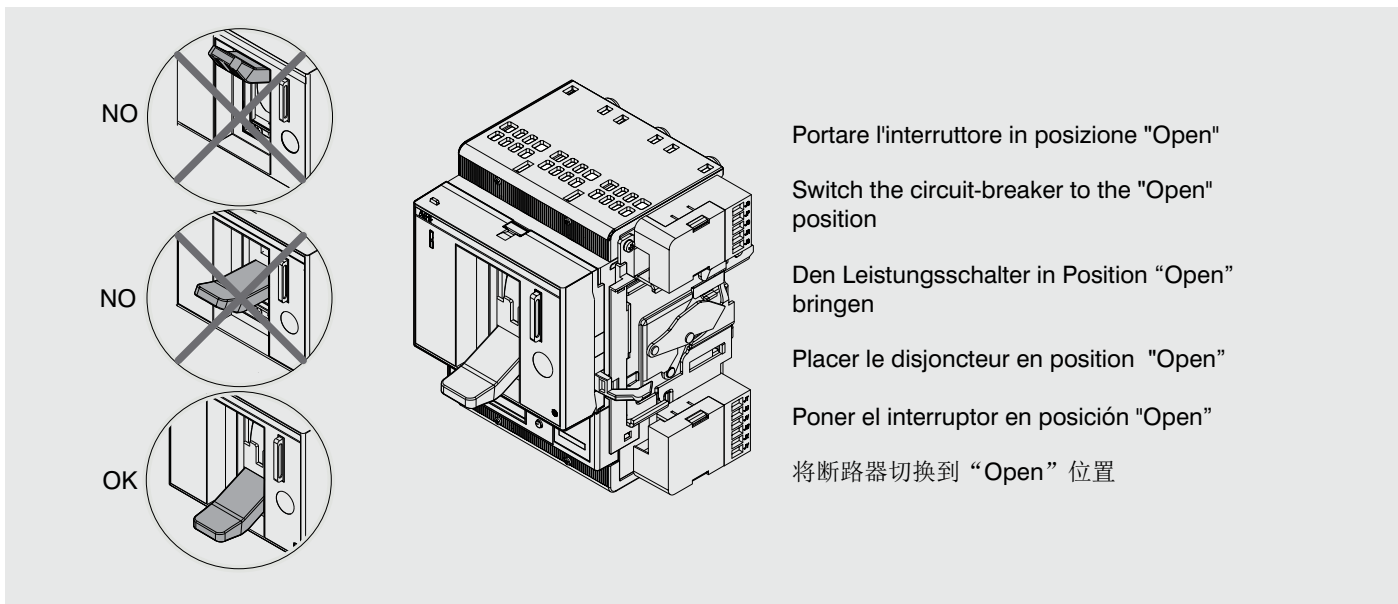
29

For cable rack assembling only **XT5 3p-4p**

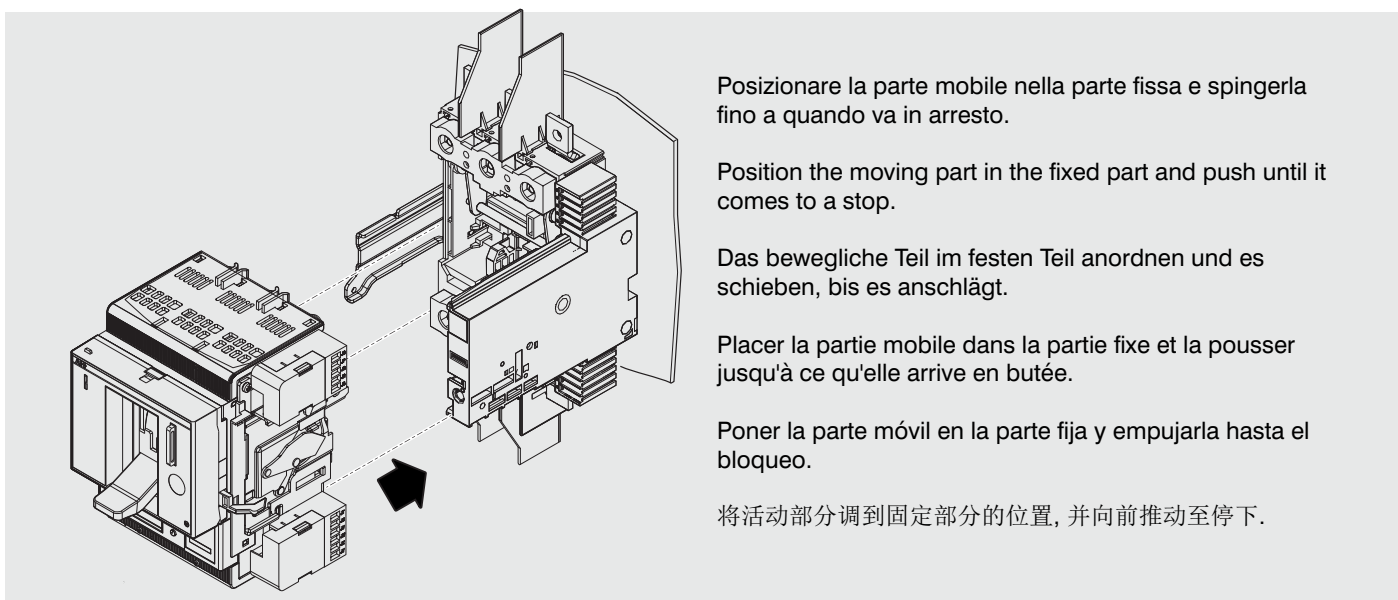
30

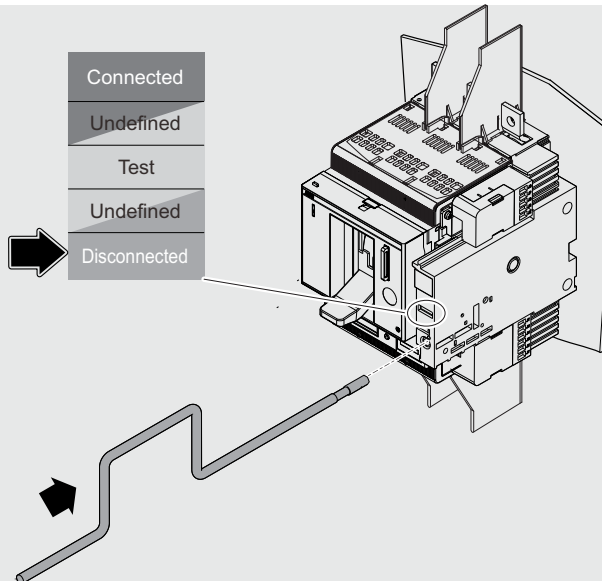
For cable rack assembling only **XT5 3p-4p**

31

**XT5 3p-4p W**

32

**XT5 3p-4p W**



Inserire la manovella nella parte fissa. In questa fase la parte mobile è in posizione DISCONNECTED.

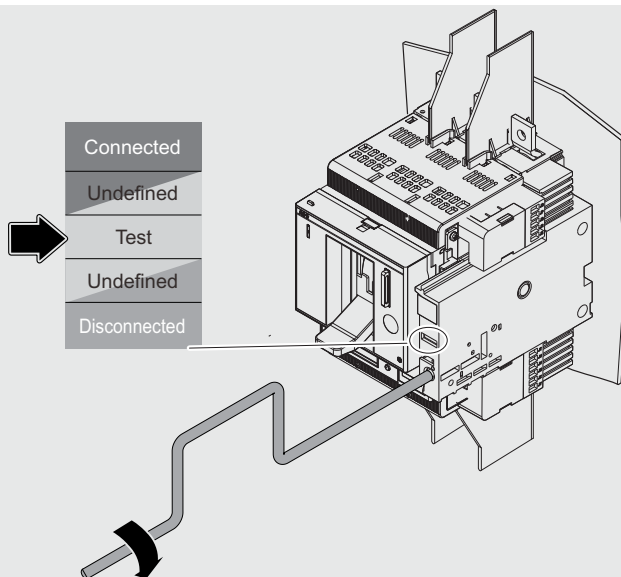
Insert the crank in the fixed part. In this phase the moving part is in DISCONNECTED position.

Die Handkurbel in das festen Teil stecken. In dieser Phase befindet sich das bewegliche Teil in der Position DISCONNECTED.

Introduire la manivelle dans la partie fixe. Dans cette phase la partie mobile est en position DISCONNECTED.

Introducir la manivela en la parte fija. En esta fase la parte móvil está en posición DISCONNECTED.

往移固定部分上插入摇把。这过程中，移动部分仍处于 DISCONNECTED 位置。



Ruotare la manovella in senso orario sino a quando il segnalatore indica che l'interruttore è in posizione TEST.

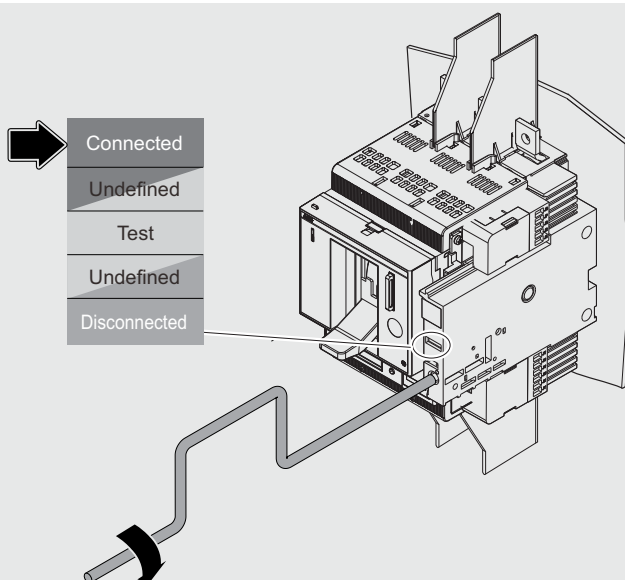
Turn the crank clockwise until the the indicator shows that the circuitbreaker is in TEST position.

Die Handkurbel im Uhrzeigersinn drehenDie Anzeige meldet die Stellung des Leistungsschalters in der Position TEST.

Tourner la manivelle dans le sens horaire jusqu'à ce que l'indicateur signale que le disjoncteur est en position TEST.

Girar la manivela en sentido horario hasta que el indicador señale que el interruptor está en posición TEST.

顺时针转动手柄，直到出且位置指示装置显示断路器已处于 TEST 位置为止



Ruotare la manovella in senso orario sino a quando il segnalatore indica che l'interruttore è in posizione CONNECTED.

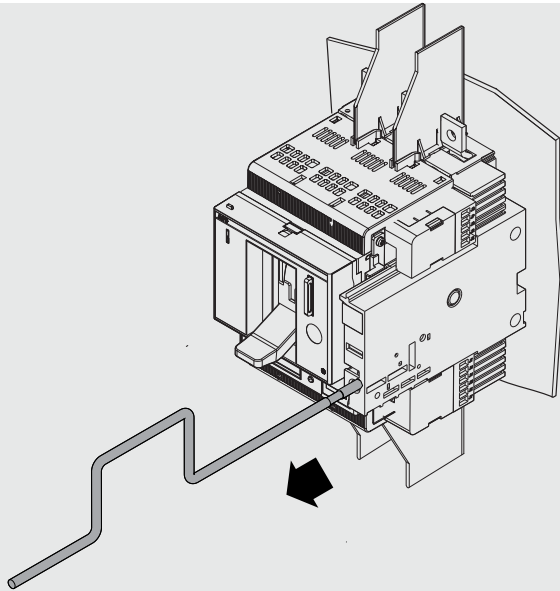
Turn the crank clockwise until the the indicator shows that the circuitbreaker is in CONNECTED position.

Die Handkurbel im Uhrzeigersinn drehenDie Anzeige meldet die Stellung des Leistungsschalters in der Position CONNECTED.

Tourner la manivelle dans le sens horaire jusqu'à ce que l'indicateur signale que le disjoncteur est en position CONNECTED.

Girar la manivela en sentido horario hasta que el indicador señale que el interruptor está en posición CONNECTED.

顺时针转动手柄，直到出且位置指示装置显示断路器已处于 CONNECTED 位置为止



Estrarre la manovella. L'interruttore può essere chiuso.

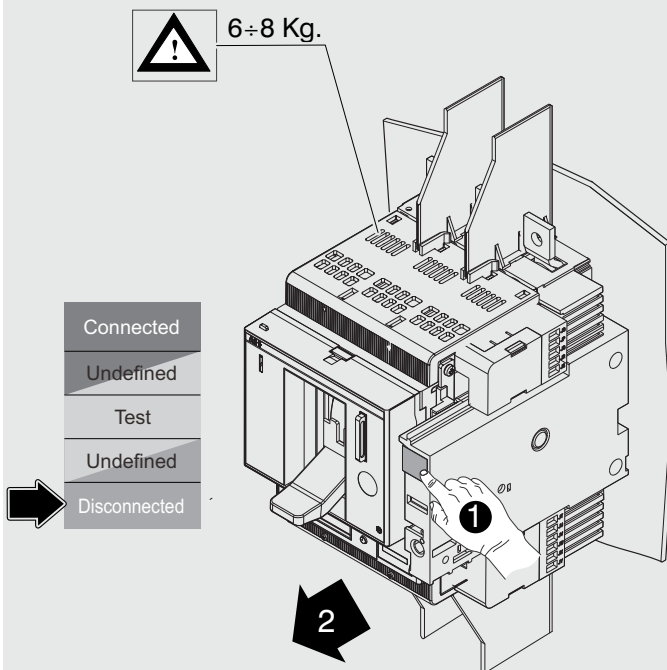
Extract the crank. The circuit-breaker can be closed.

Die Handkurbel herausziehen. Der Leistungsschalter kann eingeschaltet werden

Extraire la manivelle. Le disjoncteur peut être fermé

Extraer la manivela. El interruptor se puede cerrar

取出摇柄。可对断路器进行闭合操作。



Per estrarre la parte mobile dalla parte fissa eseguire in senso inverso le medesime operazioni indicate per l'inserzione.

Dopo l'estrazione, per rimuovere la parte mobile, sbloccare il blocco di sicurezza.

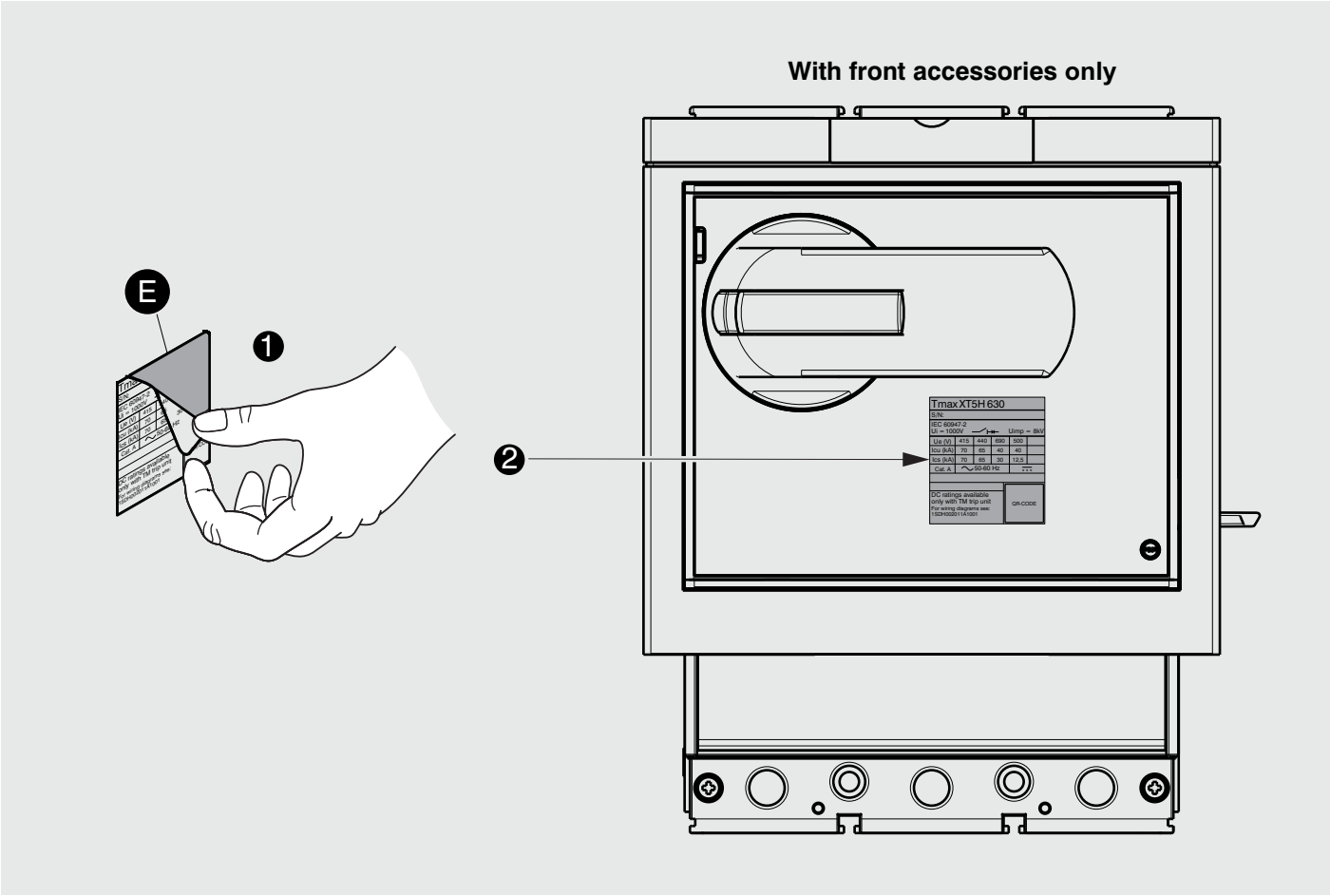
To extract the moving part from the fixed part, perform the same steps indicated for insertion in reverse order. After extraction, in order to remove the moving part, unlock the safety lock.

Um das bewegliche Teil aus dem festen Teil herauszuziehen, die gleichen Vorgänge, die zum Einfahren angegeben sind, in der umgekehrten Reihenfolge ausführen. Nach dem Ausfahren zum Entfernen des beweglichen Teil die Sicherheitsverriegelung entriegeln.

Pour extraire la partie mobile de la partie fixe effectuer les mêmes opérations indiquées pour l'embrochage dans le sens inverse. Après le débrochage, pour enlever la partie mobile, débloquent le verrou de sécurité.

Para extraer la parte móvil de la parte fija efectuar en sentido inverso las mismas operaciones indicadas para la inserción. Después de la extracción, para quitar la parte móvil, desbloquear el bloqueo de seguridad.

为将活动部分从固定部分拔下，应按照插入的步骤反向执行。拔下后，为移除活动部分，应解锁安全锁。

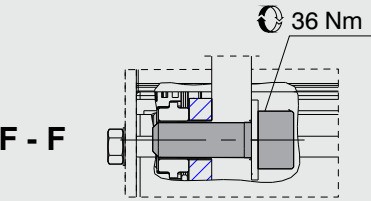


Terminali  
Terminals  
Anschlusse  
Prises  
Terminales  
端子类型

Codici  
Codes  
Codes  
Codes  
Códigos  
物料编号

Istruzioni d'installazione  
Installation instructions  
Installationsanleitung  
Instructions pour l'installation  
Instrucciones de instalación  
安装说明

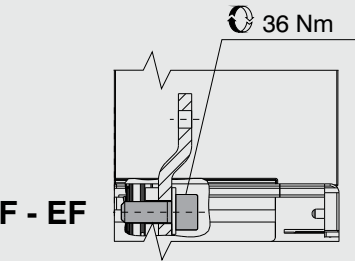
Dimensioni di ingombro  
Overall dimensions  
Abmessungen  
Dimensions d'encombrement  
Dimensiones generales  
全部尺寸



|              |      |
|--------------|------|
| 1SDA104730R1 | 3pcs |
| 1SDA104731R1 | 4pcs |

1SDH002011A1801

1SDH002011A1101



|              |      |
|--------------|------|
| 1SDA104734R1 | 3pcs |
| 1SDA104735R1 | 4pcs |

1SDH002011A1802

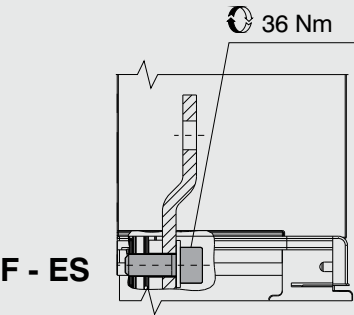
1SDH002011A1103

Terminali  
Terminals  
Anschlüsse  
Prises  
Terminales  
端子类型

Codici  
Codes  
Codes  
Codes  
Códigos  
物料编号

Istruzioni d'installazione  
Installation instructions  
Installationsanleitung  
Instructions pour l'installation  
Instrucciones de instalación  
安装说明

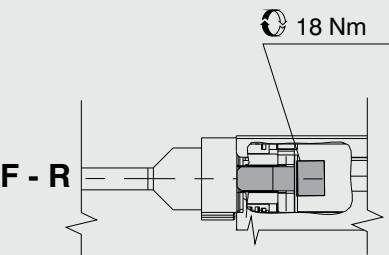
Dimensioni di ingombro  
Overall dimensions  
Abmessungen  
Dimensions d'encombrement  
Dimensiones generales  
全部尺寸



|              |      |
|--------------|------|
| 1SDA104738R1 | 3pcs |
| 1SDA104739R1 | 4pcs |

1SDH002011A1803

1SDH002011A1104



|              |      |
|--------------|------|
| 1SDA104760R1 | 3pcs |
| 1SDA104761R1 | 4pcs |

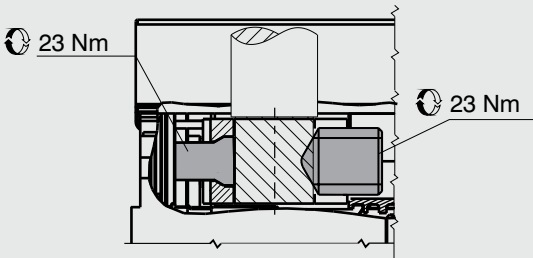
1SDH002011A1807

1SDH002011A1102

**F/P/W - FC CuAl**  
35mm<sup>2</sup>/185mm<sup>2</sup>

|              |      |
|--------------|------|
| 1SDA104746R1 | 3pcs |
| 1SDA104747R1 | 4pcs |

1SDH002011A1804

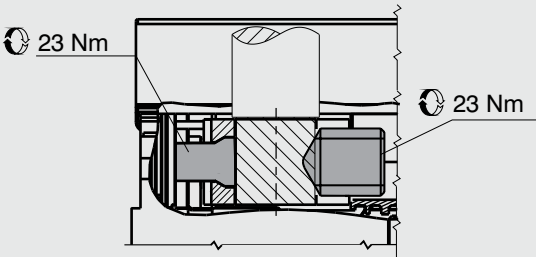


**F/P/W - FC CuAl**  
120mm<sup>2</sup>/240mm<sup>2</sup>

|              |      |
|--------------|------|
| 1SDA104742R1 | 3pcs |
| 1SDA104743R1 | 4pcs |

1SDH002011A1805

1SDH002011A1105



Terminali  
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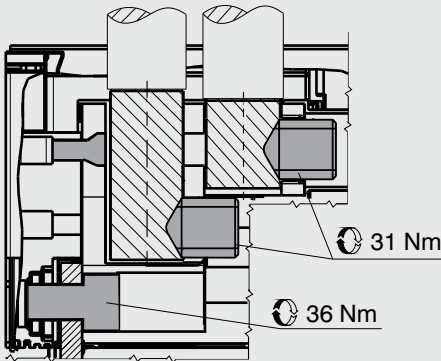
Dimensioni di ingombro  
Overall dimensions  
Abmessungen  
Dimensions d'encombrement  
Dimensiones generales  
全部尺寸

F/P/W - FC CuAl  
2x70mm<sup>2</sup>/240mm<sup>2</sup>

|              |      |
|--------------|------|
| 1SDA104748R1 | 3pcs |
| 1SDA104749R1 | 4pcs |

1SDH002011A1806

1SDH002011A1106

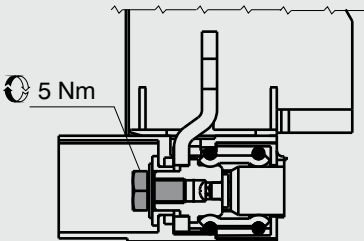


P/W 400 - EF

|              |      |
|--------------|------|
| 1SDA104674R1 | 3pcs |
| 1SDA104675R1 | 4pcs |

2TFH000019A1001

2TFH001004A1001

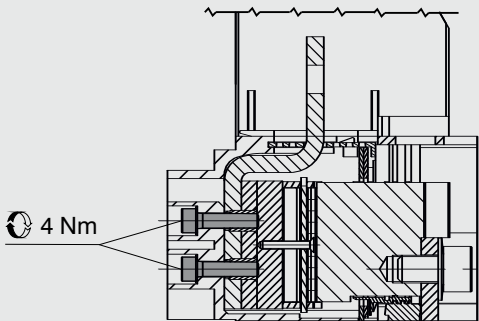


P/W 630 - EF

|              |      |
|--------------|------|
| 1SDA104766R1 | 3pcs |
| 1SDA104767R1 | 4pcs |

2TFH000019A1001

2TFH001008A1001





Terminali  
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Dimensions d'encombrement  
Dimensiones generales  
全部尺寸

P/W 400 - HR/VR

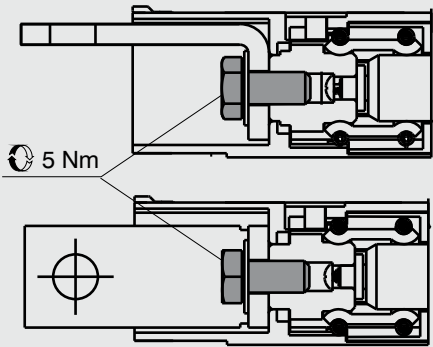
|              |      |
|--------------|------|
| 1SDA104775R1 | 3pcs |
| 1SDA104778R1 | 4pcs |

2TFH000023A1001

2TFH001005A1001

|              |      |             |
|--------------|------|-------------|
| 1SDA104774R1 | 3pcs | Same Lenght |
| 1SDA104777R1 | 4pcs | Same Lenght |

2TFH001006A1001

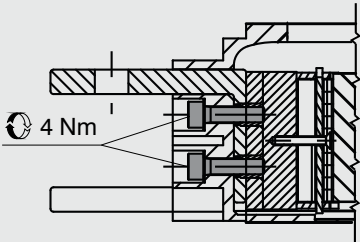


P/W 630 - HR

|              |      |
|--------------|------|
| 1SDA104770R1 | 3pcs |
| 1SDA104771R1 | 4pcs |

2TFH000022A1001

2TFH001007A1001

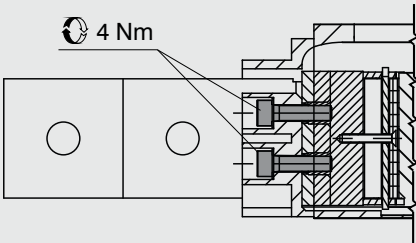


P/W 630 - VR

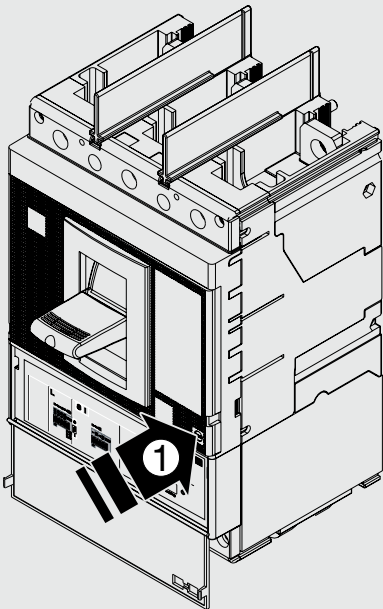
|              |      |
|--------------|------|
| 1SDA104780R1 | 3pcs |
| 1SDA104781R1 | 4pcs |

2TFH000026A1001

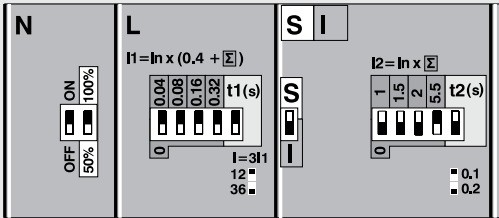
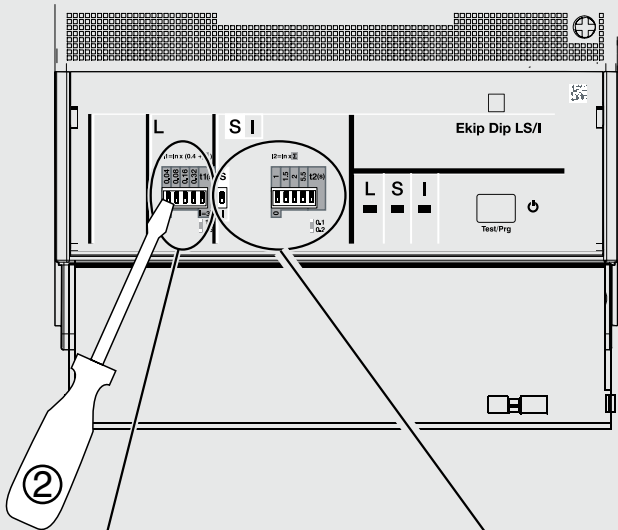
2TFH001009A1001



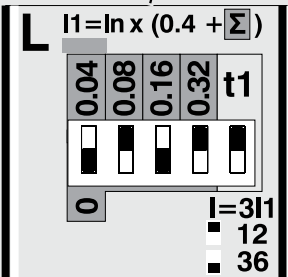




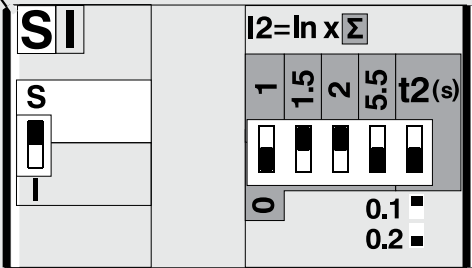
| LED       | Color  | CONDITION Run time                                                                                                                              |
|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------|
|           | Green  | LED ON (fixed) = Device active                                                                                                                  |
| L         | Yellow | LED Fixed = L pre alarm ( $0,9 \cdot I_1 < I < 1,2 \cdot I_1$ )                                                                                 |
| L         | Red    | LED Blinking = L alarm ( $I > 1,2 \cdot I_1$ )                                                                                                  |
| S         | Red    | LED Blinking = S alarm ( $I > I_2$ )                                                                                                            |
| L   S   I | Red    | LED Blinking = Parameters inconsistency - L = S or L = I.<br>LED Blinking without Parameters inconsistency = generic fault (please contact ABB) |



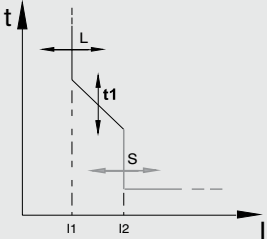
Settaggio di default  
Default setting  
Default-Einstellung  
Configuration par défaut  
Ajuste de default  
默认设置

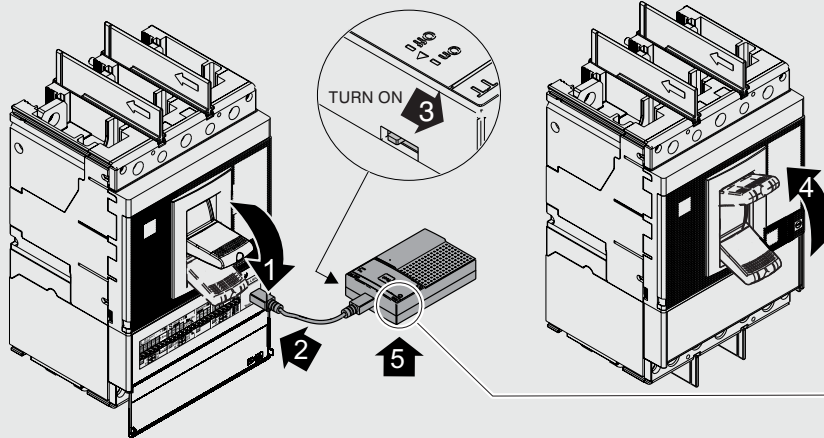


Esempio:  $I_n = 400 \text{ A}$   
Example:  $I_1 = 400 \times (0,4 + 0,08 + 0,32) = 320 \text{ A}$   
 $t_1 = 12 \text{ s @ } 240 \text{ A (3I)}$



Esempio:  $I_n = 400 \text{ A}$   
Example:  $I_2 = 400 \times (1,5 + 2) = 1400 \text{ A}$   
 $t_2 = 0,2 \text{ s @ } I_n > I$





## LED Ekip TT

|                                                                                                                    |                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Verde<br>Green<br>Grün<br>Vert<br>Verde<br>绿                                                                       | Rosso<br>Red<br>Rot<br>Rouge<br>Rojo<br>红                                                                       |
| Dispositivo acceso<br>Device ON<br>Einrichtung eingeschaltet<br>Dispositif allumé<br>Dispositivo encendido<br>设备运行 | Sostituire batterie<br>Change battery<br>Batterie ersetzen<br>Remplacer batteries<br>Sustituir baterías<br>更换电池 |

Per il trip test, prima di collegare l'interruttore all'impianto, eseguire la seguente procedura (in ogni caso, durante il trip test, sia il circuito primario che quello ausiliario devono essere NON attivi):

- 1) Mettere l'interruttore in posizione aperta
- 2) Inserire il cavo dell'unità TT
- 3) Accendere l'unità TT e verificare che il LED  di alimentazione sullo sganciatore di protezione sia acceso.

**-Controllo LED:**

- a) Se uno o più LED lampeggiano, fare riferimento alla tabella dei LED.
- b) Se tutti i led sullo sganciatore si accendono in sequenza: OK, pronto per trip test.
- 4) Chiudere l'interruttore.
- 5) Premere per 2 secondi il pulsante trip test dell'unità TT, l'interruttore esegue un trip.

**-Scollegare il cavo dell'unità TT.**

For the trip test, before connecting the circuit-breaker to the system, perform the following procedure (in any case, during the trip test, both the primary and the auxiliary circuits must be NOT active):

- 1) Put the circuit-breaker in open position
- 2) Insert the TT cable
- 3) Turn on the TT and check that the power LED  on the protection unit is on.

**-LED control:**

- a) If one or more LEDs are blinking, refer to the LED table.
- b) If all the LEDs on the release light up in sequence: OK, ready for trip test.
- 4) Close the circuit-breaker.
- 5) Press the trip test button on the TT for 2 seconds, the circuit-breaker performs a trip.

**-Disconnect the TT cable.**

Führen Sie für den Auslösetest das folgende Verfahren durch, bevor Sie den Leistungsschalter an die Anlage anschließen (während des Auslösetests dürfen in jedem Fall sowohl der Primär- als auch der Hilfsstromkreis NICHT aktiv sein):

- 1) Stellen Sie den Cricuit Breaker in die geöffnete Position
- 2) Das Kabel die Einheit TT einstecken
- 3) Schalten Sie die Einheit TT ein und sich vergewissern, dass die Power-LED  auf dem Schutzauslöser leuchtet.

**-LED Kontrolle:**

- a) Wenn eine oder mehrere LEDs blinken, ist Bezug auf die LED tabelle zu nehmen.
- b) Wenn alle LEDs auf dem Auslöser nacheinander aufleuchten: OK, bereit für den Auslösetest.
- 4) Den Leistungsschalter einschalten.
- 5) Die Taste Auslösetest am die Einheit TT für 2 Sekunden drücken, der Leistungsschalter führt eine Auslösung durch.

**-Das Kabel die Einheit TT abtrennen.**

Pour le test de déclenchement, avant de connecter le disjoncteur à l'installation, suivre la procédure ci-dessous

(dans tous les cas, pendant le test de déclenchement, aussi bien le circuit primaire que le circuit auxiliaire ne doivent PAS être actifs):

- 1) Mettre le disjoncteur en position ouverte
- 2) Brancher le câble de l'unité TT
- 3) Allumez l'unité TT et vérifier que la LED d'alimentation sur le déclencheur de protection est allumée.

**-Contrôle des LED :**

- a) Si une ou plusieurs LED clignotent, se reporter au tableau LED.
- b) Si toutes les LED sur le déclencheur s'allument en séquence : OK, prêt pour le test de déclenchement.
- 4) Fermer le disjoncteur.
- 5) Appuyer sur le bouton de test du déclenchement de l'unité TT pendant 2 secondes, le disjoncteur effectue un déclenchement.

**-Débrancher le câble de l'unité TT.**

Para el test de disparo, antes de conectar el interruptor a la instalación, realizar el siguiente procedimiento (durante la prueba tanto el circuito primario como el auxiliar deben estar siempre en estado NO ACTIVO):

- 1) Ponga el interruptor automático en posición abierta
- 2) Conectar el cable de la unidad TT
- 3) Encienda la unidad TT y verificar que el led de alimentación en el relé de protección esté encendido.

**-Control del LED:**

- a) Si uno o más LEDs parpadean, consulte la tabla LED.
- b) Si todos los LEDs en el relé se encienden secuencialmente: OK, está listo para el test de disparo.
- 4) Cerrar el interruptor.
- 5) Pulsar 2 segundos el botón de test de disparo de la unidad TT; el interruptor ejecuta un disparo.

**- Desconectar el cable de la unidad TT.**

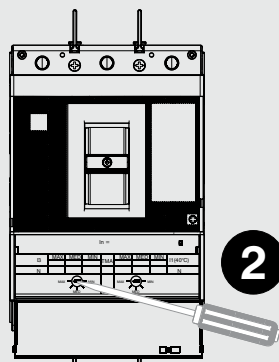
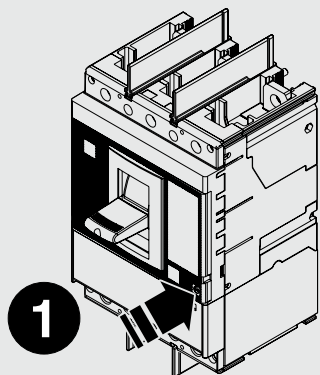
进行脱扣测试时，先将断路器连接到设备上，然后执行以下程序（总之在脱扣测试期间，主回路和辅助回路都不能激活）：

- 1) 将断路器置于断开位置
- 2) 插入TT电线，。
- 3) 开启TT，检查脱扣保护装置上的LED 灯是否点亮

**- 检查LED灯：**

- a) 如果一盏或多盏LED闪烁，请参考表 LED。
- b) 如果脱扣保护装置上的LED灯依次点亮：说明以准备好进行脱扣测试。
- 4) 关闭断路器。
- 5) 按住TT的脱扣测试按钮2秒钟，断路器就会执行一次脱扣。

**- 断开TT的电线。**



|     |     | I1        |            |            |
|-----|-----|-----------|------------|------------|
|     | In  | MIN (0,7) | MED (0,85) | MAX (1xIn) |
| TMA | 320 | 224       | 272        | 320        |
|     | 400 | 280       | 340        | 400        |
|     | 500 | 350       | 425        | 500        |
|     | 630 | 441       | 535        | 630        |
| TMG | 320 | 224       | 272        | 320        |
|     | 400 | 280       | 340        | 400        |
|     | 500 | 350       | 425        | 500        |
|     | 630 | 441       | 535        | 630        |

|          |     | I1  |     |     |     |
|----------|-----|-----|-----|-----|-----|
|          |     | In  | MIN | MED | MAX |
| TMA N50% | 320 | 140 | 170 | 200 |     |
|          | 400 | 175 | 212 | 250 |     |
|          | 500 | 224 | 272 | 320 |     |
|          | 630 | 280 | 340 | 400 |     |

|     |     | I3   |            |              |             |
|-----|-----|------|------------|--------------|-------------|
|     |     | In   | MIN (5xIn) | MED (7,5xIn) | MAX (10xIn) |
| TMA | 320 | 1600 | 2400       | 3200         |             |
|     | 400 | 2000 | 3000       | 4000         |             |
|     | 500 | 2500 | 3750       | 5000         |             |
|     | 630 | 3150 | 4725       | 6300         |             |

|     |     | I3   |              |               |            |
|-----|-----|------|--------------|---------------|------------|
|     |     | In   | MIN (2,5xIn) | MED (3,75xIn) | MAX (5xIn) |
| TMG | 320 | 800  | 1200         | 1600          |            |
|     | 400 | 1000 | 1500         | 2000          |            |
|     | 500 | 1250 | 1875         | 2500          |            |
|     | 630 | 1575 | 2363         | 3150          |            |

|    |     | I3   |            |             |             |
|----|-----|------|------------|-------------|-------------|
|    |     | In   | MIN (7xIn) | MED (10xIn) | MAX (13xIn) |
| MA | 320 | 2240 | 3200       | 4160        |             |
|    | 400 | 2800 | 4000       | 5200        |             |
|    | 500 | 3500 | 5000       | 6500        |             |



ATTENZIONE! Istruzioni relative alla Trip unit Ekip Touch sono disponibili con il documento [1SDH002039A1001](#).

WARNING! Instructions on Ekip Touch Trip unit are available with document [1SDH002039A1002](#).

ACHTUNG! Anweisungen zu Trip unit Ekip Touch finden Sie mit dem Dokument [1SDH002039A1003](#).

ATTENTION! Instructions concernant Trip unit Ekip Touch sont disponibles avec le document [1SDH002039A1004](#).

ATENCIÓN! Instrucciones sobre Trip unit Ekip Touch están disponibles con el documento [1SDH002039A1005](#).

警告! Ekip Touch脱扣器有可用的说明文件 [1SDH002039A1002](#).

-Le trip unit Ekip Touch e Hi-Touch aventi rating plug 500A e 630A possono essere equipaggiate con i rating plug XT5 da 250A a 630A. Quelle aventi rating plug fino a 400A possono essere equipaggiate con i rating plug XT5 da 250A a 400A.

-Ekip Touch and Hi-Touch trip units with 500A and 630A rating plugs can be equipped with 250A to 630A XT5 rating plugs. Those with rating plugs up to 400A can be equipped with 250A to 400A XT5 rating plugs.

-Die Auslösegeräte Ekip Touch und Hi-Touch mit Bemessungsstrommodulen von 500A und 630A können mit Bemessungsstrommodulen XT5 von 250A bis 630A ausgestattet werden. Diejenigen mit Bemessungsstrommodulen bis 400A können mit Bemessungsstrommodulen XT5 von 250A bis 400A ausgestattet werden.

-Les déclencheurs Ekip Touch et Hi-Touch ayant des rating plug de 500A et 630A peuvent être équipés avec les rating plug XT5 de 250A à 630A. Ceux ayant des rating plug jusqu'à 400A peuvent être équipés avec les rating plug XT5 de 250A à 400A.

-Los relés de protección Ekip Touch y Hi-Touch con rating plug 500A y 630A pueden ser equipados con los rating plug XT5 de 250A a 630A. Aquellos con rating plug de hasta 400A pueden ser equipados con los rating plug XT5 de 250A a 400A.

-具有500A和630A的Rating Plug的脱扣单元Ekip Touch和Hi-Touch，可配备250A至630A的XT5 Rating Plug。具有400A以下Rating Plug的脱扣单元，可配备250A至400A的XT5 Rating Plug。