

RM6

MV distribution
factory built assemblies
at your service

Anglais

civil engineering and installation manual

Pour :pdm

Imprimé :ven, 23 mar, 2007, 09:47:08

Du livre :07897071en

Document :SOM

Dernier enregistrement :ven, 23 mar, 2007, 09:38:44

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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**

as per iso 3864–2

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

**WARNING**

as per iso 3864–2

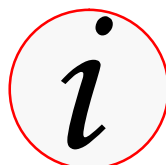
WARNING: failure to follow this instruction may result in death or serious injury.

**CAUTION**

as per iso 3864–2

CAUTION: failure to follow this instruction may result in injuries.

This alert signal can also be used to indicate practices that could damage the RM6 unit.

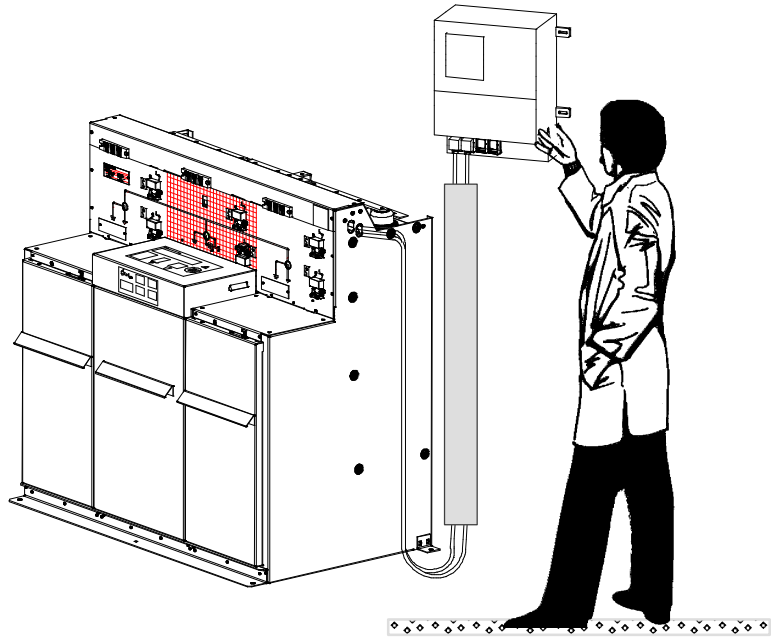
**INFORMATION–ADVICE**

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, or call the following telephone number:
+33 (0)4 76 57 60 60
located in Grenoble, France.
You can log on to:
www.schneider-electric.com



distribution rules



The aim of this publication is to enable the RM6 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



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



The contractor must be certified and authorised to manipulate and perform work on the RM6 unit.

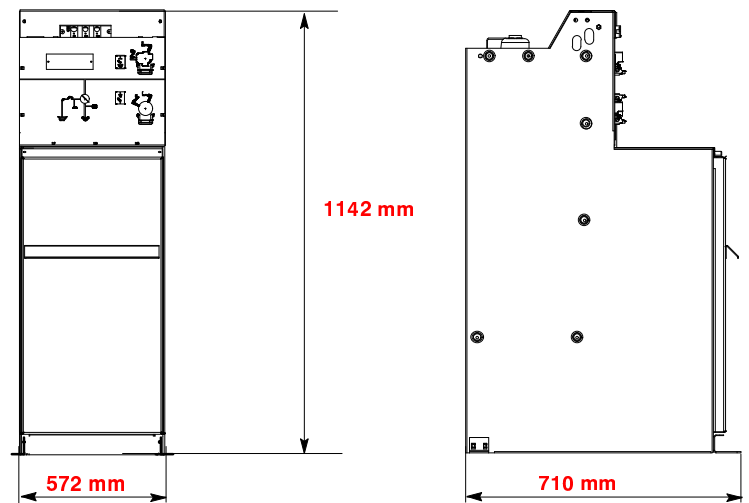


Only undertake the work after having read and understood all the explanations given in this document.

If you have any difficulty complying with these rules, please contact **Schneider Electric**.

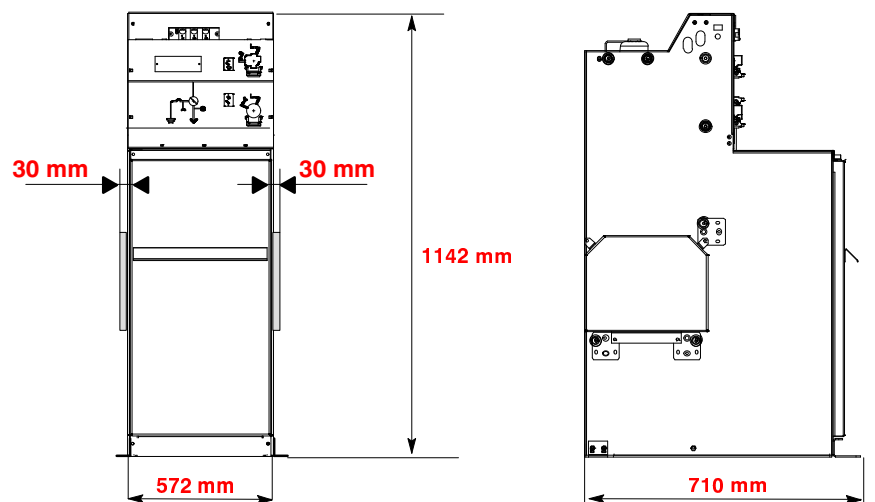
1 function range no extensible

function	weight
I	135 kg
D	135 kg



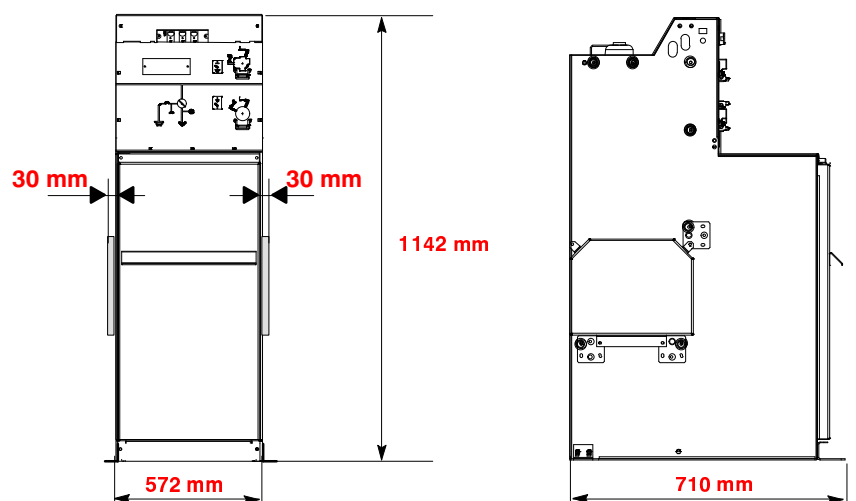
double extensibility

function	weight
D, B	135 kg



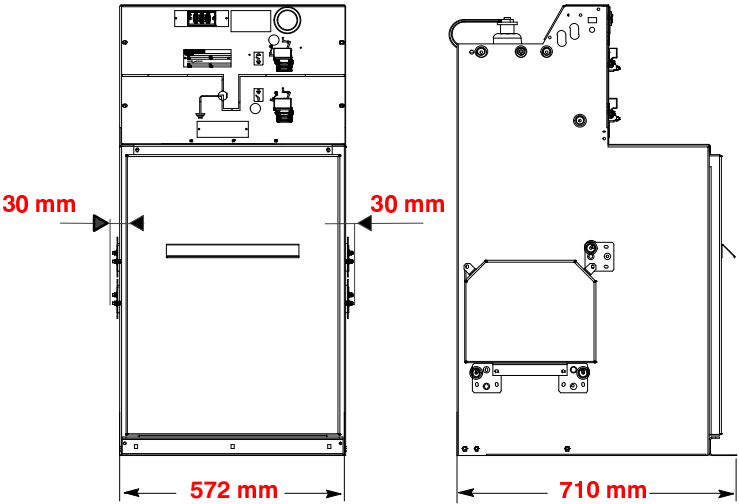
double extensibility

function	weight
I	135 kg
Q	185 kg

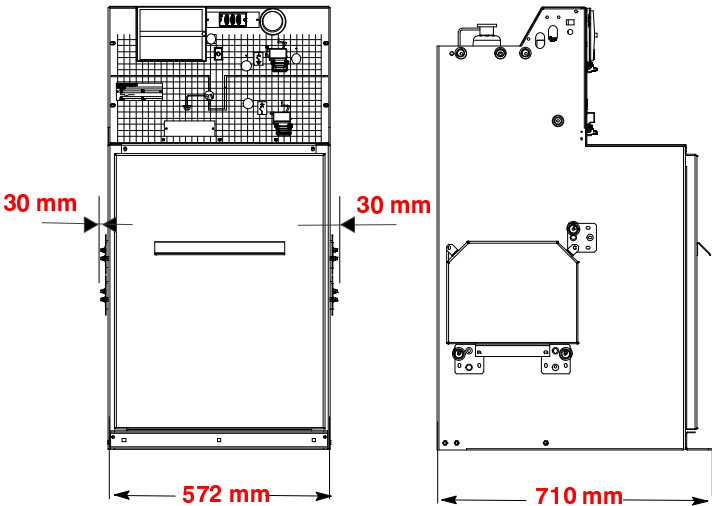


1 function range
double extensibility
coupling

function	weight
IC	145 kg



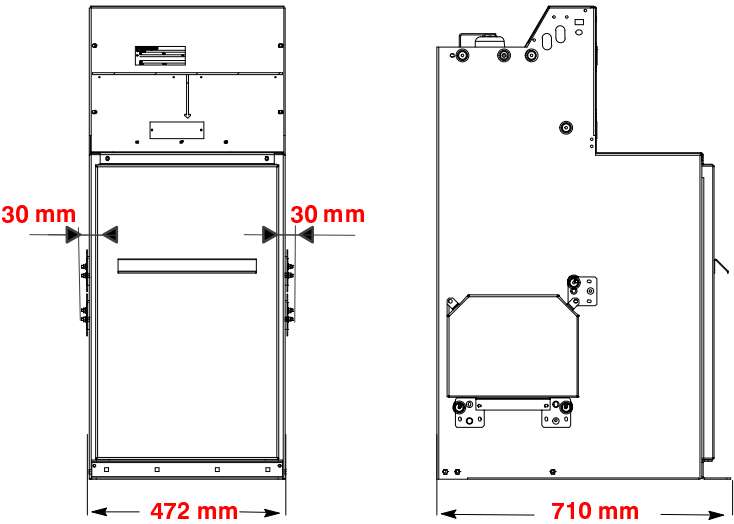
function	weight
BC	145 kg



connection on busbar

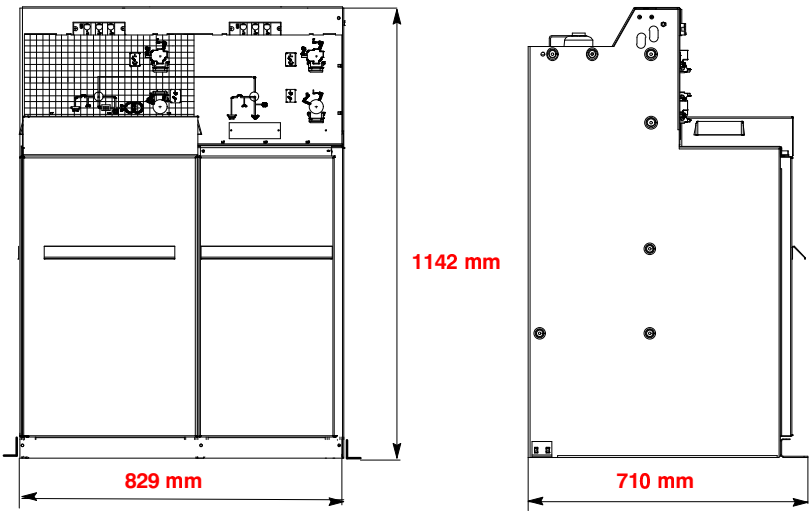
Example : DE-O

function	weight
RE-O	135 kg
LE-O	135 kg
DE-O	135 kg



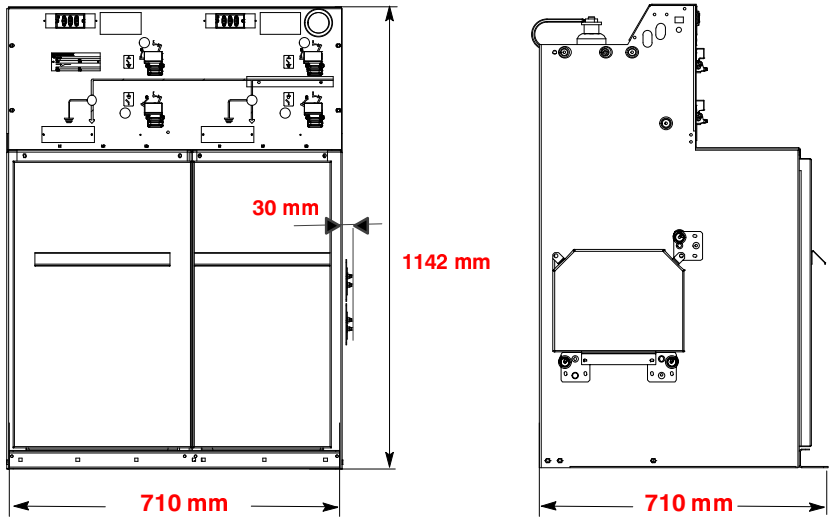
2 functions range
no extensible

function	weight
QI	195 kg
DI	180 kg
II	155 kg



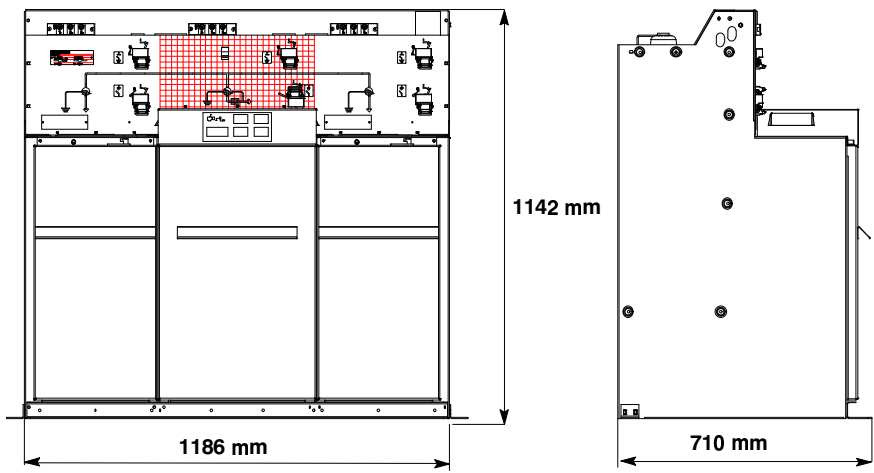
2 functions range
extensible to the right

function	weight
II	155 kg



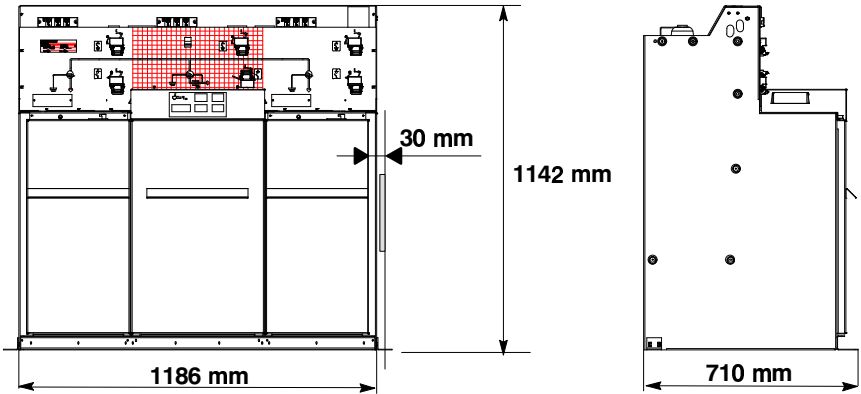
3 functions range
no extensible

function	weight
IQI	275 kg
III	240 kg
IDI	250 kg
IBI	250 kg



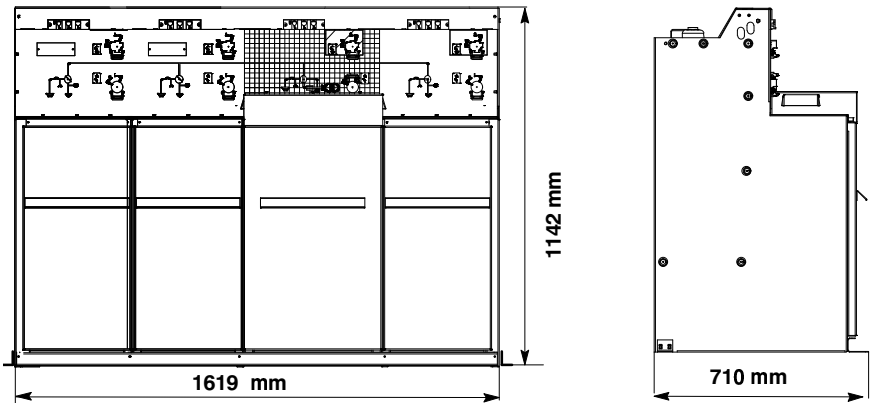
extensible to the right

function	weight
IQI	275 kg
III	240 kg
IDI	250 kg
IBI	250 kg



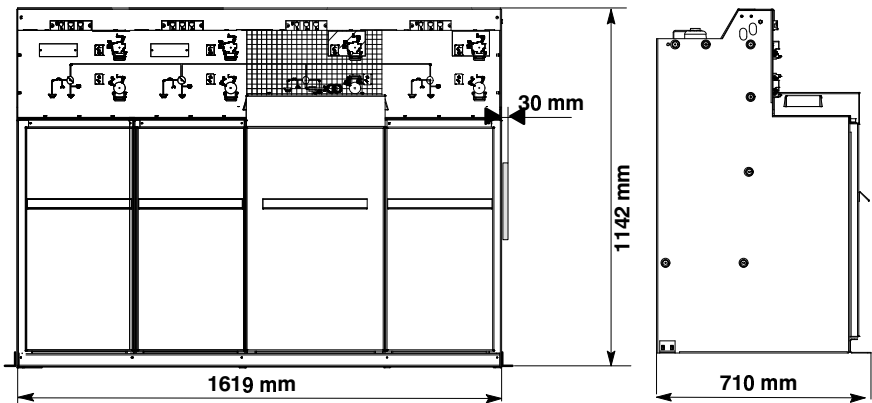
4 functions range
no extensible

function	weight
IIQI	355 kg
IIII	320 kg
IIDI	330 kg
IIBI	330 kg
QIQI	390 kg
BIBI	340 kg
DIDI	340 kg



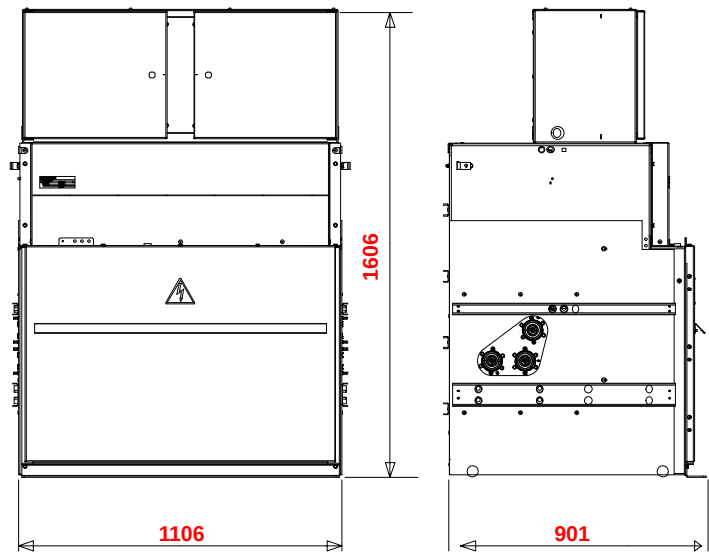
4 function range
extensible to the right

function	weight
IIQI	355 kg
IIII	320 kg
IIDI	330 kg
IIBI	330 kg
QIQI	390 kg
BIBI	340 kg
DIDI	340 kg



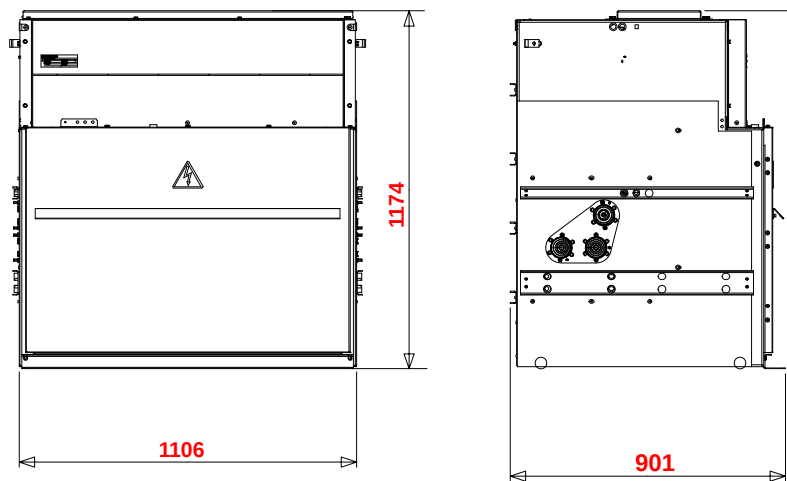
**metering cubicle
with LV compartment**

function	weight
DE – Mt	400 kg



without LV compartment

function	weight
DE – Mt	400 kg



handling

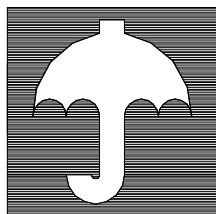
A handling pallet is fixed beneath the **RM6** switchgear.

This device enables fork handling of the devices.

silk-screen printed instructions on the transport cover



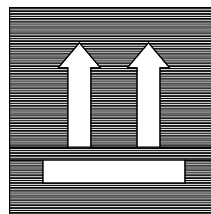
It is important to pay particular attention to the information affixed to the transport cover before carrying out any kind of handling operations.



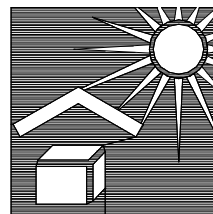
keep away from rain



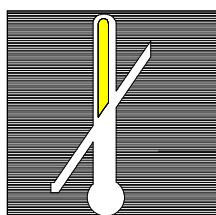
handle with care



this way up



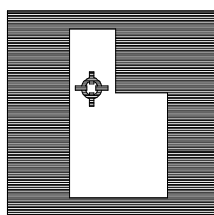
keep away from sunlight



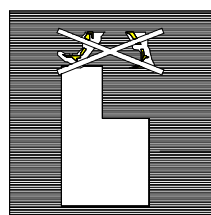
maxi 80°C

Storage Temp

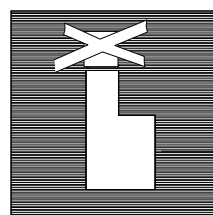
mini -40°C



high gravity center



do not walk on it



do not stack

by forklift truck

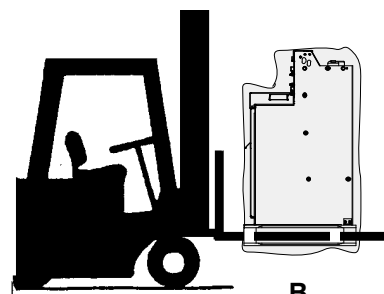


The handling solution **(A)** is to be used only for narrow areas where handling solution **(B)** is impossible.

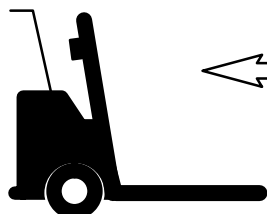
Make sure that in case **(A)** the forks are considerably longer than half the length of the pallet.



A



B



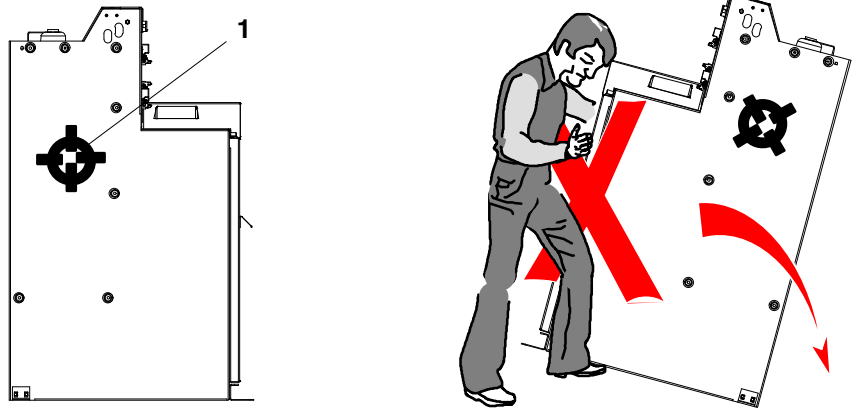
comply with the positioning of the forks

The truck's forks must be engaged underneath the entire width of the RM6 unit.

“centre of gravity” transport

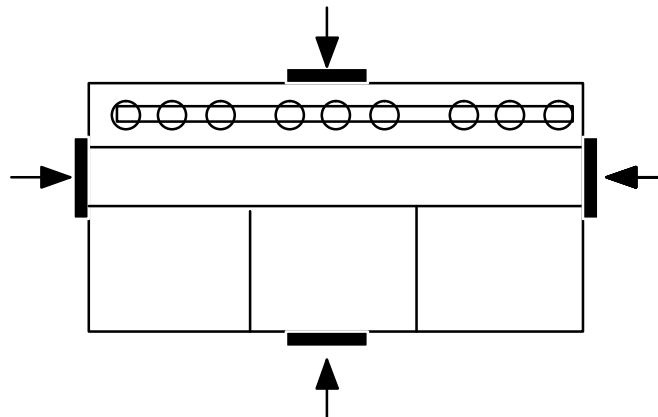


1 : high centre of gravity



transport conditions

Wedge the RM6 unit securely during transport.

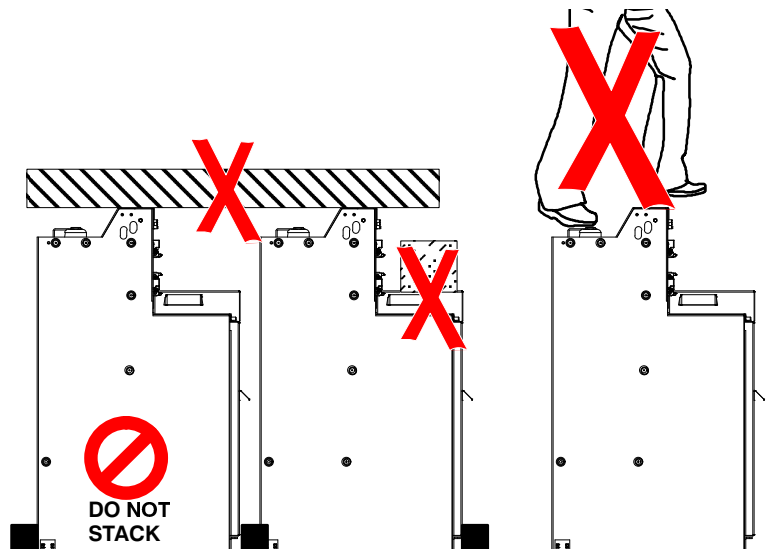


reminder

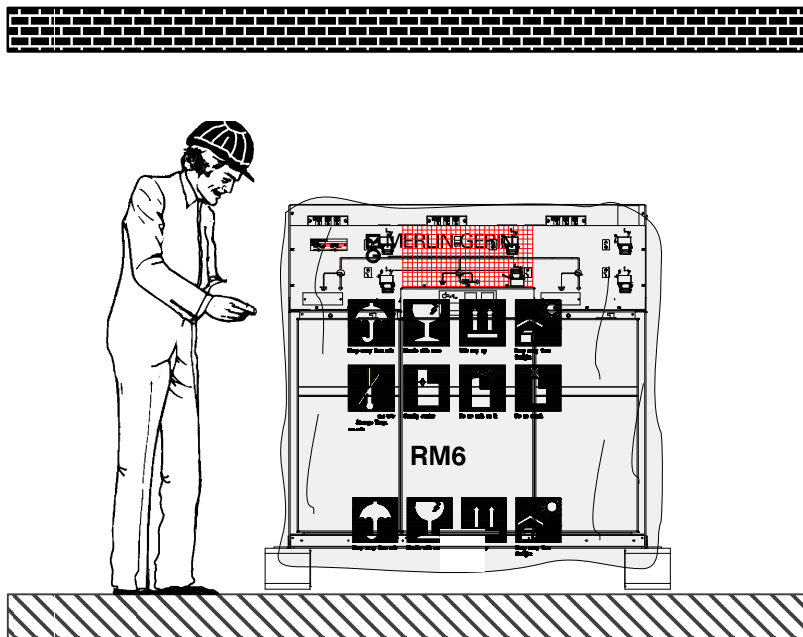


Do not place anything
on the RM6 unit.

Do not walk on the RM6 unit.



acceptance



- make sure the delivered **RM6 unit** is complete
- carry out a visual inspection of the functional components
- verify the characteristics indicated on the nameplates, compared to the initial order

Refer to the "characteristics" chapter :

- the plastic cover must be in position on the **RM6 unit** and in good condition when it arrives.

information



In the event of an anomaly, indicate the necessary reserves to the carrier.

The functional unit must remain on its base in its original packing materials when it is stored, until it is taken to its installation site.



In a case of visible damage or anomalies, do not install the RM6 unit. Contact SCHNEIDER ELECTRIC immediately.

Reminder: telephone numbers indicated in the first chapter of this document.

handling by slings with hooks

If the minimum sling lengths cannot be implemented, use a lifting beam.



Do not handle a substation using slings, if the LV trunking or mimic panel front plate are not fitted.

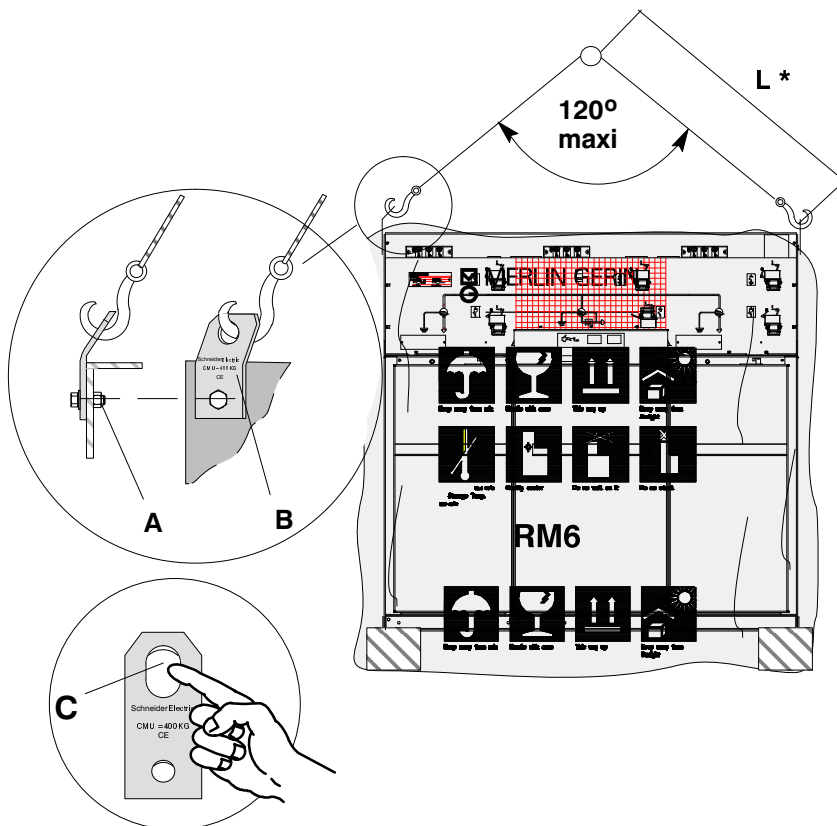
The handling by lugs are reserved only for handling RM6 substations.

A : HM12 screws nuts and

B : Schneider Electric
CMU = 400 KG CE



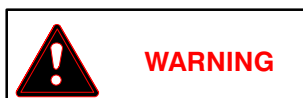
C : if the holes are deformed (roundness) replace the lugs.



choice of slings to be used

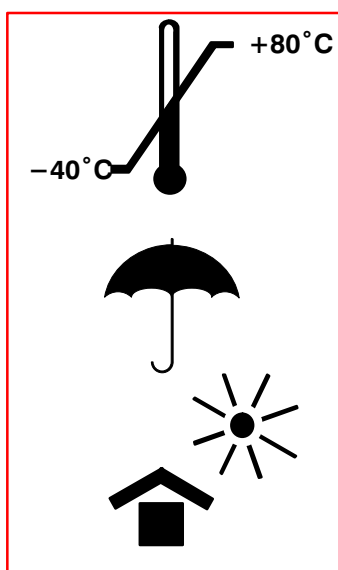
Slings to be used	1.2 or 3 functions	4 functions
* Min. length (L) (mm)	700	1000
Max. load in (daN)	> 300	> 400

storage

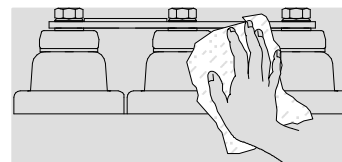


When stored, the equipment must remain in its original packing.

It must be stored under shelter, on a dry floor or on a material insulating it from the damp.

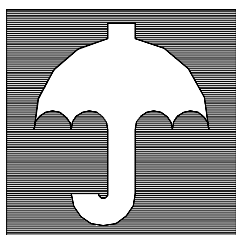


Following prolonged storage, all the insulating parts must be thoroughly cleaned before use. The panels must be dusted using a dry, clean cloth.

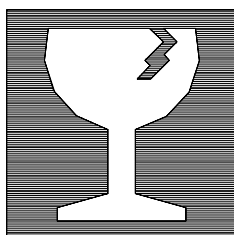


Clean using a sponge and clear water. Do not use alcohol or other solvents to clean.

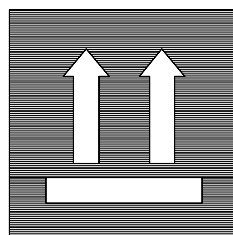
remember



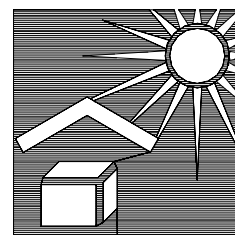
Keep away from rain



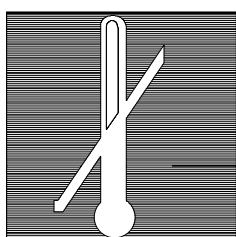
Handle with care



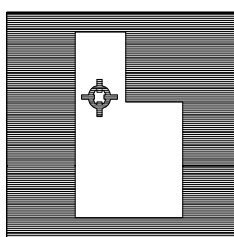
This way up



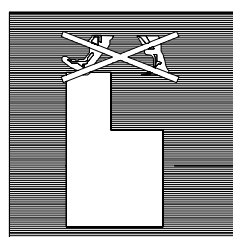
Keep away from
Sunlight



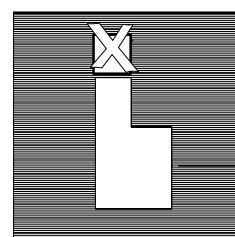
Maxi 80°C
Storage Temp.
Mini -40°C



High gravity center



Do not walk on it



Do not stack

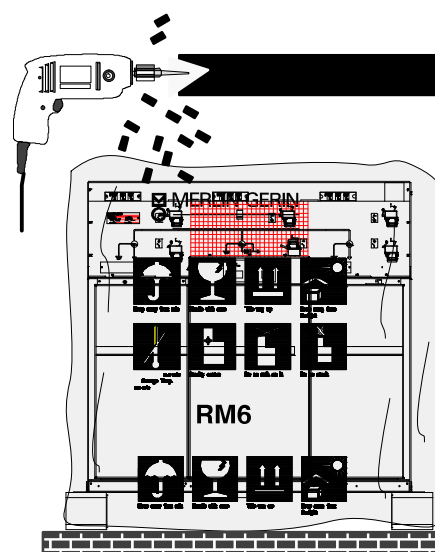
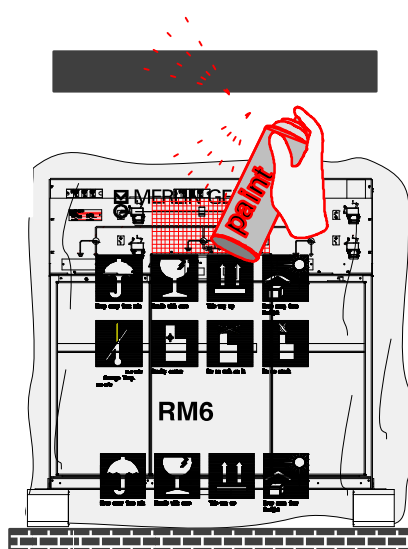
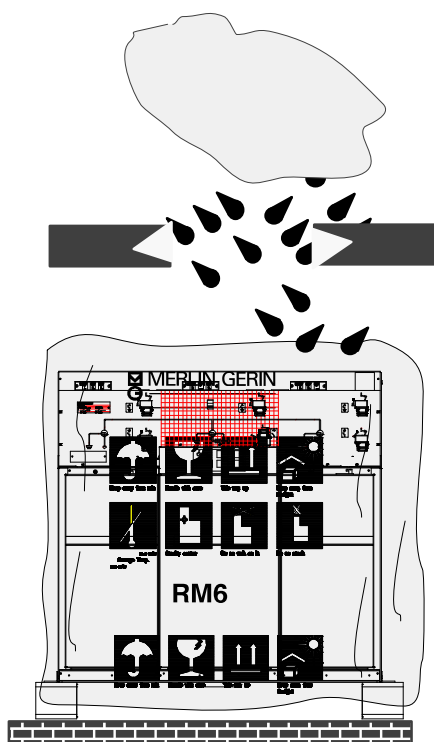
storage (continued)



WARNING



Keep the RM6 unit under its original plastic cover throughout the whole storage period



specific recommendations for long-term storage

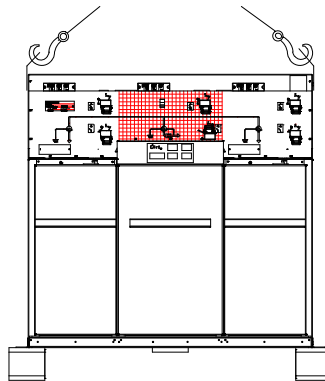
regularly check the condition of the protective cover

unpacking on site

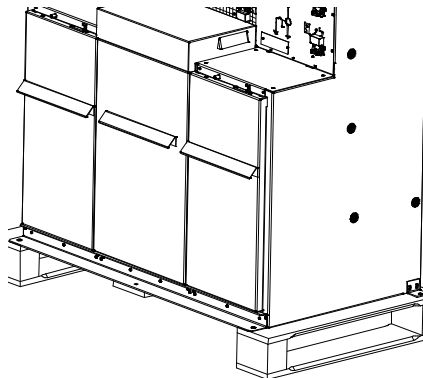


After unpacking, the remaining materials (plastic cover + wooden pallet) must be sorted and routed to the appropriate recycling systems.

When unpacking, check the functioning of the **RM6 units** by carrying out a few actions.

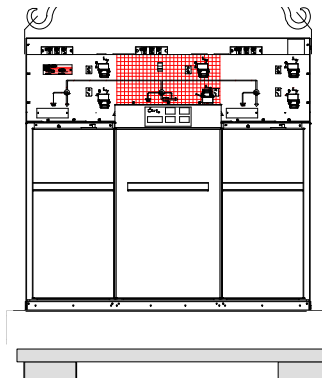


Remove the packing cover.
Place the device on the ground.



NB: the front plinth MUST remain in position.

Remove the handling pallet.



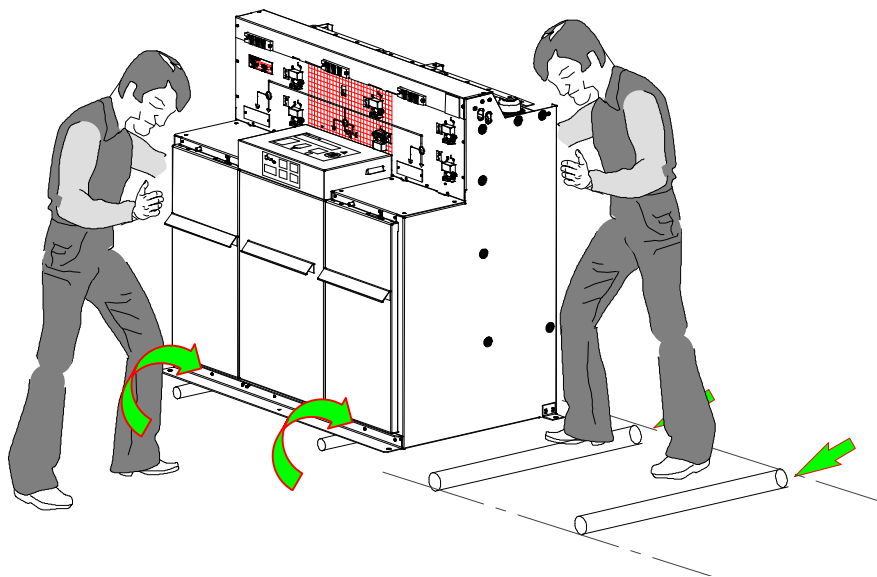
Lift up the substation in order to remove the handling pallet.

handling using rollers

After unpacking and dismantling of the handling kit.

Slide the **RM6 unit** on several cylindrical rollers.

Move it to its definitive installation position.

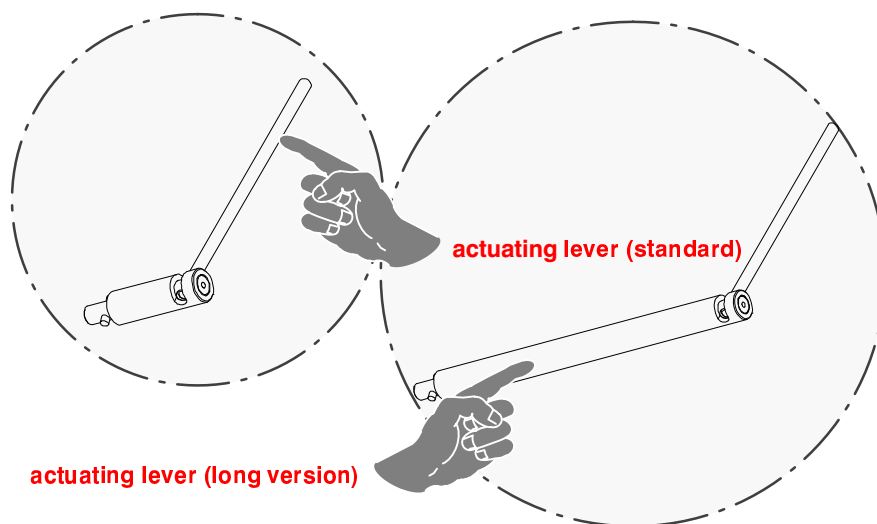


checking the accessories delivered with the unit



We draw your attention to this specific point.

The actuating lever is a **MANDATORY** requirement in order to install the **RM6 unit** and put it into operation.



WARNING

Reminder: the original RM6 lever must be used; it is delivered with the RM6 unit.

If the lever is missing

Call your sales representative who will put you in contact with the closest **SCHNEIDER ELECTRIC** group service centre, or call the following telephone number:
+33 (0)4 76 57 60 60
located in Grenoble, France.
You can log on to :

www.schneider-electric.com

technical data



Check that the information marked on the rating plate matches the equipment ordered.

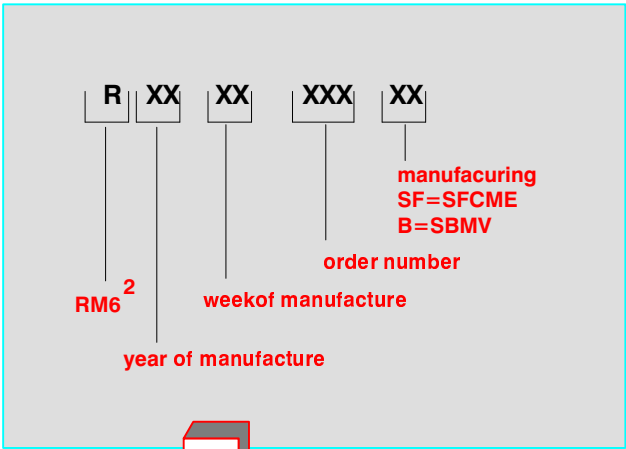


Diagram illustrating the relationship between the rating plate and the technical data table, with arrows indicating the mapping of information.

RM6									
Type			S/N		Year				
Ur	kV	Ud	kV	Up	kV				
Ik	kA	tk	s	fr	Hz				
○ IAC	A FL	kA 1s		Instr.				○	
									
Ir	A	Ir	A	Ir	A	Ir	A		
Isc		kA							
0-3'-CO-3'-CO									
SF6	kg	Pre	kPa	IEC62271-200					

Annotations with arrows:

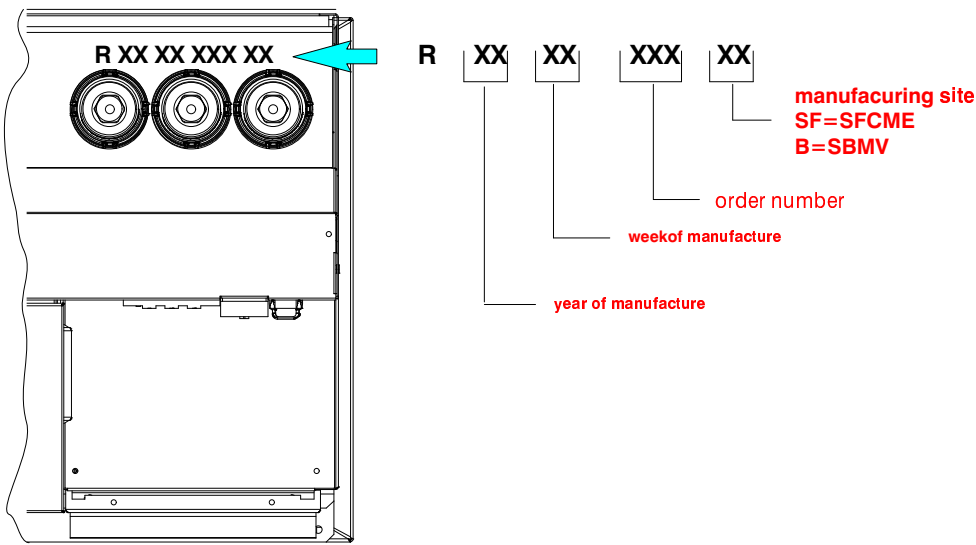
- switch 1 function**: Points to the first switch symbol in the diagram.
- busbar connection**: Points to the busbar connection symbol in the diagram.
- circuit-breaker 1 function**: Points to the first circuit breaker symbol in the diagram.
- switch/switch combination**: Points to the switch combination symbol in the diagram.

identification

1st case

RM6 unit prior to 11.04.05

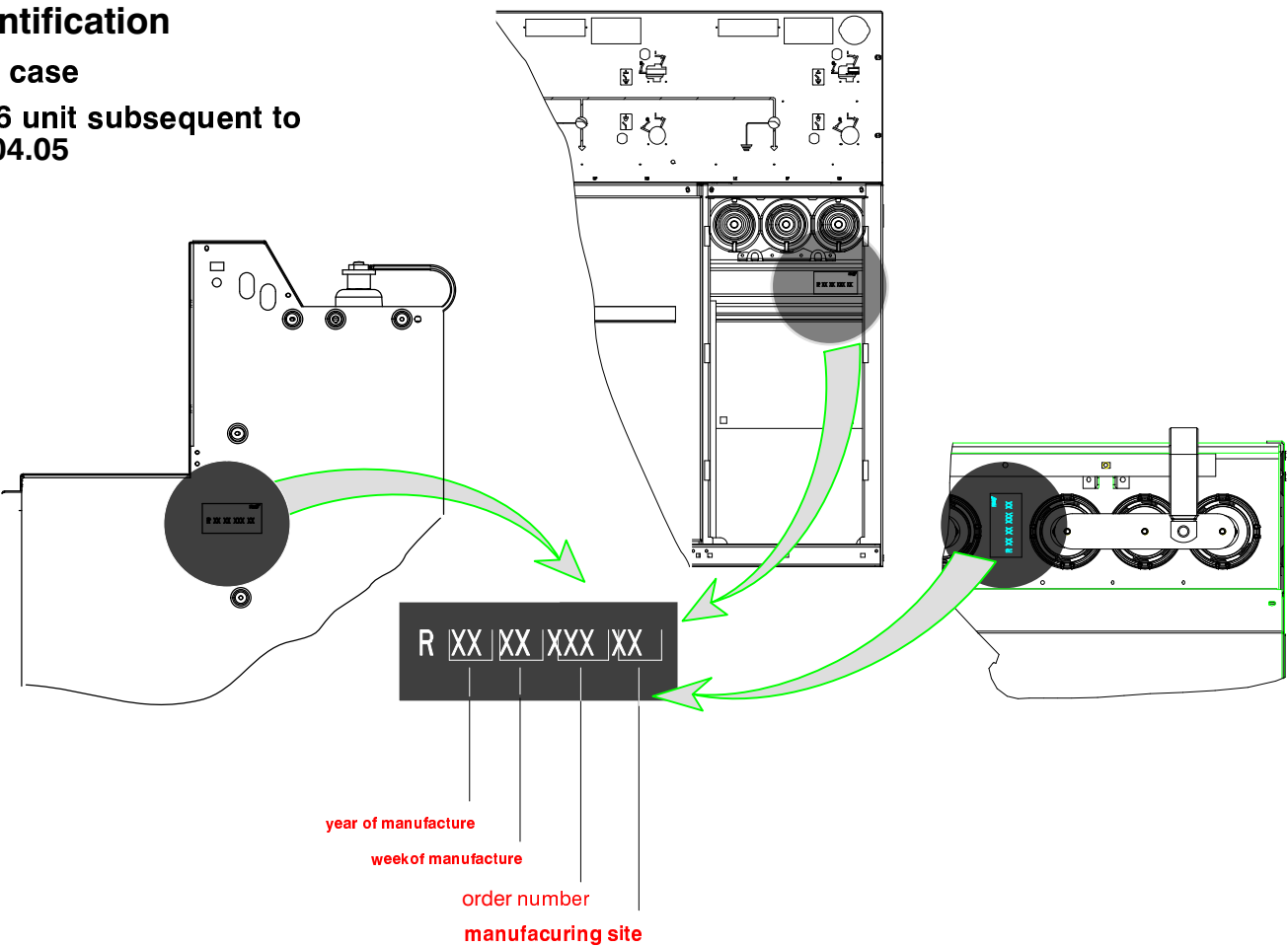
Unit serial n° engraved on top of the case.



identification

2nd case

RM6 unit subsequent to 11.04.05



reminder

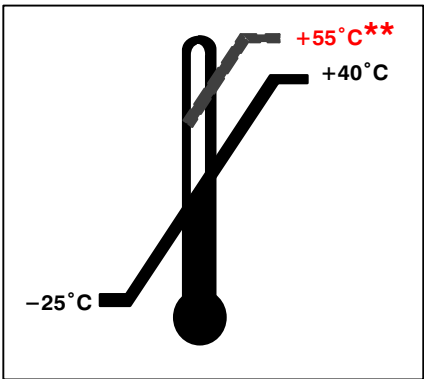


It is **important** to control heating phenomena causing condensation problems in sub–stations.



Condensation is determined directly by the temperature of the components and the humidity level of the air introduced by the ventilation.
This humidity level can be modified considerably **by the presence of water in the basement.**

temperature



When the **RM6** is operating, the ambient temperature must be between **–25°C and +40°C.**



**** Above 40°C, but only up to 55°C, carry out a current derating.**

temperature	40 °C	45 °C	50 °C	55 °C
nominal current	400A	400A	400A	355A
	630A	575A	515A	460A

recommendation

Ageing withstand of switchgear in an MV substation depends on several factors that must be complied with before or while installing the equipped substation.

rules to be complied with

■ **(1)**
Need for proper implementation of connections:

the new cold-slip-on or retractable technologies offer an ease of installation that encourages long-term withstand.

■ **(2)**
The effect of the relative humidity factor:

implementation of a heating resistor in the LV compartment is vital in climates with a high rate of relative humidity and with large temperature differences.

■ **(3)**
Ventilation control:

grid size must be suited to the power lost in the substation. These grids must be placed only near the transformer, to avoid air circulation on the MV switchboard.

■ **(4)**
The need for brickwork construction for the ducts, equipped with a device guaranteeing absence of water stagnation:

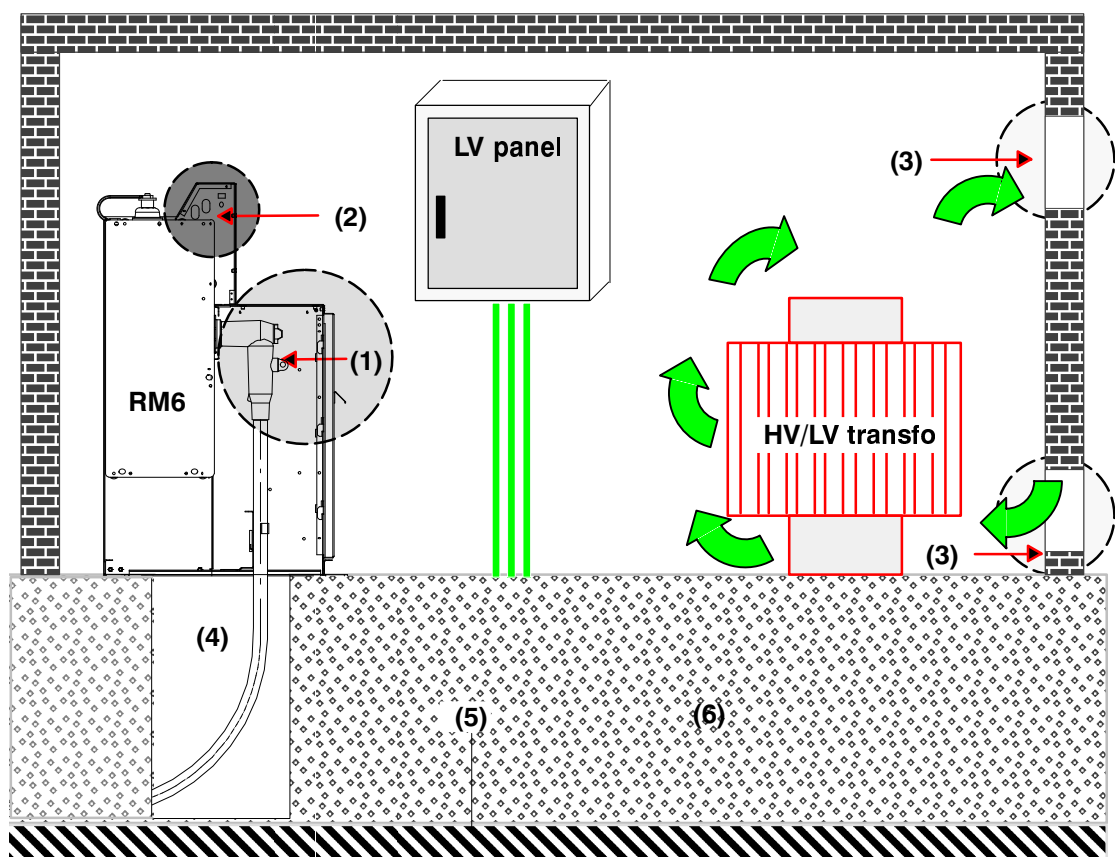
either by installation of perfect tightness at cable routing level, at the entrance to the MV substation enclosure or by installation of a device allowing evacuation of water that has accidentally entered the duct.

■ **(5)**
Preparation of the ground guaranteeing absence of water penetration in the ducts and rapid evacuation of water that has accidentally entered the ducts:

by installation of a drain under and around the substation (sufficiently thick gravel layer).

■ **(6)**
Stabilisation of the ground before installing the MV substation guaranteeing absence of all ground movement and thus of the MV substation at a later stage.

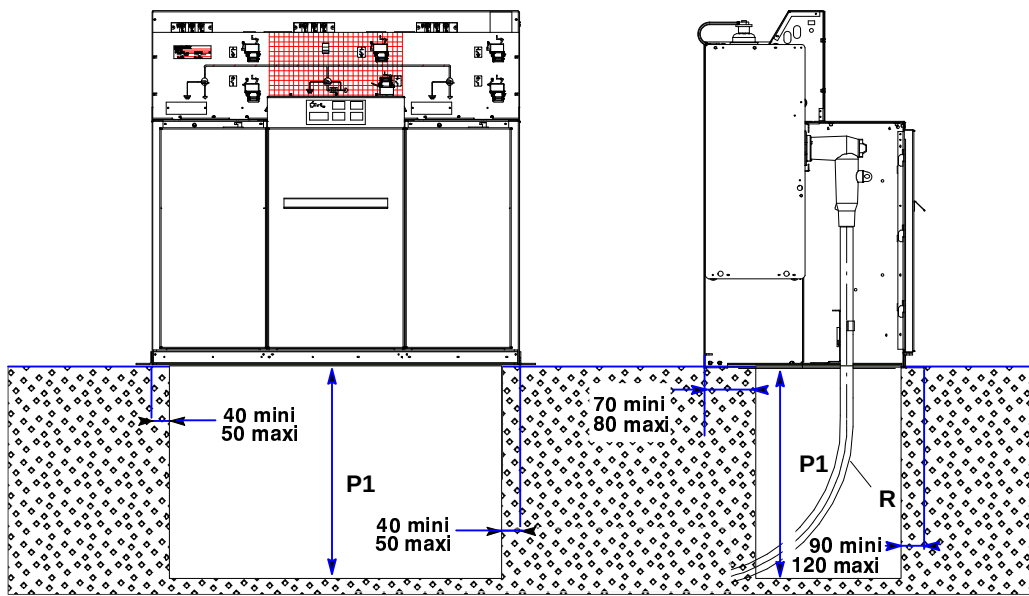
example of correct installation



for network switch or
network circuit breaker

Cables can be routed from
the front, rear, left or right.

*In the case of civil engineering
without trench, a raising plinth
can be optionally supplied.*



determining trench depth (P1)



for more detailed information,
please contact the cable
supplier

connection	cable insulation	cable	cross-section (mm ²)	radius of curvature (mm)	depth (mm)
plug-in sockets draw-out sockets	dry insulator	single-pole	≤ 50	370	270
			70 to 95	440	340
			120 to 150	500	400
			185 to 240	590	520
			300	640	540
heat-shrinkable ends	dry insulator	single-pole	≤ 50	370	270
			70 to 95	440	340
			120 to 150	500	400
			185 to 240	590	520
			300	640	540
		three-pole	≤ 95	550	660
			150	610	720
			185	650	770
			≤ 50	550	660
			95	635	750
	paper impregnated with non-draining material	three-pole	150	670	790
			240	775	900
			300	835	970

for fuse-switches

H1 : 700 minimum for changing fuses

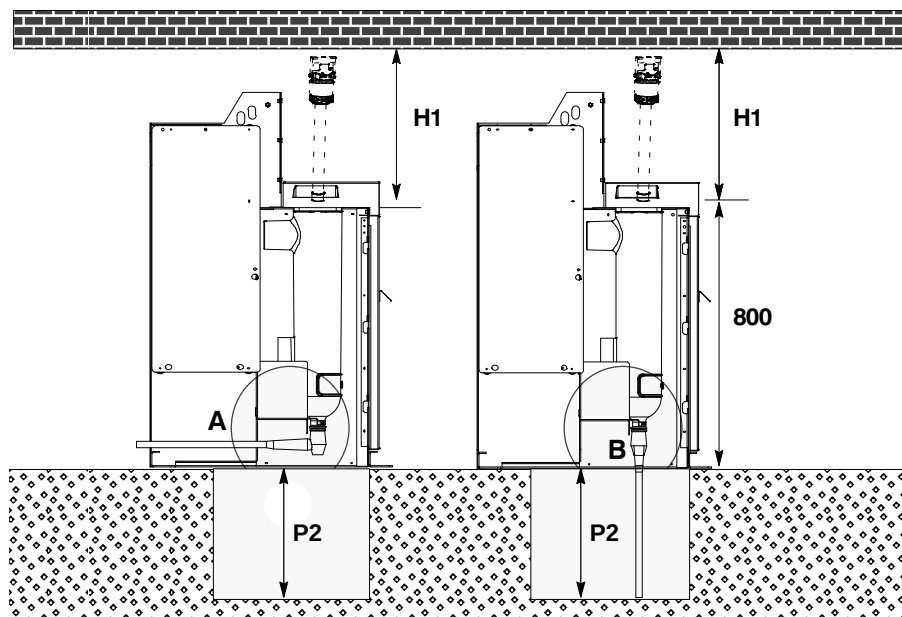
A : plug-in (elbow type socket)

B : plug-in (straight socket)

The sectional area of the "transformer" output cable (functions Q and D) is usually less than that of "network" output cables (functions I and B).

All the cables then pass through the same space.

When using HV straight power outlets or bases, the depth "**P2**" indicated below may be greater than that of "network" "**P1**" cables.

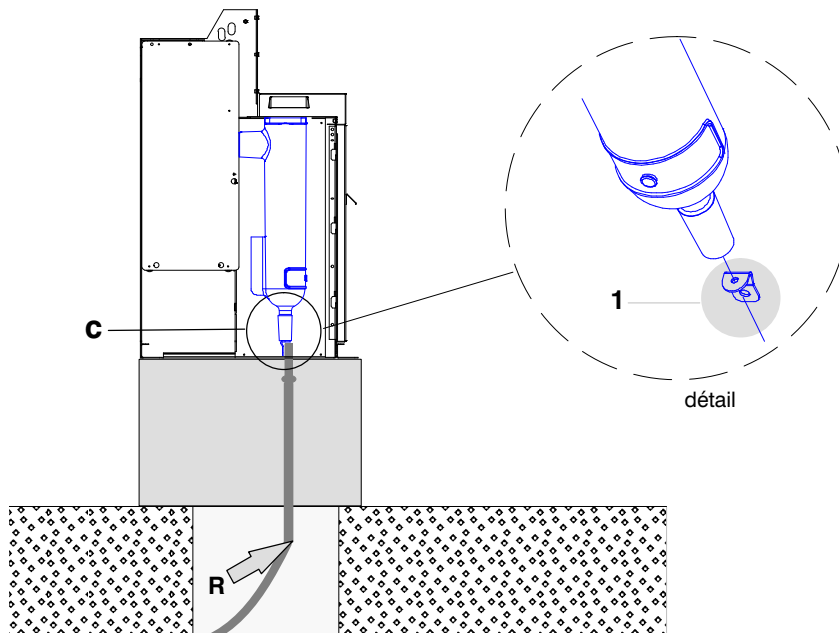


in the case of a connection with heat-shrinkable sleeve

C : heat-retractable

installation of the square of connection TH

1 : to fix the square of connection under the fuse well using screw HM8.20 like its disc diameter 8 (delivered screws and bolts)



WARNING

The curvature of the cables may cause partial deterioration of the fuse compartments.

It is mandatory to use 520mm bases.

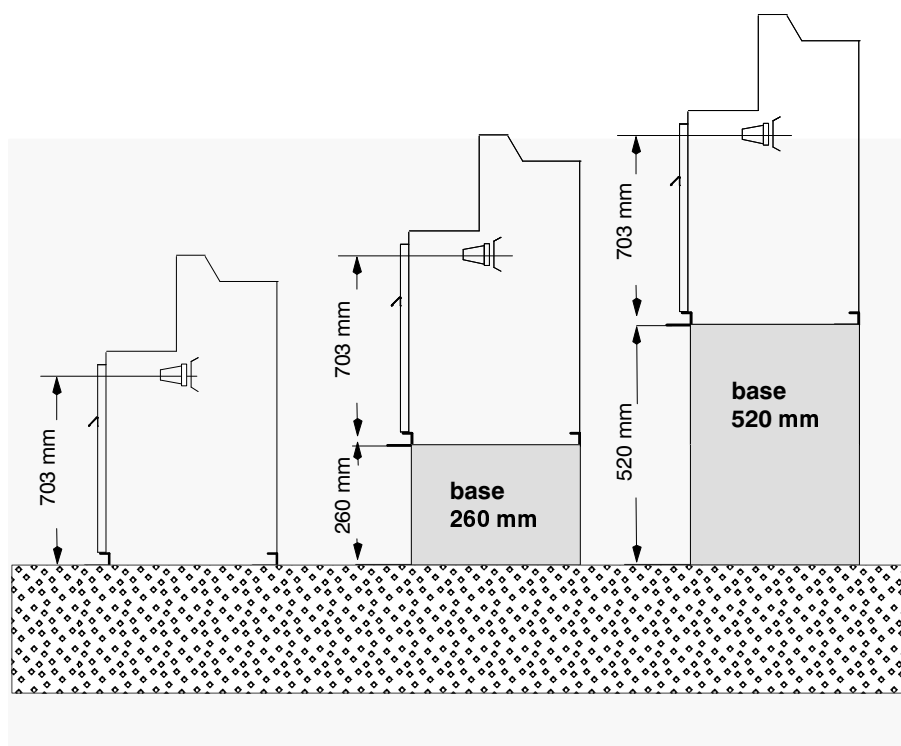
determining trench depth (P2)

cable insulation	cable	cross-section (mm ²)	radius of curvature (mm)	plug-in elbow type	plug-in straight	heat-shrinkable
dry insulator	single-pole	35	335	100	520	335
		50 to 70	400	100	520	400
		95	440	100	550	440
	three-pole	35	435	100	520	725
		50 to 70	500	100	520	800
		95	545	100	550	860

additional raising block

The **RM6** may be optionally equipped with a 260 or 520 mm raising plinth.

This addition, which simplifies civil engineering works, allows a reduction in trench depth or even complete elimination of trenches when cable radius of curvature so allows.



For these bases' Interior Arc resistance, please contact the **SCHNEIDER ELECTRIC** department.

for DE – Mt metering cubicle



WARNING



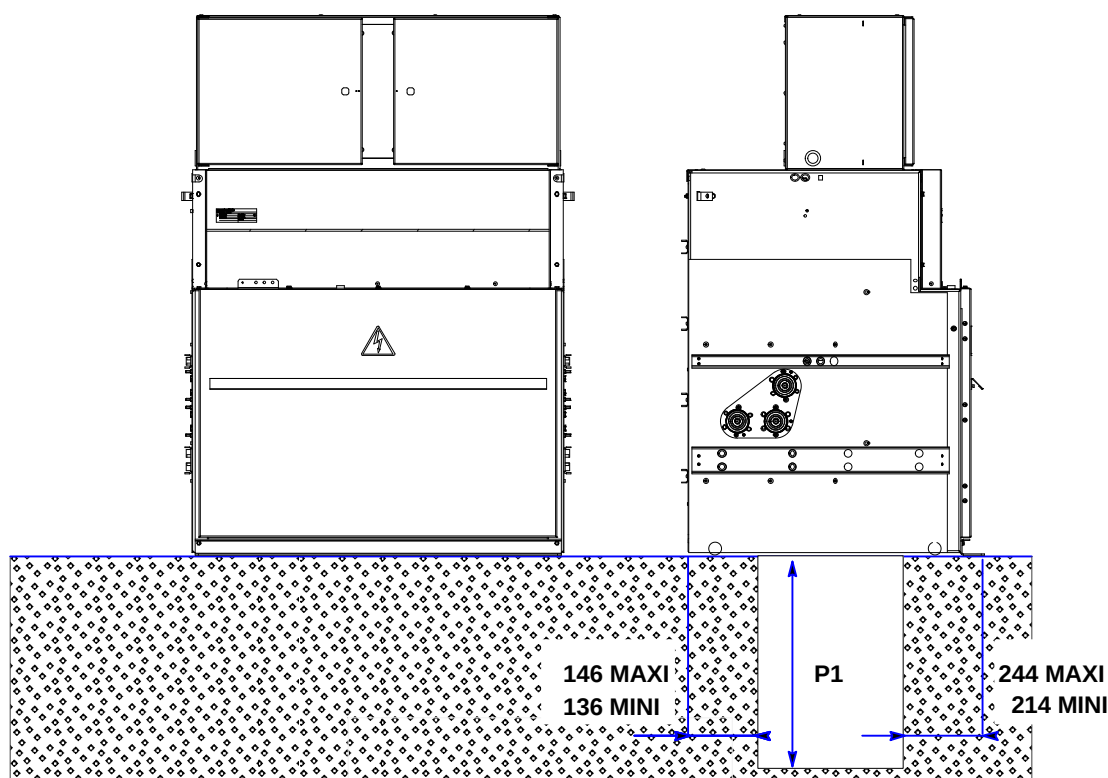
the width of the metering cubicle's duct must be taken into consideration in the event of a future extension



CAUTION

INTERIOR ARC RESISTANCE OF THE INSTALLATION

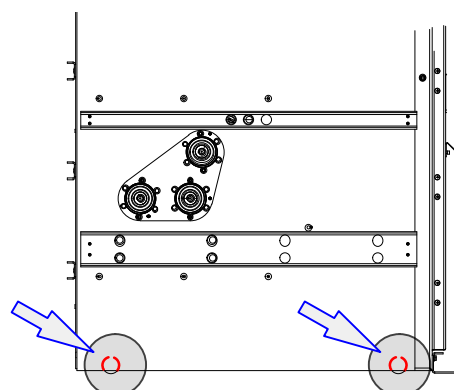
make sure that the positioning of the evacuation flap on the duct is respected, as described on the following page



CAUTION



the handling rollers must not be in line with the duct.



duct detail for switchboard with MV metering

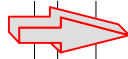
bottom view

A : membrane

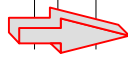
B : flap

C : duct

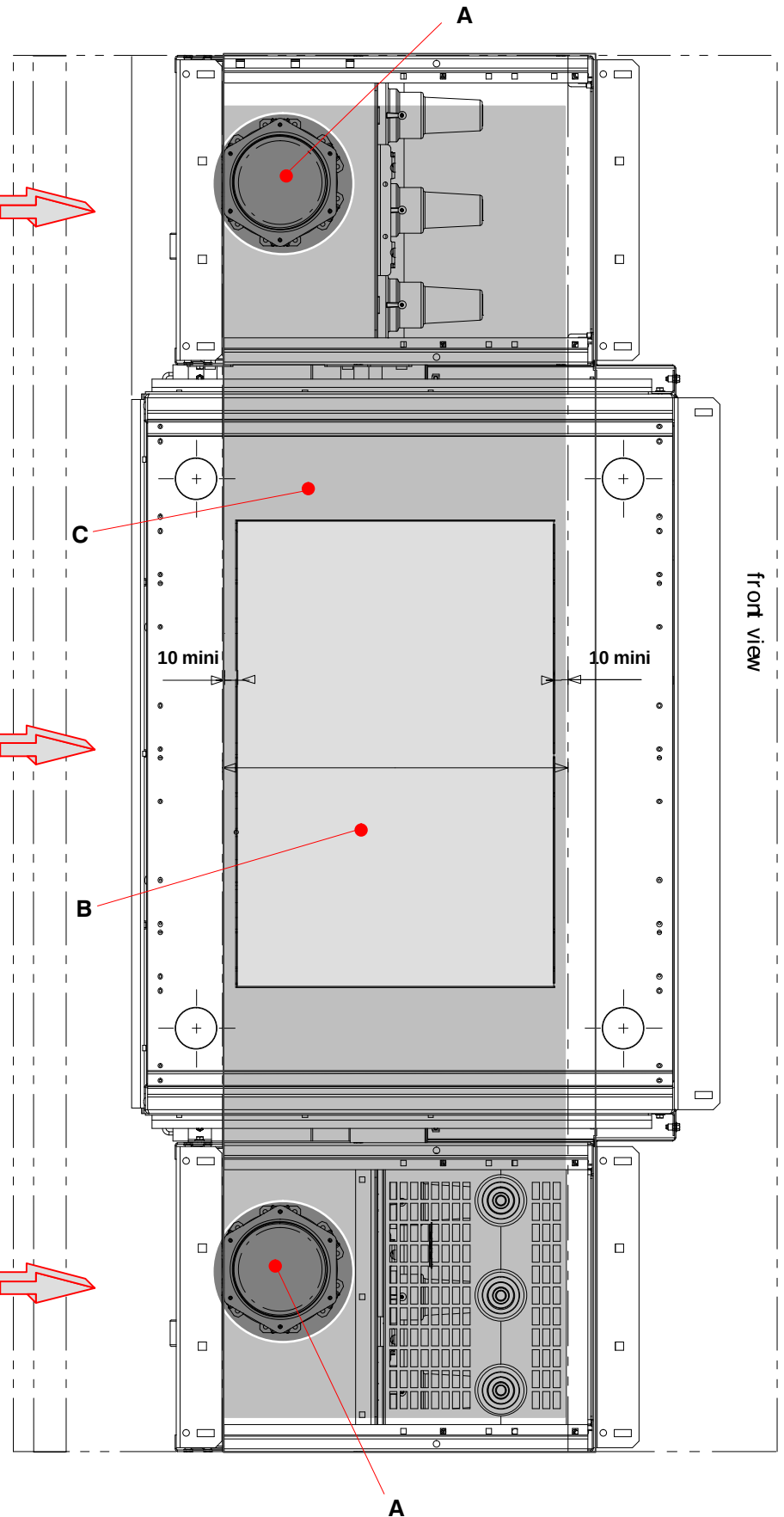
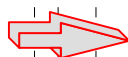
RM6



DE – Mt metering
cubicle



RM6



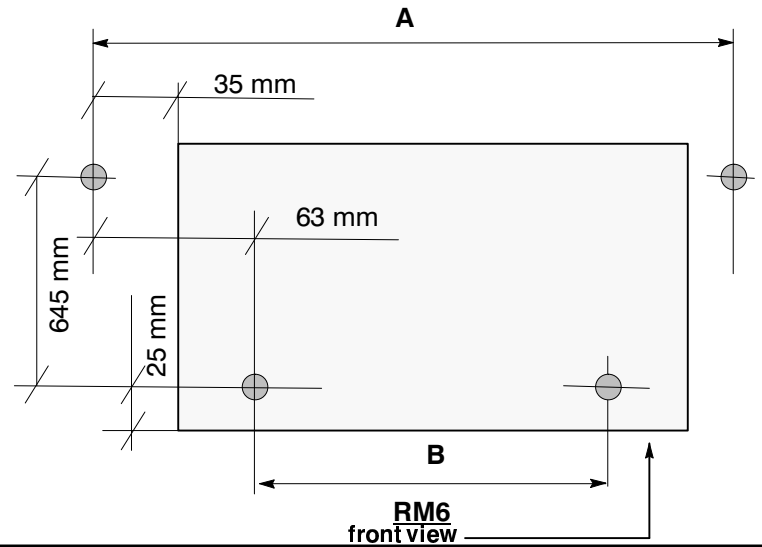
preparing the ground fixing

Drill the holes in the ground to the diameter necessary to fit the M6 screws.

Fit the suitable dowels.

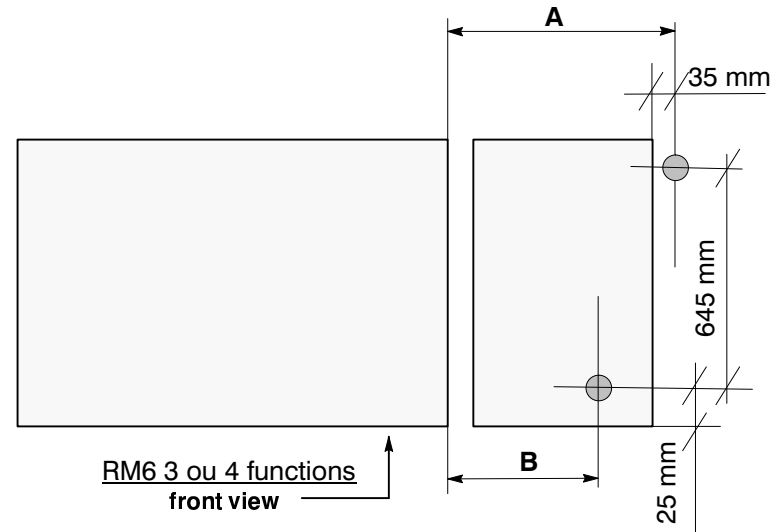
sizing for RM6 extensible to the right or non extensible

	A	B
RM6 1 function width : 472 mm	542 mm	416 mm
RM6 1 function width : 572 mm	642 mm	516 mm
RM6 2 functions width : 829 mm	899 mm	773 mm
RM6 3 functions width : 1186 mm	1256 mm	1130 mm
RM6 4 functions width : 1619 mm	1689 mm	1563 mm



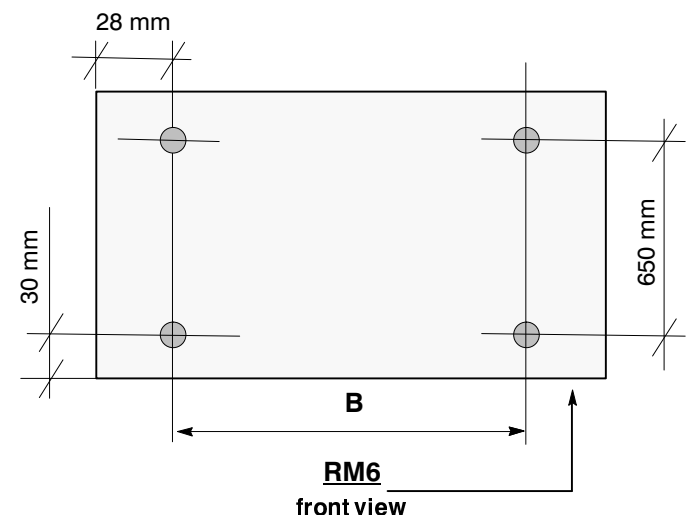
sizing for double extensible RM6

	A	B
extensibility width : 472 mm	550 mm	487 mm
extensibility width : 572 mm	650 mm	587 mm

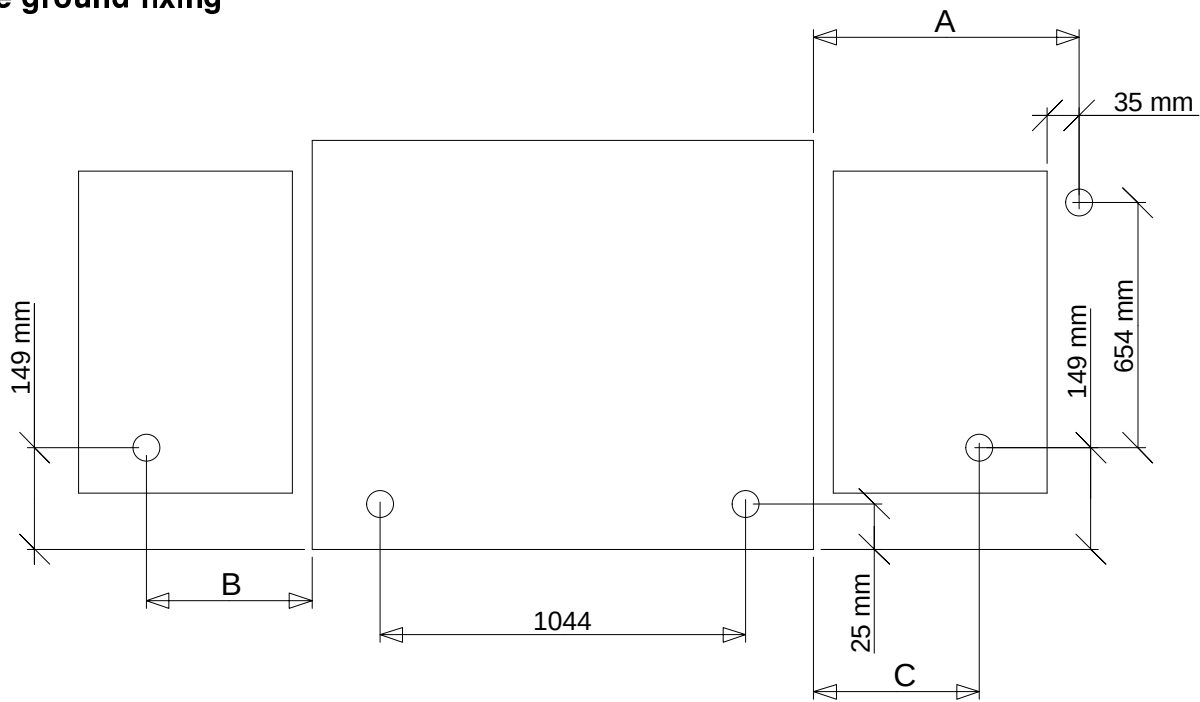


sizing for RM6 extensible to the right or non extensible with raising block

	B
RM6 1 function width : 472 mm	416 mm
RM6 1 function width : 572 mm	516 mm
RM6 2 functions width : 829 mm	773 mm
RM6 3 functions width : 1186 mm	1130 mm
RM6 4 functions width : 1619 mm	1563 mm



fixing the ground fixing



sizing for double
extensiblefor DE – Mt
metering cubicle

	A	B	C
RE 1 function width : 472 mm		416	
DE 1 function width : 472 mm	547	484	484
LE 1 function width : 472 mm	547		484
DE 1 function width : 572 mm	647	584	854
RE 2 functions width : 1619 mm		841	
RE 3 functions width : 1186 mm		1198	
RE 4 functions width : 1619 mm		1631	

fixing to the ground

The RM6 must be fixed by at least 3 points.

Position the RM6 on the civil engineering.
Secure the unit using HM6 screws.

verification before installation

description



metal peg



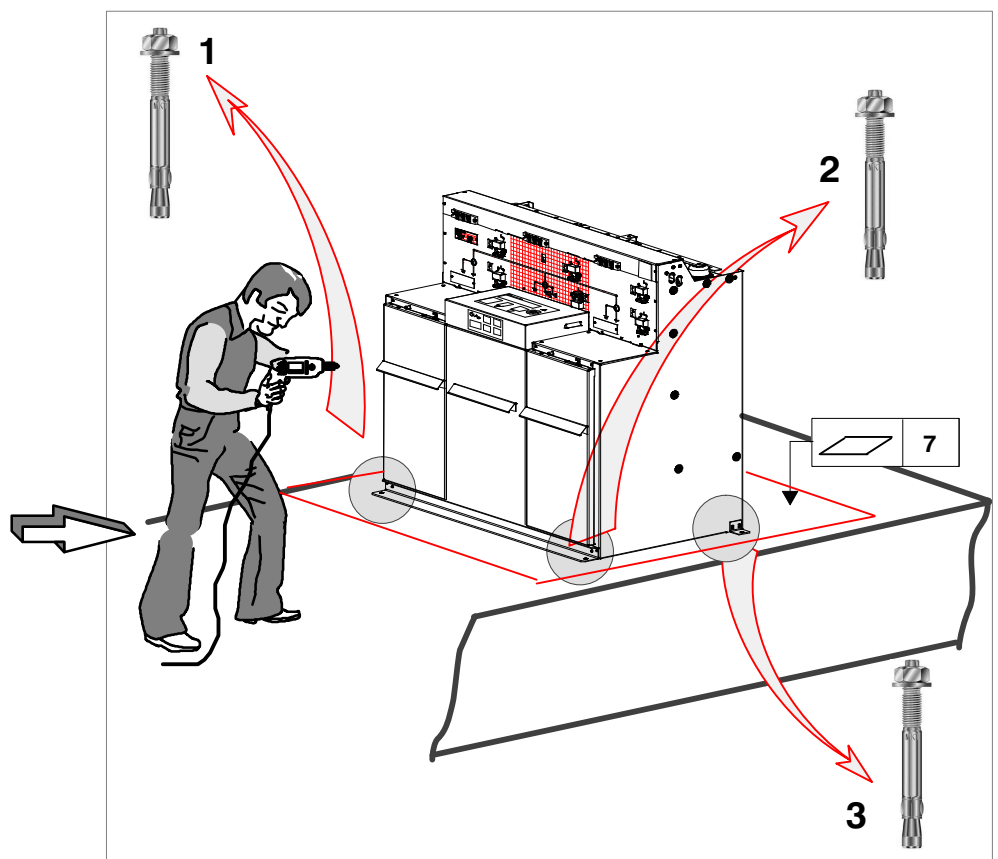
WARNING

the finishing on the civil engineering slab must be of high quality



There must be no evenness defect greater than 7mm over a length of 2m and a width of 1m

- 1/ chamfered extremity of the stud making it possible to hammer it in without damaging the threads
- 2/ class 8 nut for bichromate steel or A4 stainless steel studs depending on the version
- 3/ washer
- 4/ smooth stud shaft without marking
- 5/ rolled expansion ring made up of two segments linked together on one side. Each segment has a boss
- 6/ tapered part of the stud performing expansion



installing the substation for resistance to internal arcing

When an installation is requested with protection against internal arcing faults, consult the diagrams below.

The parts to guide the gases towards the evacuation openings (stacks) and the cooling walls are not part of the switchgear supply. These components should be adapted to each type of use.



The gas evacuation kits listed below are available in the RM6 accessories.

gas evacuation kit via the back of the unit

Classification according to
IEC62271-200: IAC AFL

Interior arc resistance

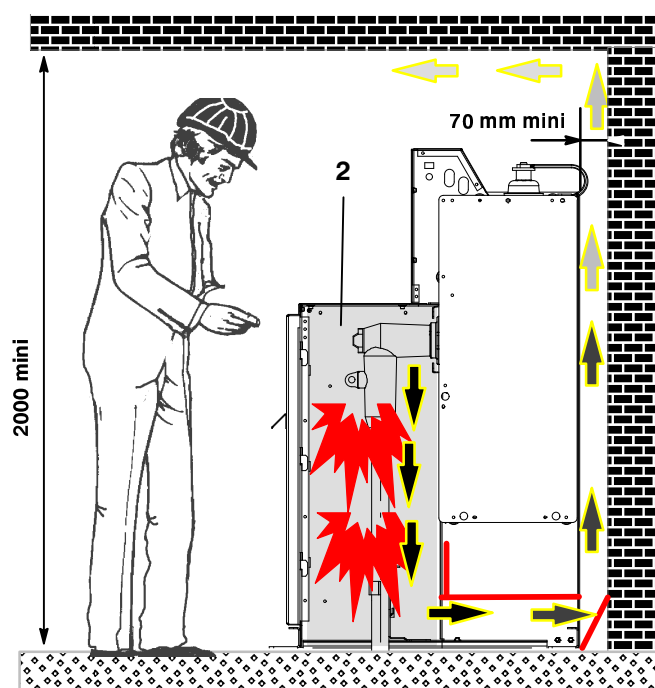
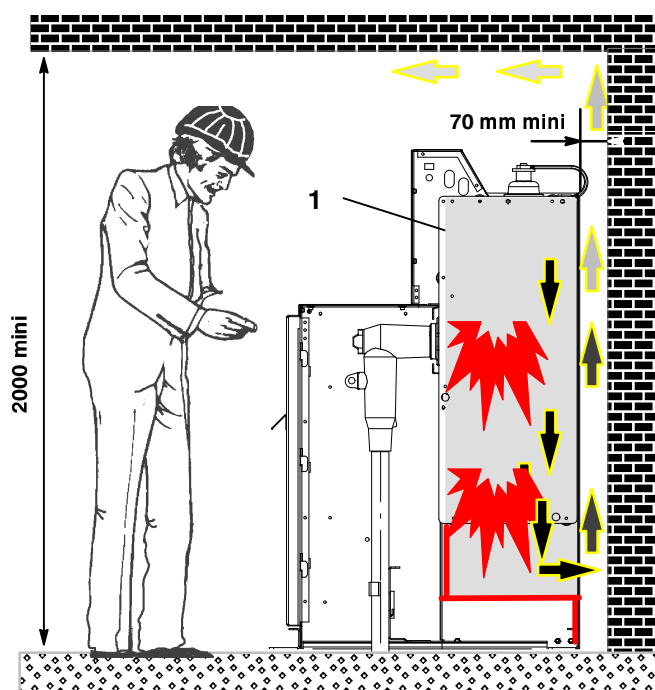
Maxi 24kV – 16kA.1s.



→ evacuation of the SF₆ gas
after ignition of the interior
arc

interior arc ignition
zone in the case
(1)

interior arc ignition
zone in the cable box
(2)



gas evacuation kit via the back of the unit

Classification according to
IEC62271-200: IAC AFL

Interior arc resistance

Maxi 24kV – 16kA.1s.



→ evacuation of the SF₆ gas
after ignition of the interior
arc



interior arc ignition
zone in the case
(1)

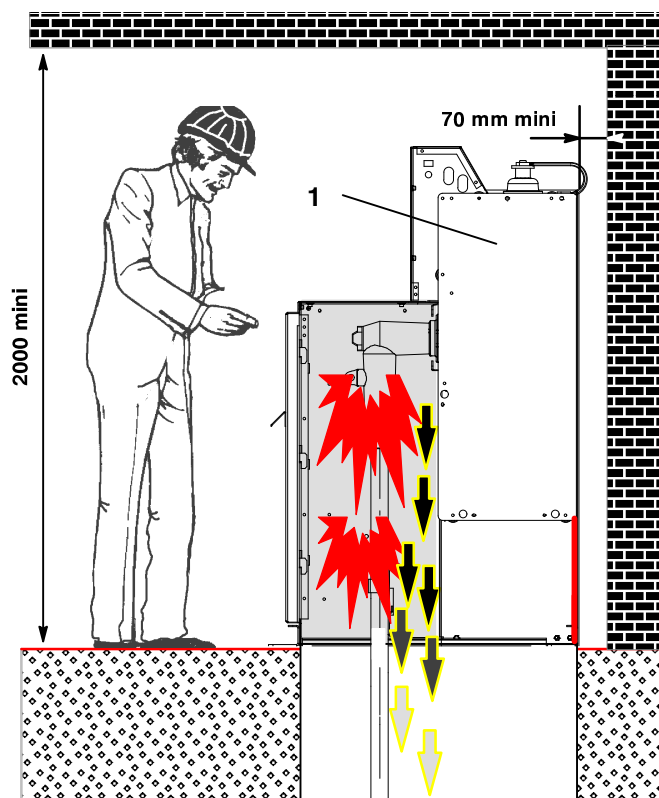
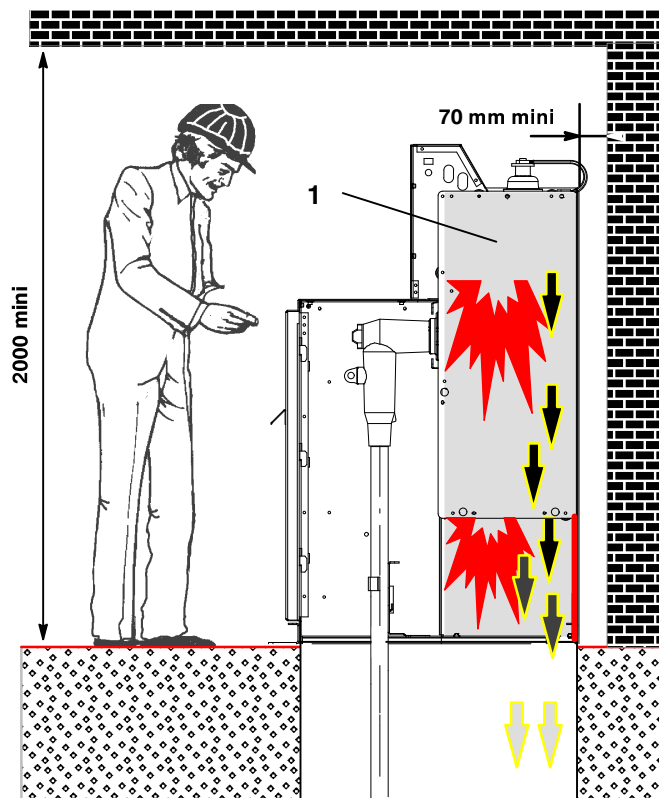


interior arc ignition
zone in the cable box
(2)



If possible the downstream
compartment should open into a
room that is not used.

Otherwise, keep to a minimum
volume of 1.5m³.



gas evacuation kit via the
back of the unit

for DE_mt cubicle

Classification according to
IEC62271-200: IAC AFL

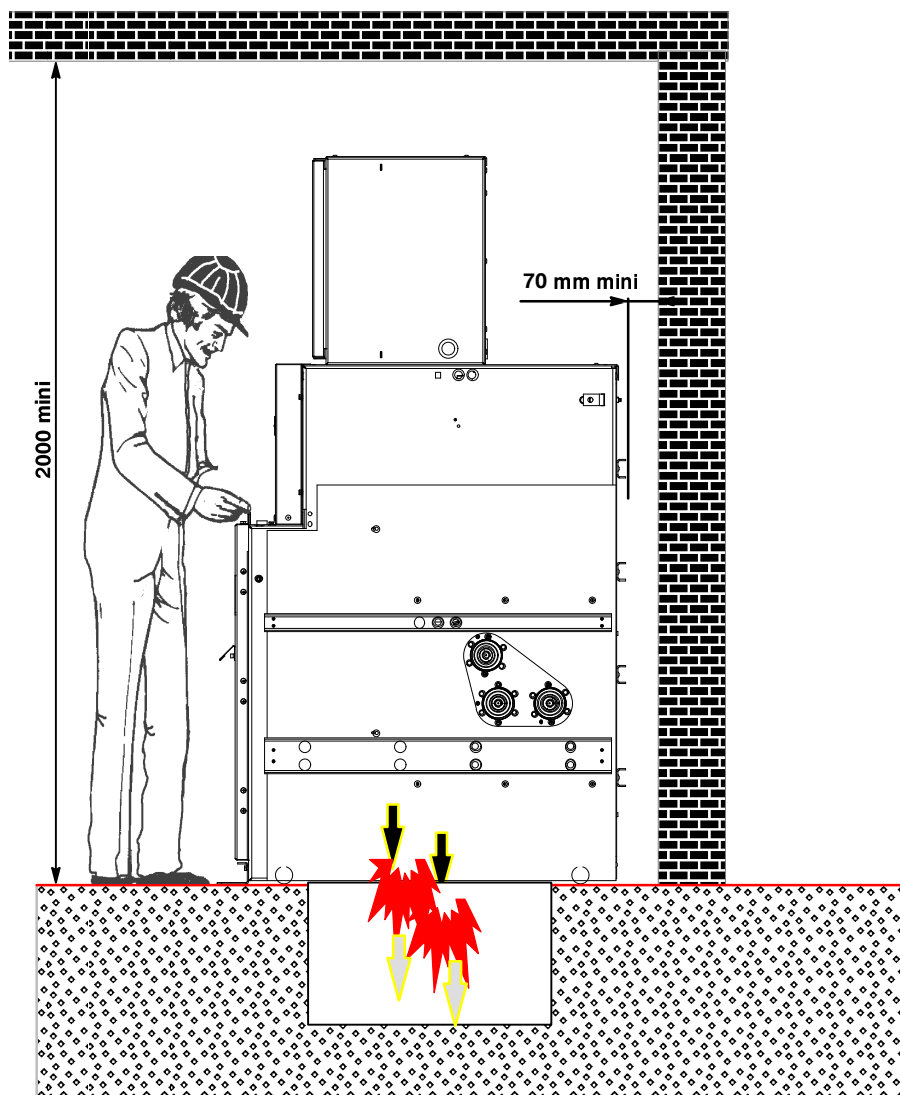
Interior arc resistance

Maxi 24kV-16kA.1s.



→ evacuation of the SF6 gas
after ignition of the interior
arc

interior arc ignition
zone in the case
(1)



connecting the HV cables foreword



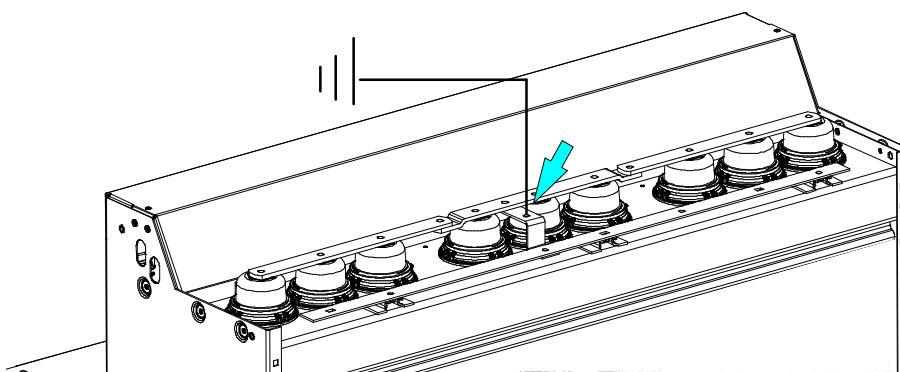
Before connecting the cables, ensure that the functional unit is in the earthing switch closed position.

The cables **MUST** be connected with the **RM6** substation fixed to the ground.

The operations described below apply to all connection types.

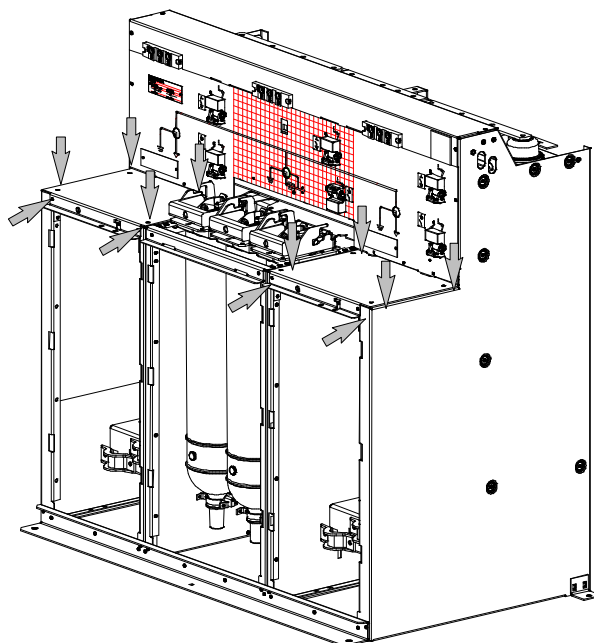
The connections will be made and used according to the manufacturer's manual.

connecting the RM6 frame to the substation earth



Before connecting the HV cables, you must connect the **RM6 frame** to the main earth bar.

access to the HV connection bushings removing the panels



Remove the fuse compartment cover (lift and pull it towards you), then remove the 3 front panels (2 screws per panel).

Remove the 2 top plates on the cable connection compartments (6 screws per plate).

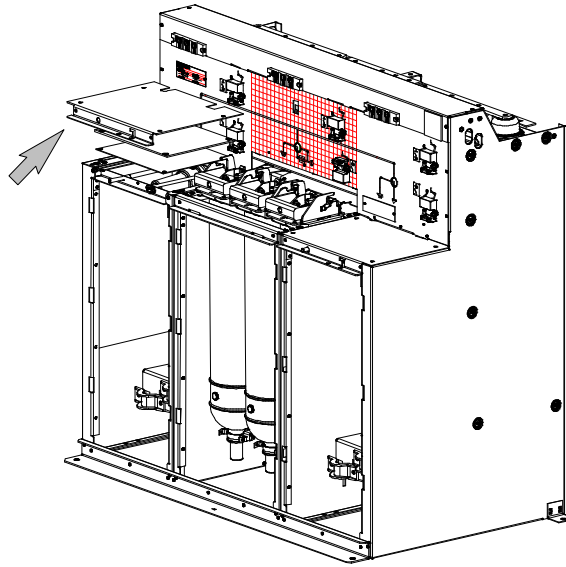
If the cable compartment is equipped with bottom plates, dismantle the front bottom plate and the tightness horns.

(Optional supplies)

case of a compartment with resistance to internal arcing

Remove the fuse compartment cover (lift and pull it towards you), then remove the 3 front panels.

Remove the 2 top plates from the cable connection compartments (6 screws per plate), then withdraw the internal arcing protection (1 plate+1 insulator), 4 F/90M5 screws.



type of usable connections

The **RM6** connection interfaces are defined by draft project **PREN50181**.

The type of connections to be used depend on the interface equipping your **RM6**.

It is defined when you place your order and depends on very precise criteria such as:

The current of the connected equipment :

200A, 400A, 630A

Short-time withstand current:
12,5 KA ; 16KA ; 25KA

Socket type:

Draw-out: sliding contact.

Disconnectable: screw-on lug.

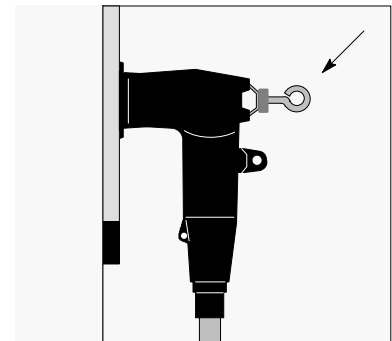
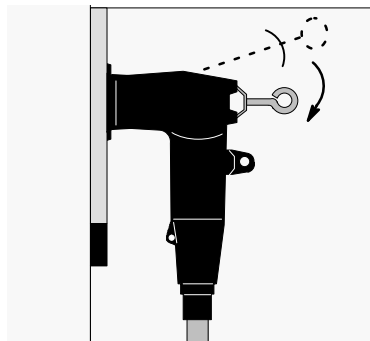


Use the connectors indicated in the catalogue.

We do not guarantee the dielectric withstand over time if other types of connectors are used.

If 2 cables are connected to the same bushing, use connectors designed for this purpose.

draw-out sockets with controlled field



Mount on the interface:

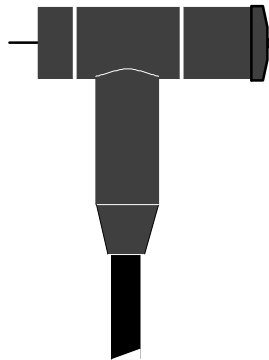
–200A ; 12,5KA 1s ; 31,5 KA peak (A type).

–400A ; 16KA 1s ; 40KA peak (A type).

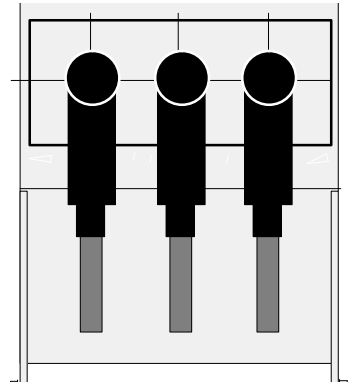
Interface fitted with a sliding contact.

To install the socket at the end of the cable, comply with the accessory manufacturer's manual.

**disconnectable sockets
with controlled field
or non-controlled field**



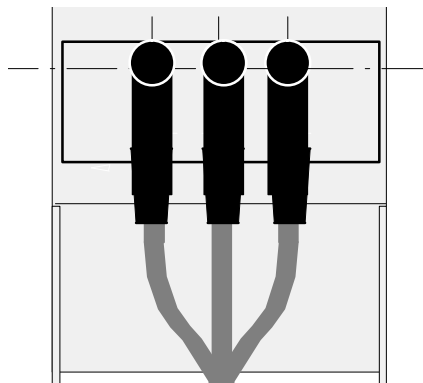
Mount on the interface:
630A ; 25KA 1s ; 62,5 KA peak
(C type)
Interface containing a M16
tapping.



To install the socket at the end
of the cable, comply with
the accessory manufacturer's
manual

**Tightening torque
on the interface is 50 Nm.**

**cable ends with
heat-shrinkable elements**

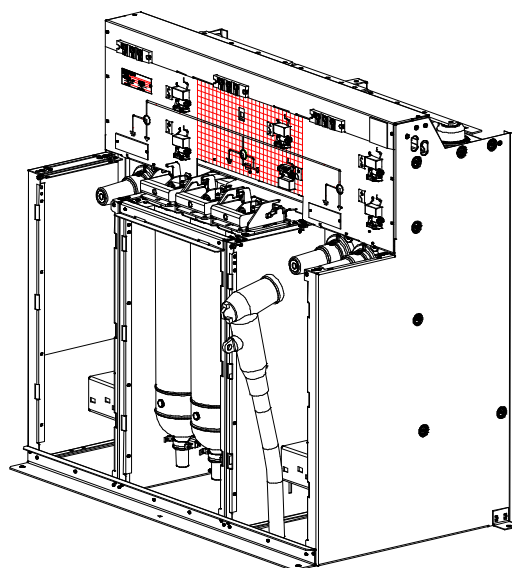


Mount on the interface :
630A ; 25KA 1s ; 62,5 KA peak
(C type)
Interface containing a M16
tapping.

For implementation
of heat-shrinkable elements,
comply with the accessory
manufacturer's manual.

**Tightening torque
on the interface is 50 Nm.**

**connecting the HV
cables
preparing the cable ends**



The curvature and length of the
cables must be adjusted so that
no stress is exerted on the
connection interfaces.

Fit the tightness horns on the
cables, if the cable compartment
is equipped with bottom plates.
Prepare the cable ends according
to the instructions of the
accessory manufacturer

instructions



The MV cable characteristics must be taken into account when the connectors are installed on the product's bushings.

Since no mechanical load is exerted on the bushing it is possible to guarantee complete absence of damage to the product during installation.

recommendation for connecting cables

- types of MV cables (single pole or three pole)

The depth of the cable duct must be compatible with the cable's curvature radius.

Refer to the following chapter: **civil engineering dimensioning.**

The unit must be fixed to the ground before the MV cables are connected.

details

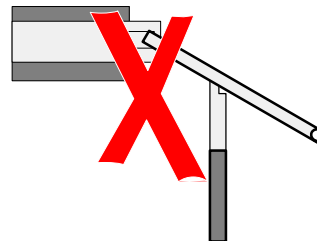
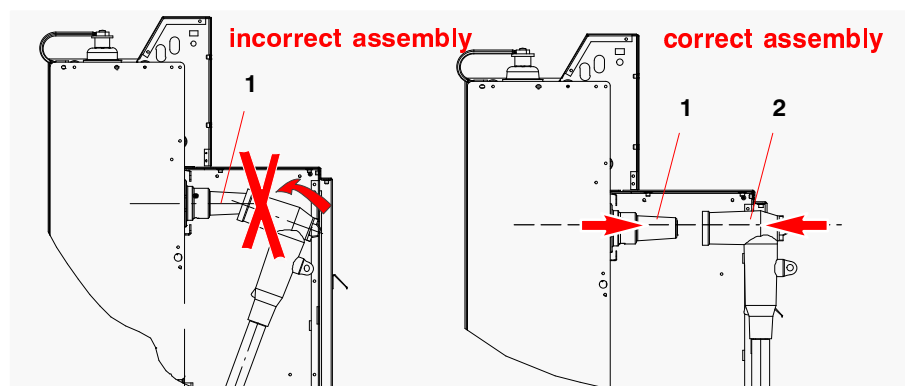
In the absence of any mechanical load, the terminal line must be perfectly aligned with the line of the bushing.

Only the tool recommended by the socket manufacturer must be used to facilitate installation of the socket on the bushings.

The cut length of the MV cable must be adjusted for each phase (three pole cables in particular).

Never use a bar to pull the cable and bring the connection eyelet onto the bushing.

This could damage the bushing and irrevocably damage the unit.



■ Incorrect assembly:

Make sure the cable does not pull on the bushing (1) otherwise there is a risk of damage being caused to the RM6 unit.

■ Correct assembly:

It is mandatory to correctly align the plug-in socket (2) on the bushing (1).

remember

- comply with the tightening torque values indicated in the "connection instructions" chapter.

- when installation of the MV cables is completed, check no load is exerted by installation of the cable tightening clamps.

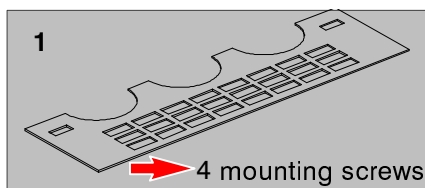
The force exerted by the cable on the bushing should not exceed 30 daN.

(standard IEC 137 and NFC 66-550)

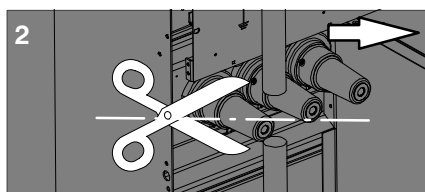


the following operation
should be performed with
the unit **POWERED DOWN**

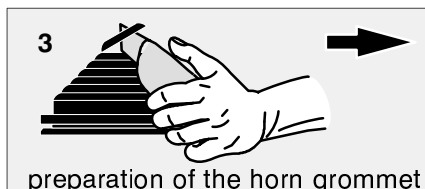
methods and fabrication of cable connections for single pole cables



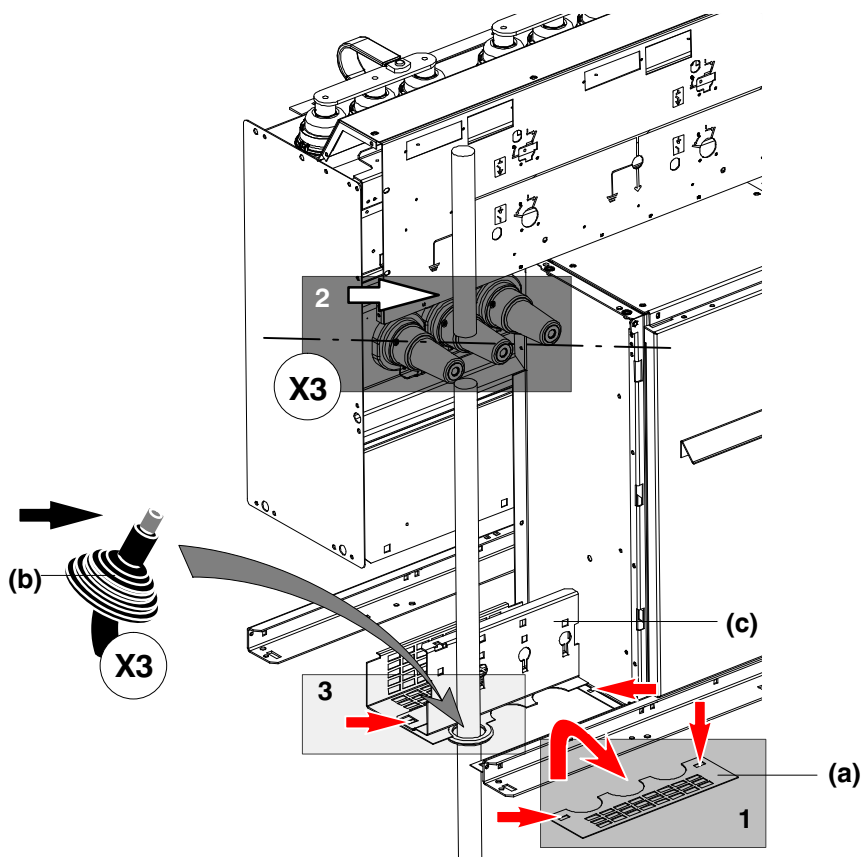
1 : remove the front bottom panel
(a).



2 : cut the incoming cable
to the right length.
Adjust the cable length with
the bushing of the **RM6** unit.

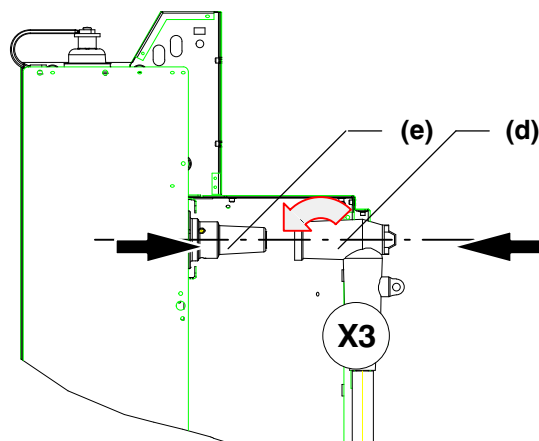
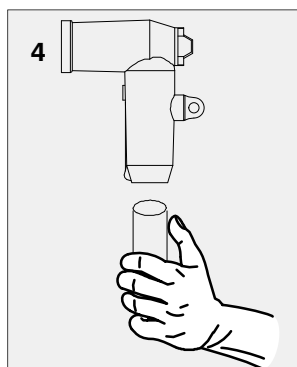


3 : slide the horn (b) inside the
cable until it is embedded in the
rear bottom panel (c).



fabrication of cable heads

■ Refer to the socket
manufacturer .



keep to the alignment between the socket (d)
and the bushing (e)

plugging the socket on the bushing

5

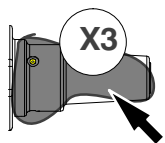


Before plugging the socket in remember to clean the bushing and the inside of the socket with a clean cloth and then lubricate (see details below).

5 bis

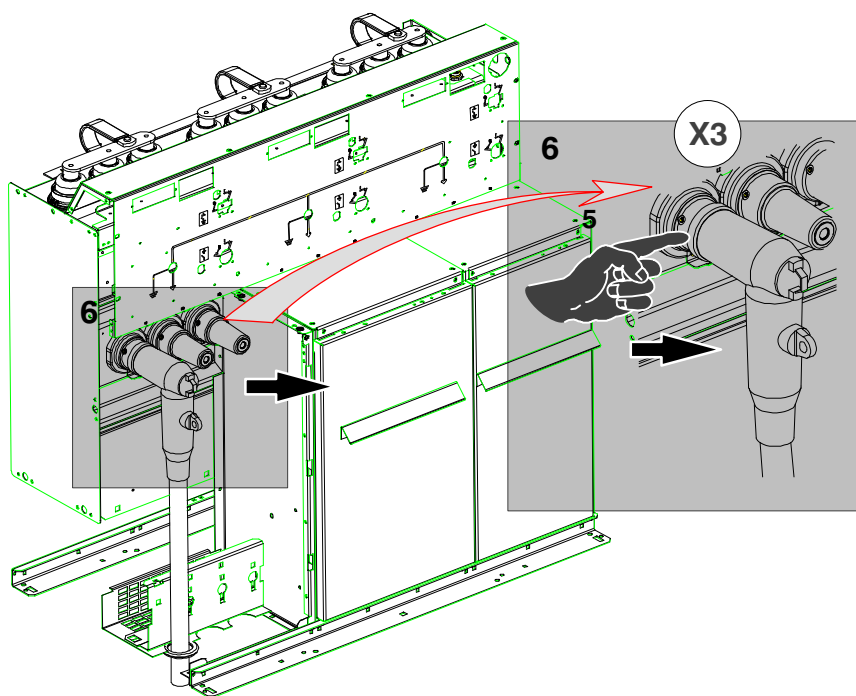


lubricate the inside of the socket



lubricate the bushing complement

to order the lubricant
contact the connector supplier

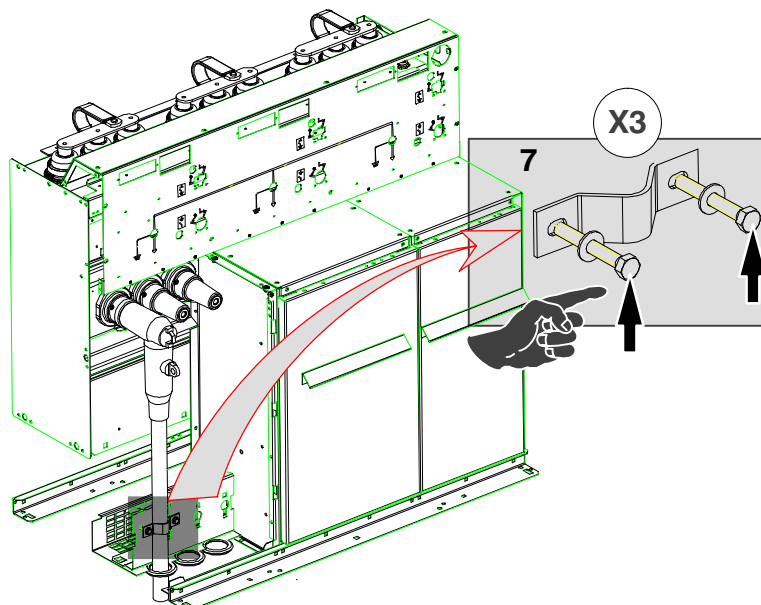


cable clamping

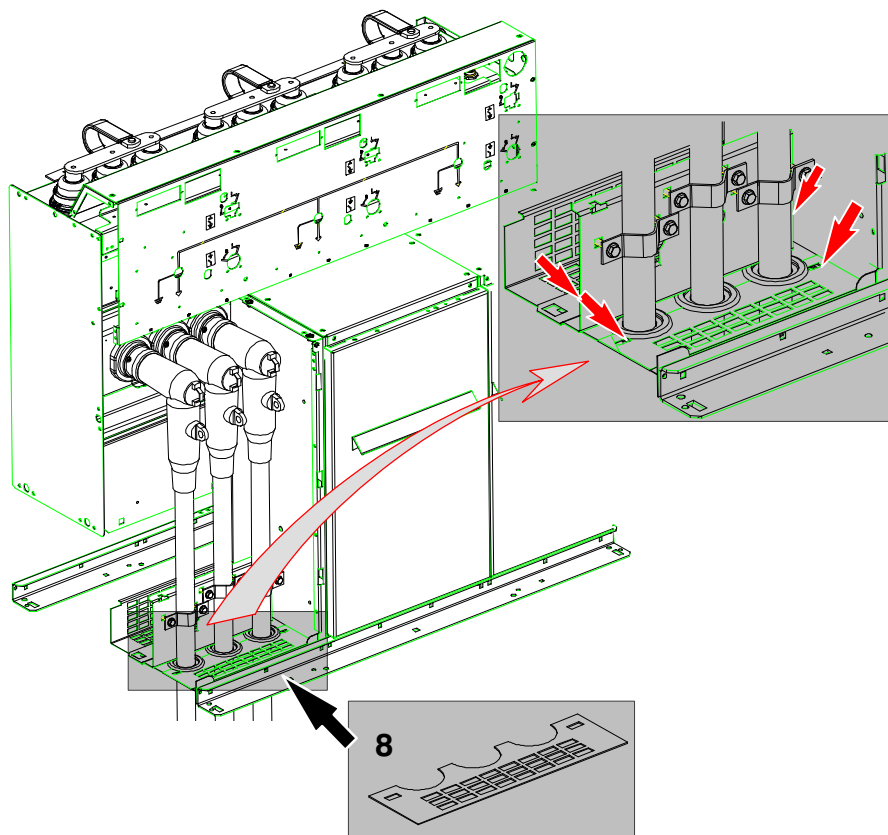
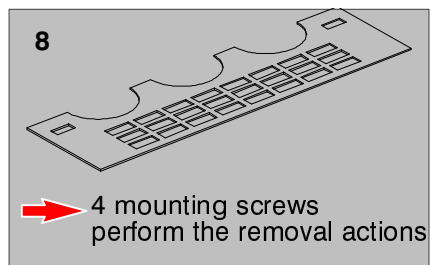
7



tightening torque: 18Nm

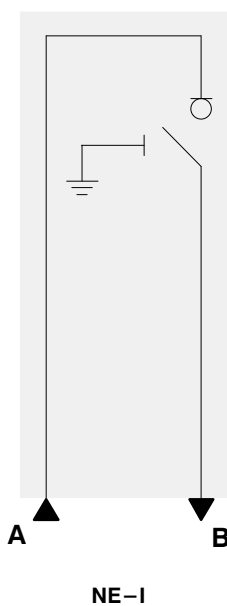
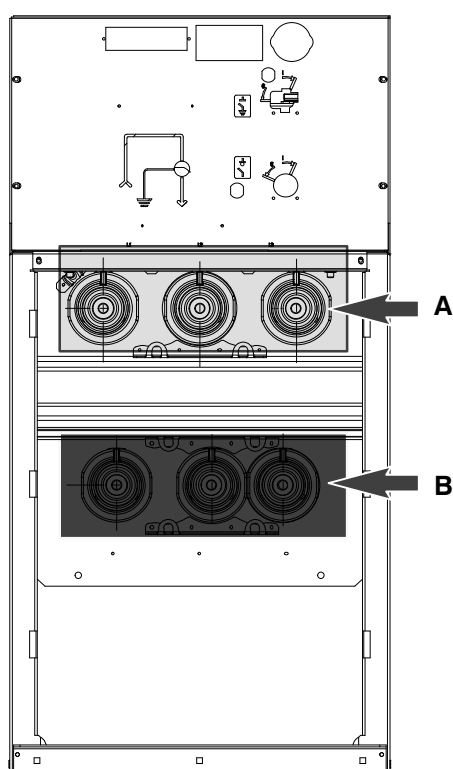


lift up the front bottom panel



connection for NE function cubicle 1

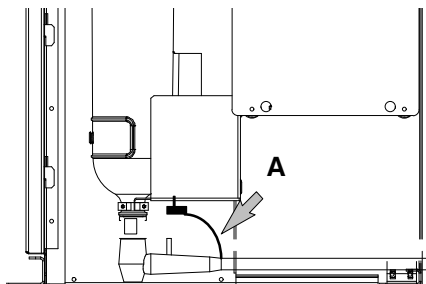
A : incoming power
B : outgoing power



connection of cable earth straps

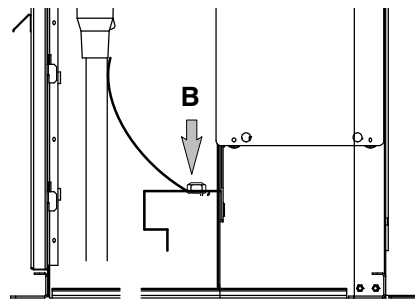
A : transformer protection function

B : loop switch function



Connect the earth straps of the 3 cables to the fuse compartment foil acting as the earth collector (M10 nuts).

Tightening torque: 28 Nm.



Connect the earth straps from the switch's 3 cables to the flange support acting as the earth collector (M10 screws).

Tightening torque: 28 Nm.

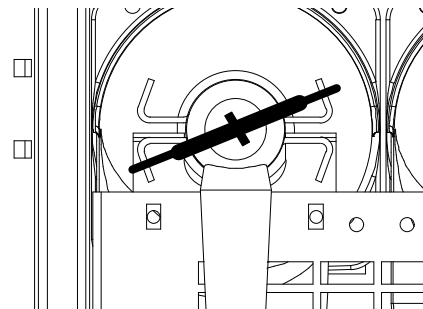
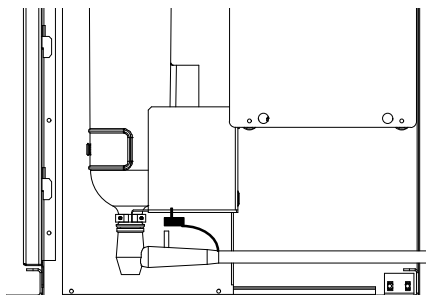
RM6 incorporating a general cable earth collector (**option**).

Connect the straps to the collector located at the bottom of the cable compartment.

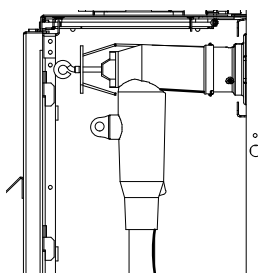
installing the sockets on the RM6 interfaces

Follow the instructions of the accessory's manufacturer.

Make sure you comply with the phases: L1 – L2 – L3.



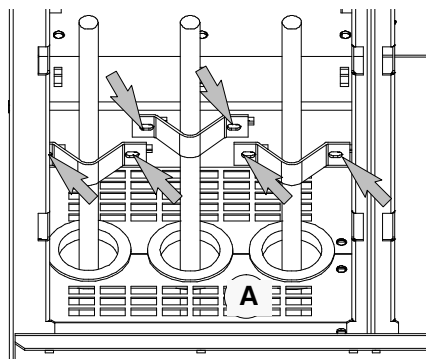
In the case of detachable sockets installation of the pin under the fuse compartment.



Before using the silicon lubricant supplied with the connection accessories, clean the interfaces with a dry cloth.

cable clamping assembly of bottom panels

Single pole cable.



Whatever type of cable is used:

Tightening torque: 18 Nm.

Embed the sealing horns in the rear bottom panel.

Assemble the front bottom panel (**a**) (4 HM6 screws).

It is essential to clamp the cables.



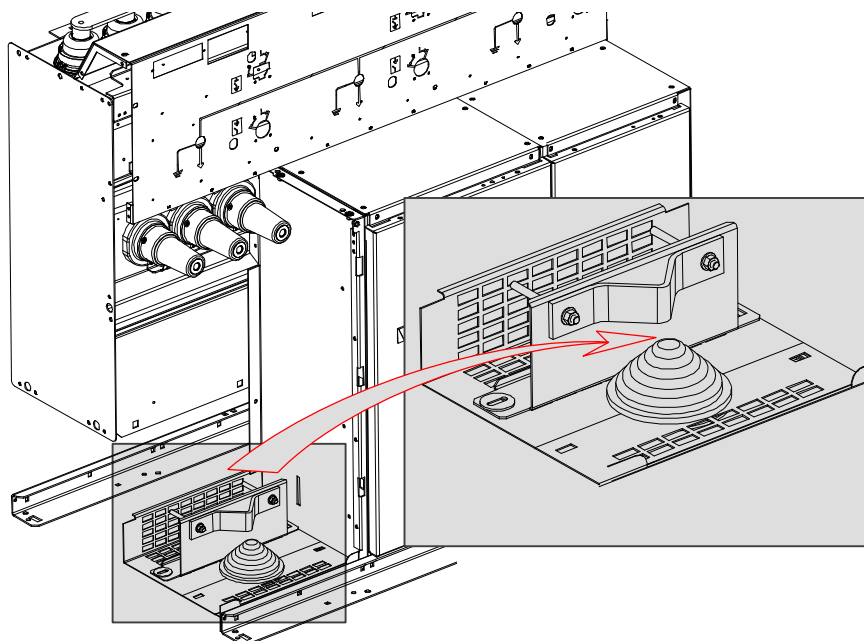
the following operation
should be performed with
the unit **POWERED DOWN**

methods and fabrication of cable connections for three pole cables

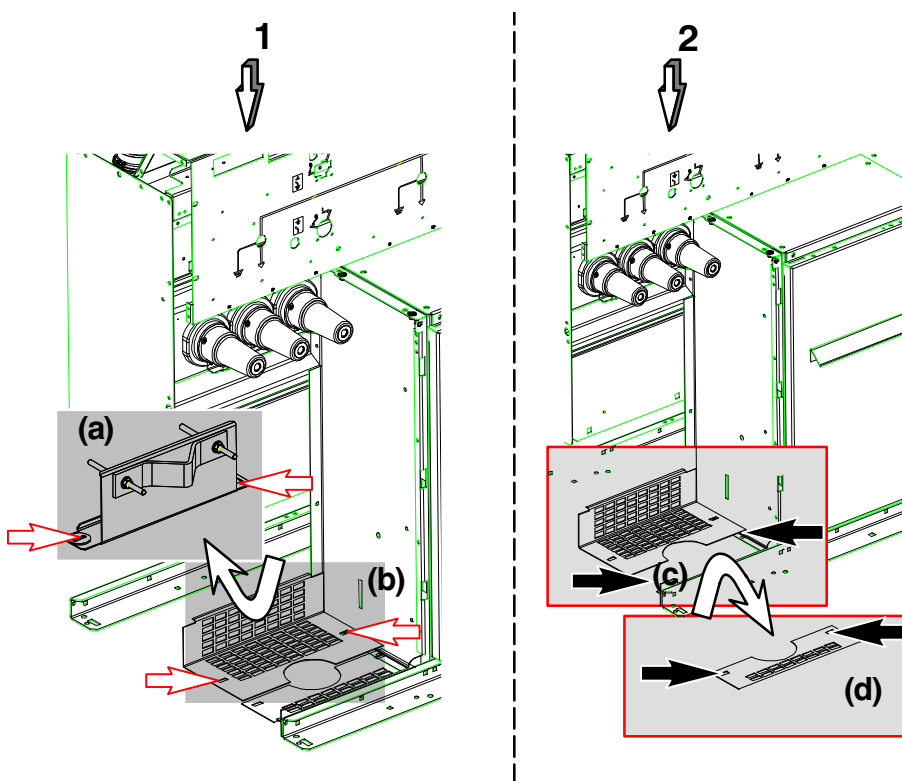
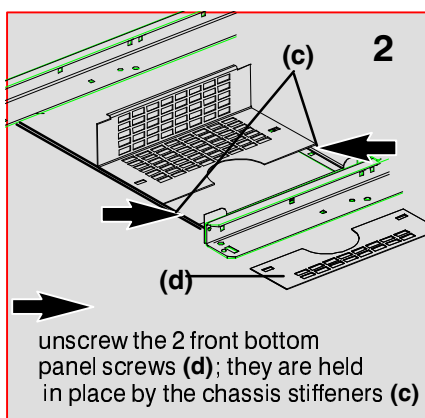
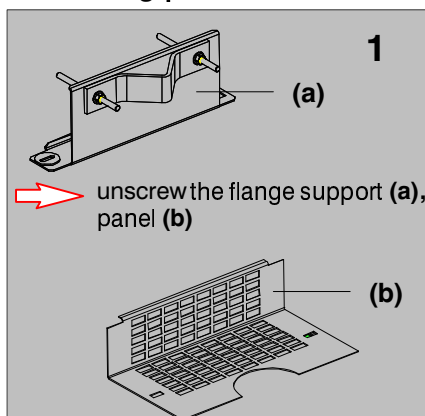
The **RM6 unit** arrives on the
operator's site equipped with
these fittings in order to connect
the cables.



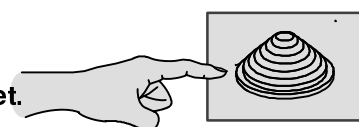
It is recommended to carefully
follow the instructions below.



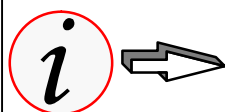
preparation of the cable compartment dismantling procedure



Remember to recover the grommet.



REMINDER

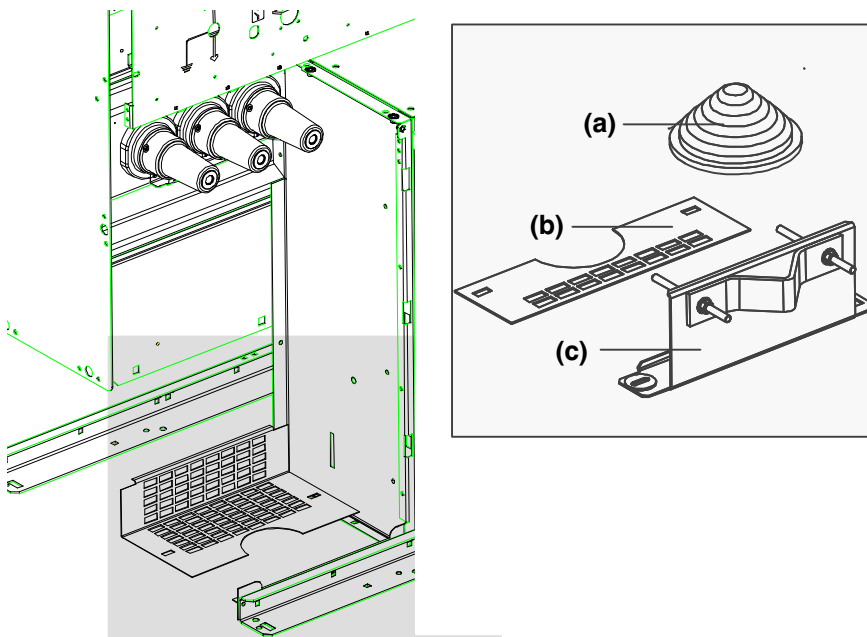


for the rest of the intervention, you must be positioned as shown in the illustration below

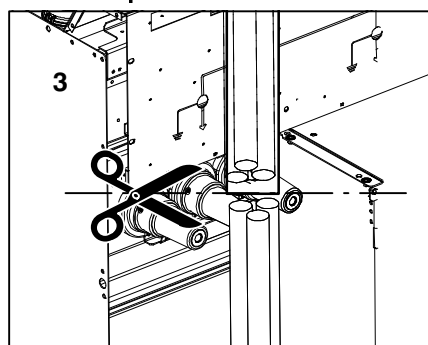
correct visual

You must have in your possession the following 3 items:

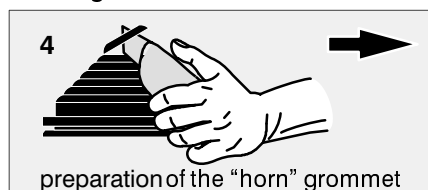
- (a): "horn" grommet
- (b): front bottom plate
- (c): cable flange support



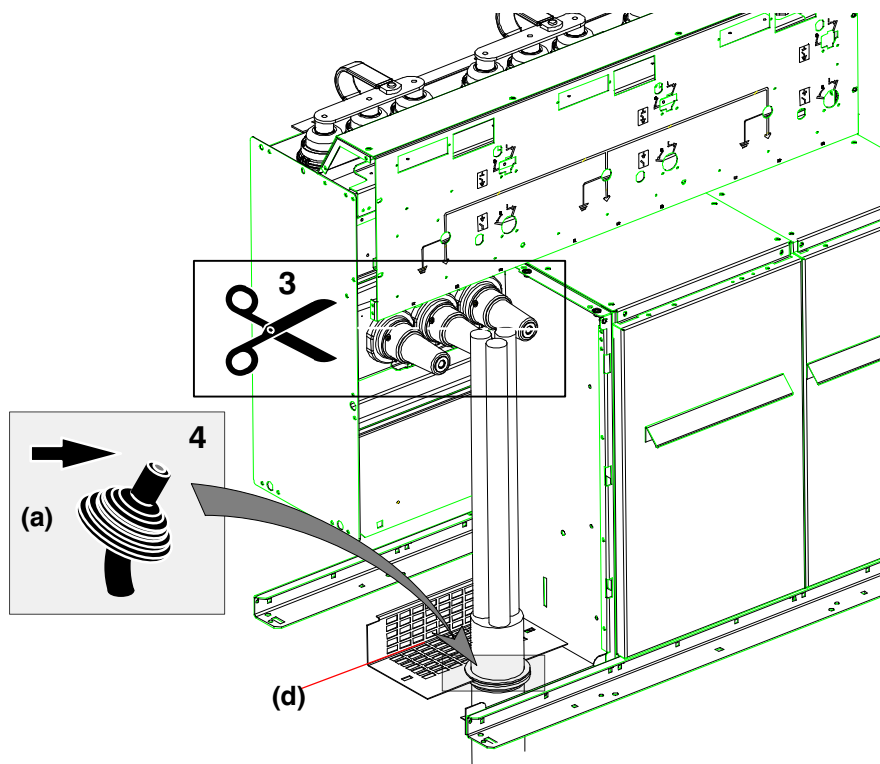
cable fabrication for three pole cable



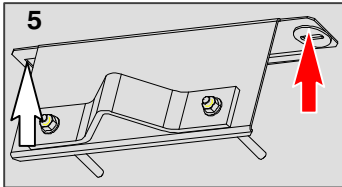
3 : cut the incoming cable to the right length.
Adjust the cable length with the bushing of the **RM6** unit.



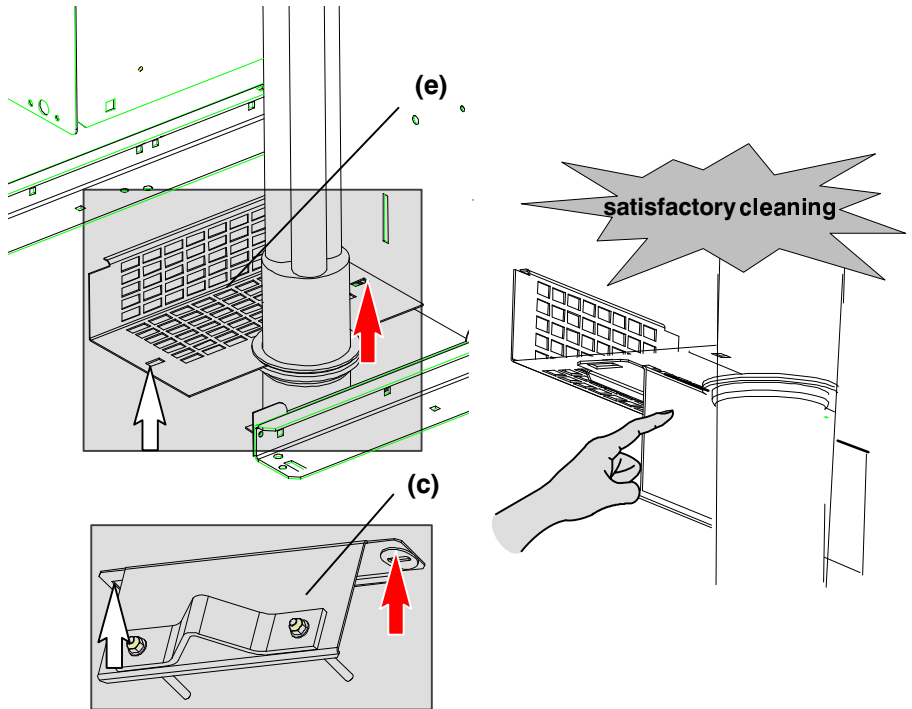
4 : slide the horn (a) inside the cable until it is embedded in the rear bottom panel (d).



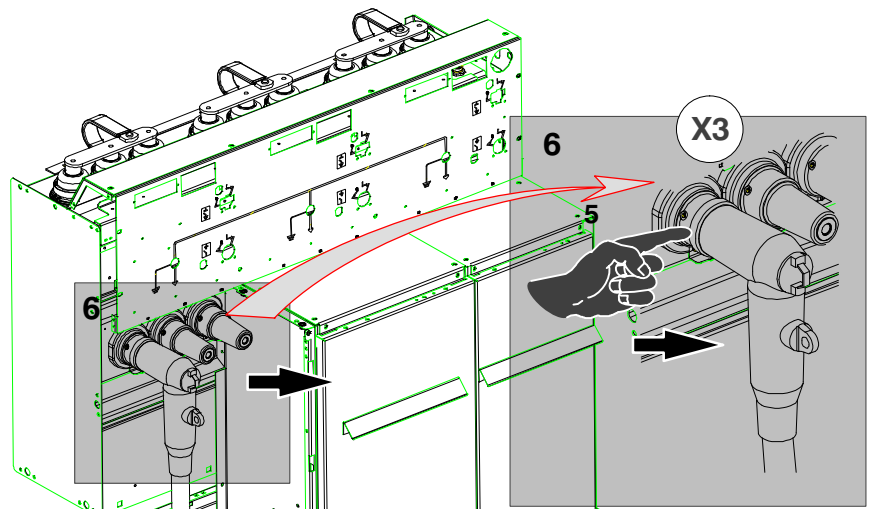
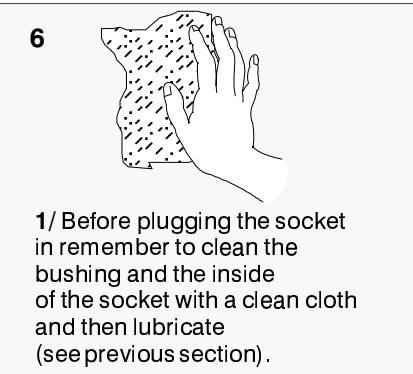
fitting the cable flange support



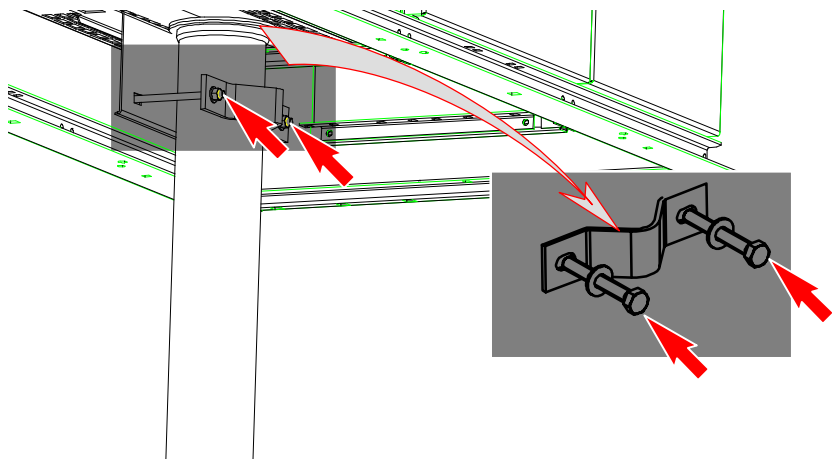
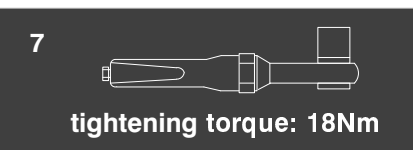
5 : fix the cable flange support (c) under the rear bottom panel using the 2 screws (e).



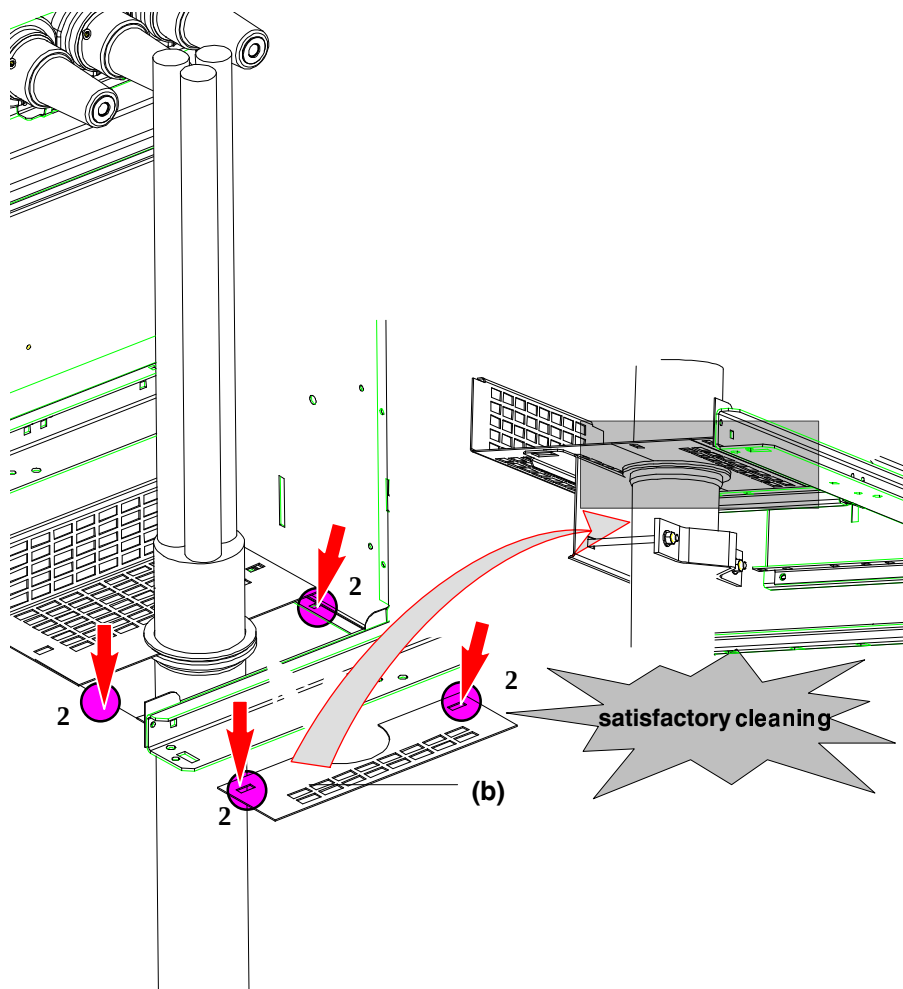
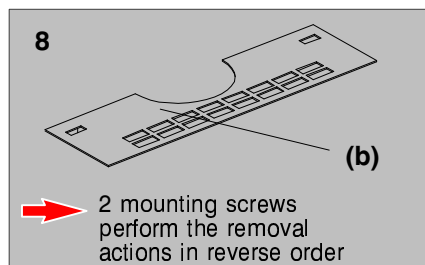
plugging the socket on the bushing



cable clamping



reassemble the front bottom panel



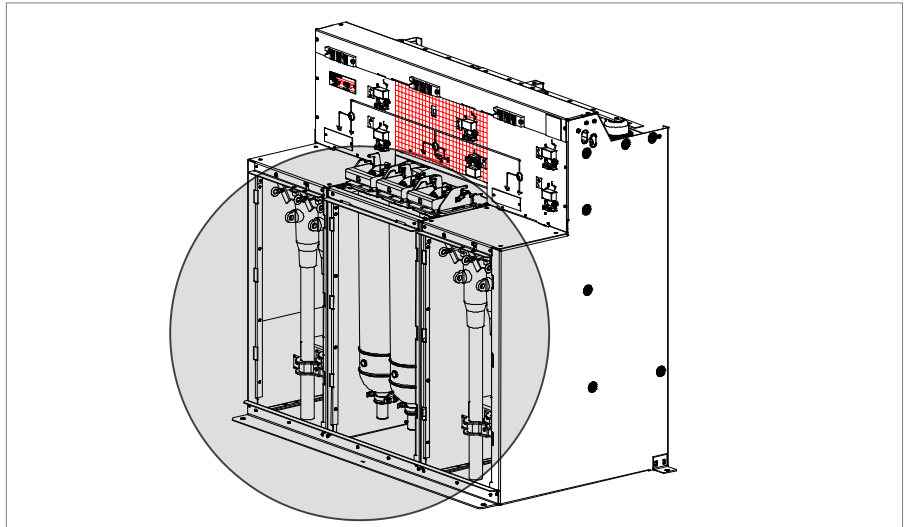
fitting the panels

Fit the 2 top plates on the cable connection compartments, (6 screws per HM6X16 plate).

If the cable compartment is fitted with an internal arcing protection, put back the protection.

Ensure that you respect the layers.

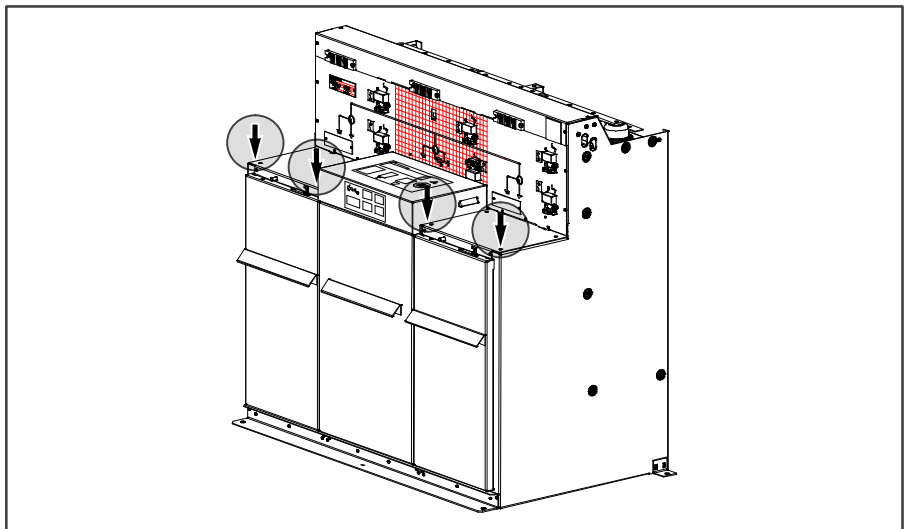
1 plate + 1 insulator + top plate.



access to the MV compartment

Put back the front panels on the cable connection compartments (2 HM6x16 screws per panel).

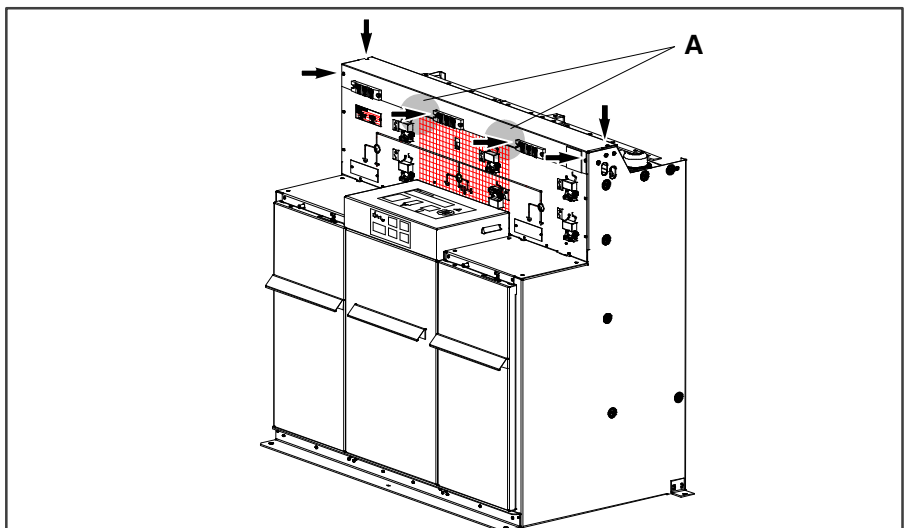
Put back the fuse compartment cover.



LV connection

Access to the LV compartment

Open the LV compartment access trunking by removing the 4 HM 6X16 screws and the 2 **A** CBLZSM4 self-cutting screws. Remove the trunking vertically.



LV compartment customer power supply

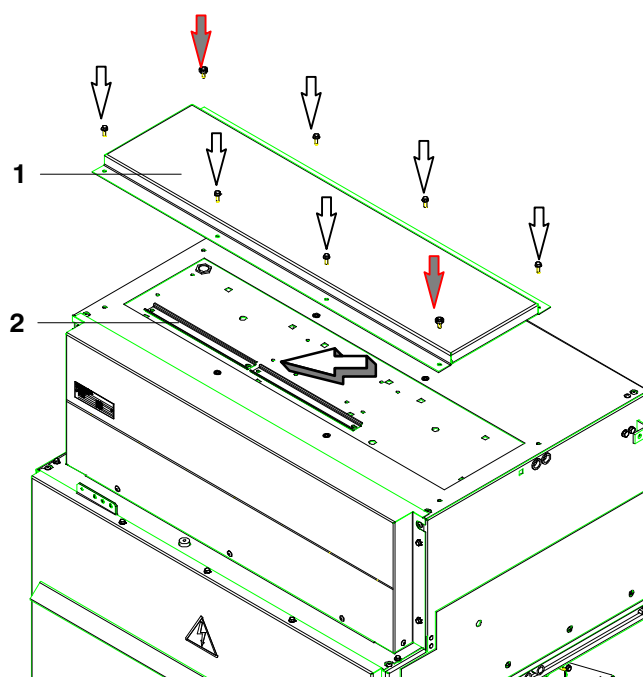


the following operation
should be performed with
the unit **POWERED DOWN**

without LV compartment

-  sealable screw
-  HM6.12 screw

1



- 1 : Remove the 6 HM6.12 screws, and the 2 sealable screws.
- 2 : LV connecting terminal

 customer power supply

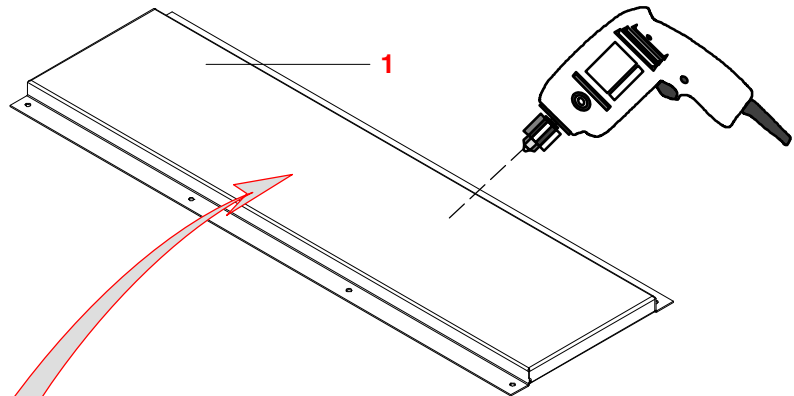
access preparation

customer LV power supply

A : drill a hole in the
LV compartment sheeting (1)
to the desired diameter.

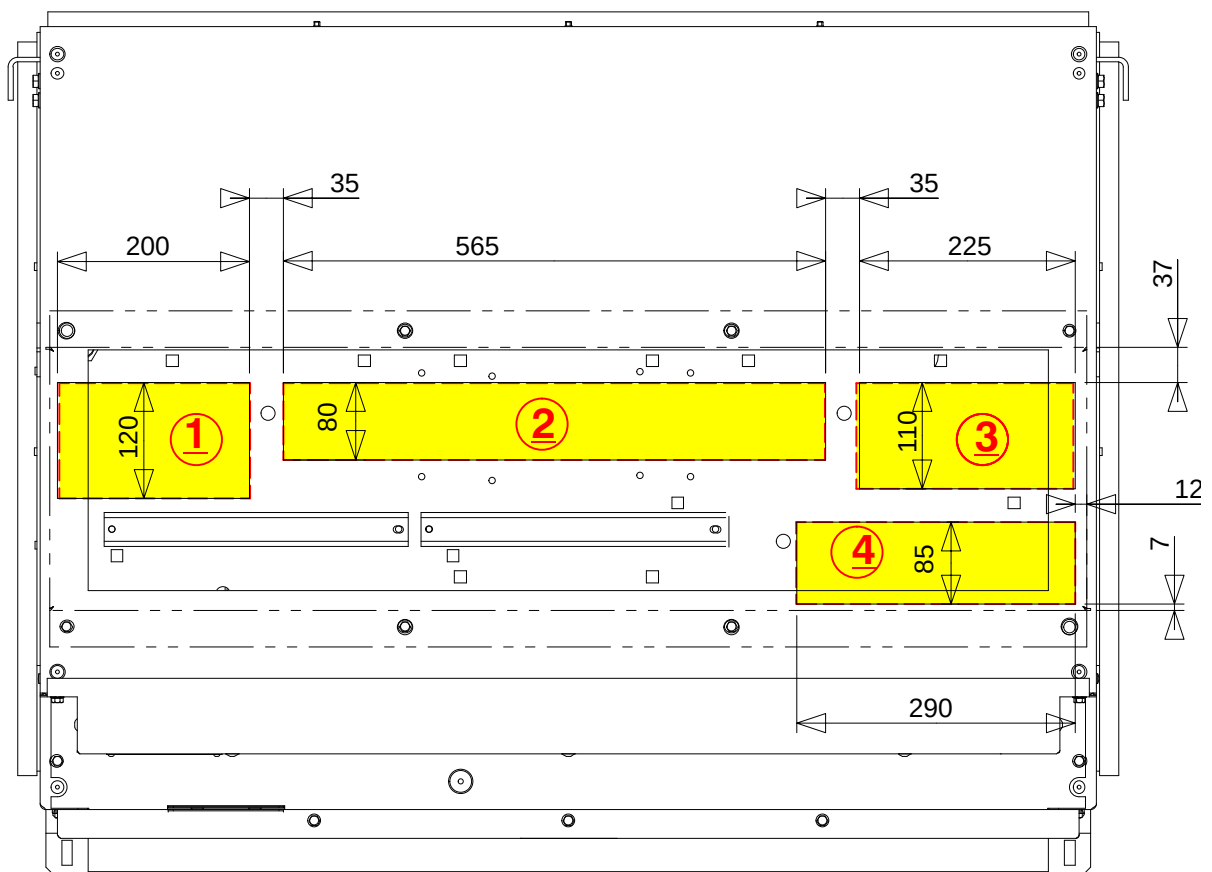


to avoid all risk of damage,
the drilling zones must
be respected



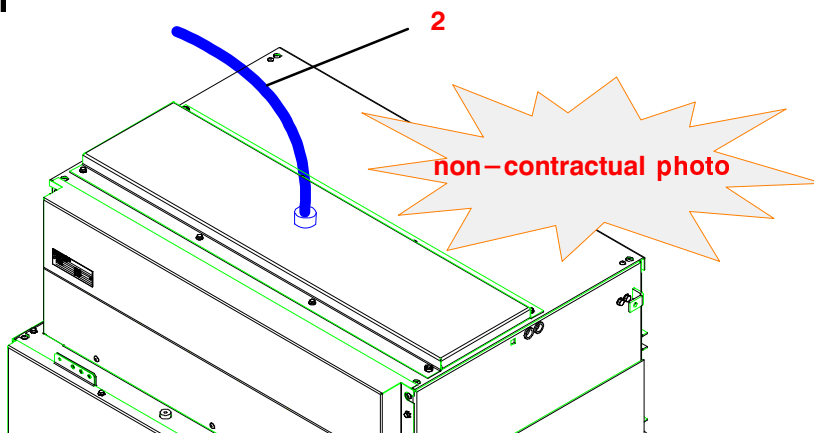
AUTHORISED DRILLING ZONE

① ② ③ ④



customer connection example

2 : power supply cable
provided by the customer



The customer connection must
guarantee a protection index of
IP3X.

current transformer (CT) intensities and temperatures for DE_mt cubicle

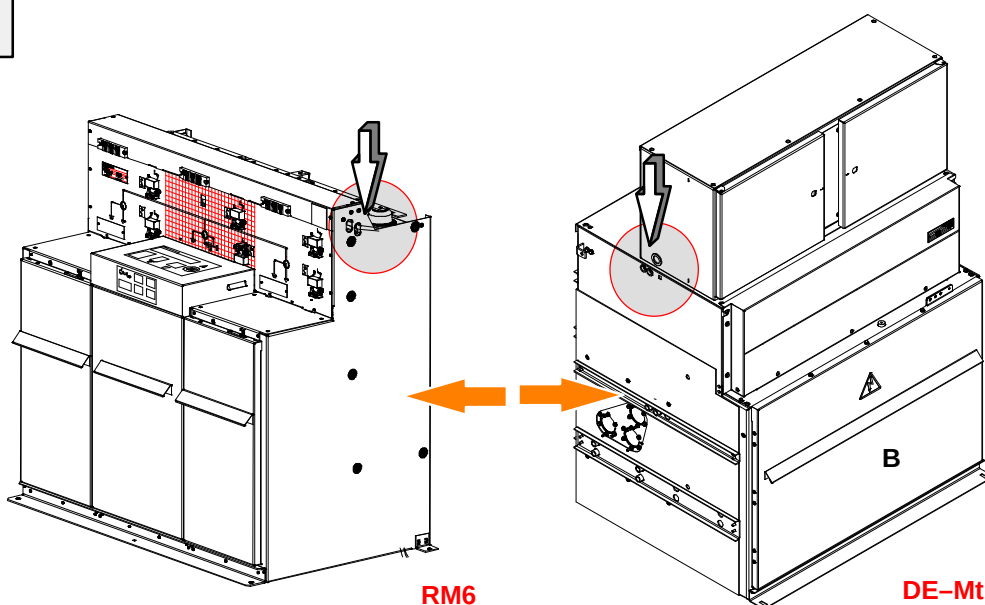
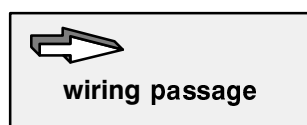
CHECK and RESPECT:

The maximum allowable intensity.
This depends on the type of
CT (and primary ratio used).

CHECK and RESPECT:

The maximum ambient
temperature.
This depends on the type of CT
installed.

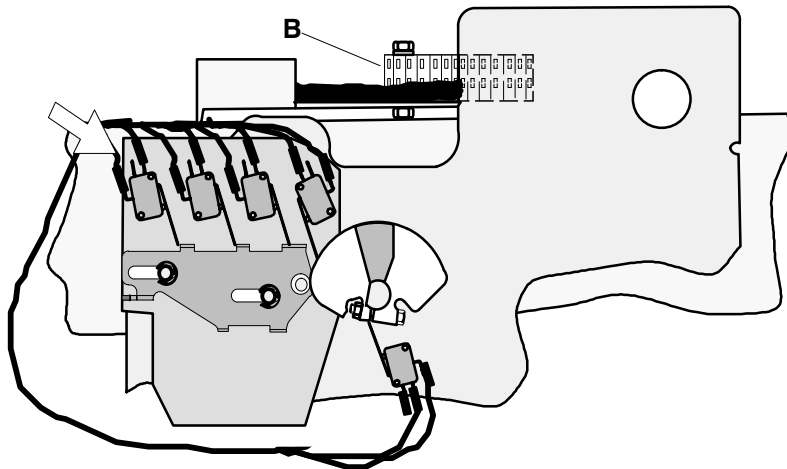
intercubicle link



switch, circuit-breaker, earthing switch indication

2O+2C

B : connection terminal block.
(supplied alone or with
the motor mechanism option)



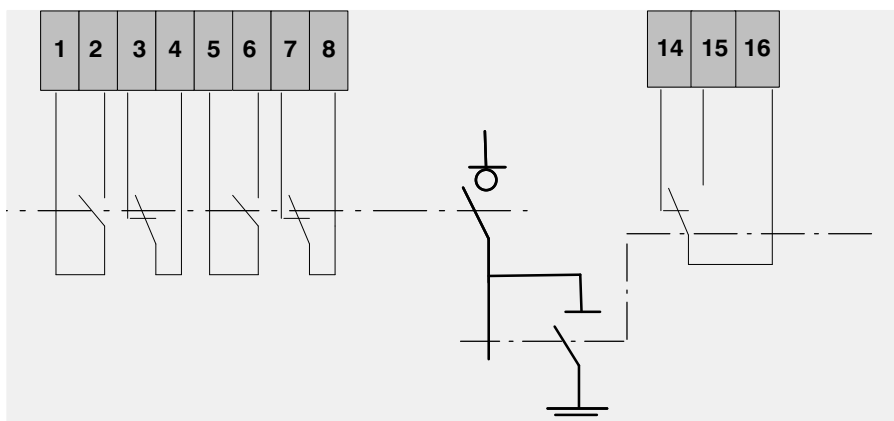
marking the connection terminal block

Position of the closed HV switch:
terminals **1–2** and **5–6**.

Position of the open HV switch:
terminals **3–4** and **7–8**.

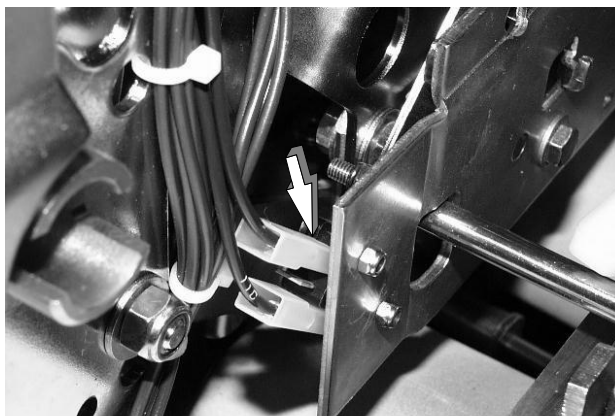
Position of the closed earthing
switch: terminals **16–15**

Position of the open earthing
switch: terminals **14–16**

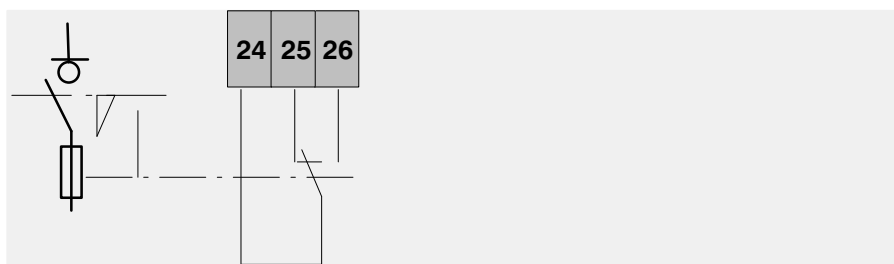


fuse blowing indication

(optional supply)



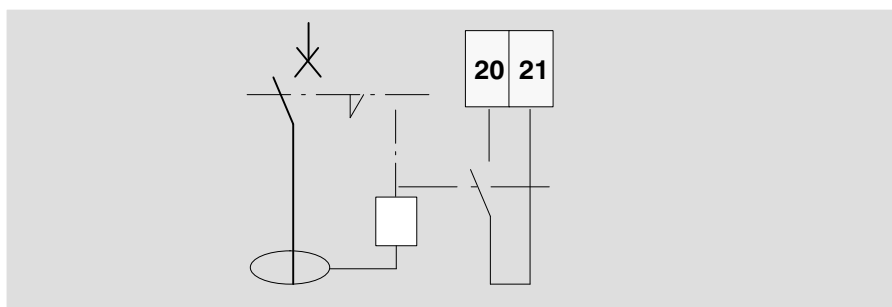
marking the connection terminal block



**fault tripping indication
circuit – breaker function
only**
(optional supply)

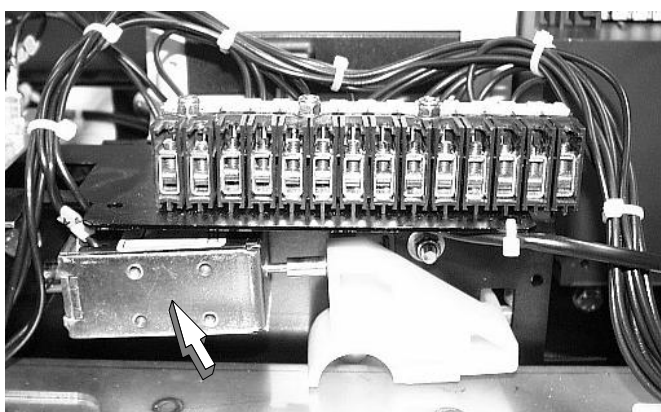


**marking the connection
terminal block**



tripping coil

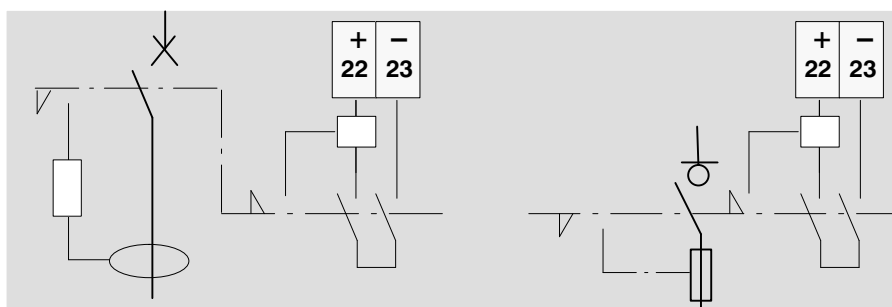
The operation of this accessory is guaranteed for a supply voltage of +10% and –15% of nominal voltage.
(optional supply)



**marking the connection
terminal block**



follow the polarity
of the 24VDC coil

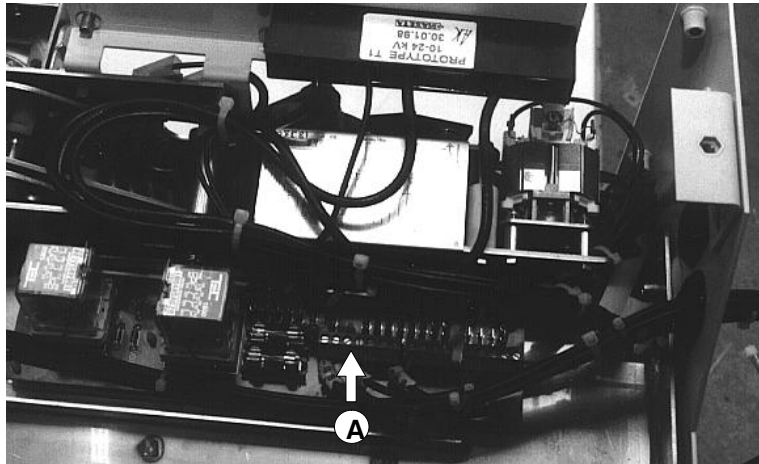


gear motor on switch operating mechanism

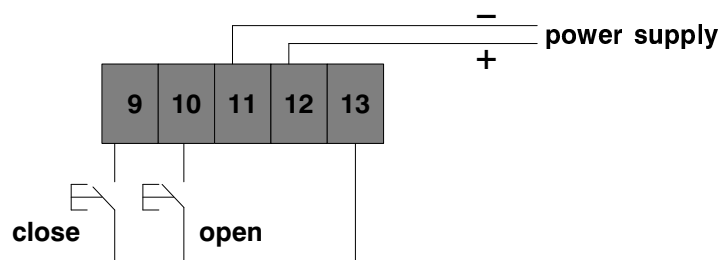
(optional supply)

The operation of this accessory is guaranteed for a supply voltage of +10% and –15% of nominal voltage.

A : connection terminal block



marking the connection terminal block

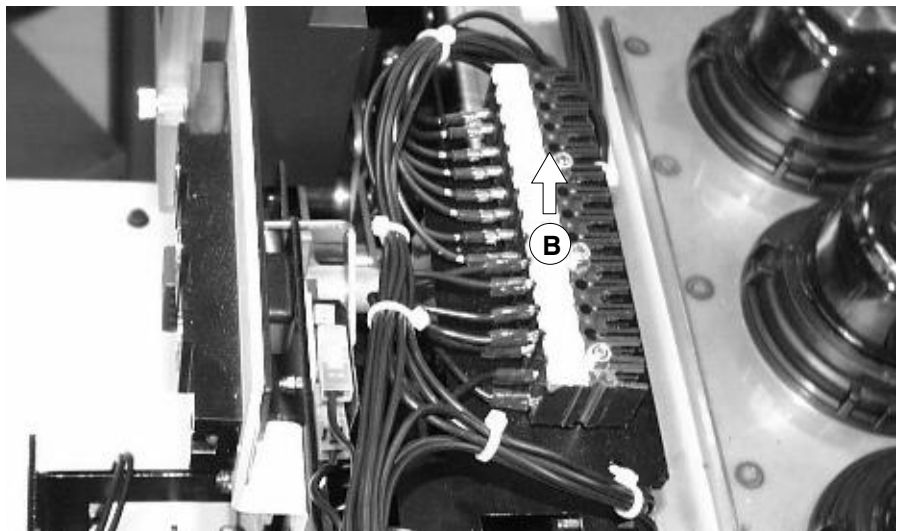


gear motor on circuit-breaker operating mechanism

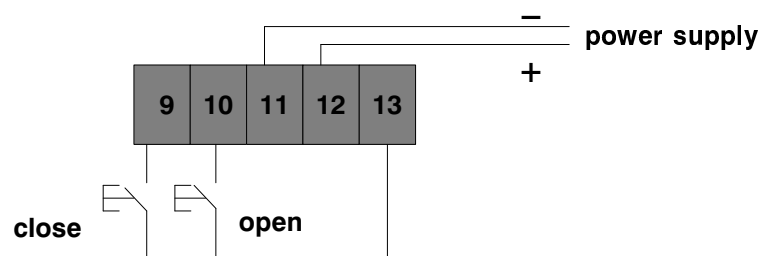
(optional supply)

The operation of this accessory is guaranteed for a supply voltage of +10% and –15% of nominal voltage.

B : connection terminal block



marking the connection terminal block



checking

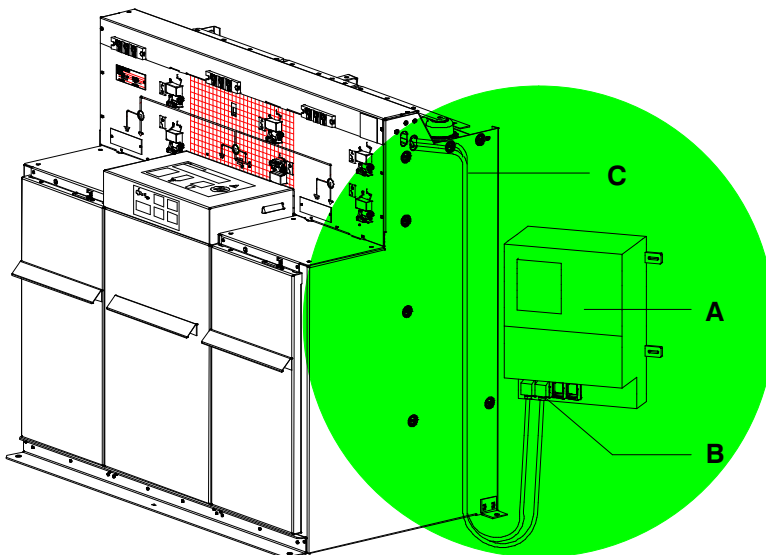
The gear motor must not operate when:

- the switch is in the earth position.
- the lever is inserted in an operating pin, earth or switch.

remote control

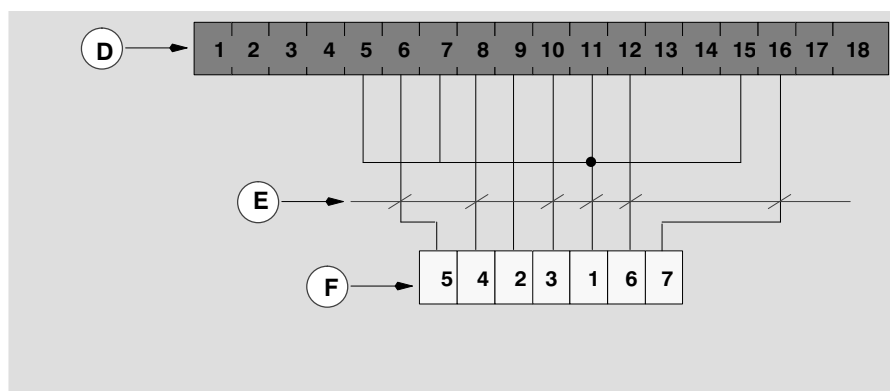
Connecting the RM6 to the Talus 200 remote control interface.

- A** : TALUS 200 remote control interface
B : connectors (of the Harting type)
C : connecting leads



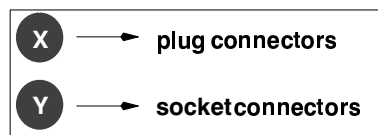
cabling a connecting lead

- D** : RM6 terminal block
E : connection lead
F : harting contact pin

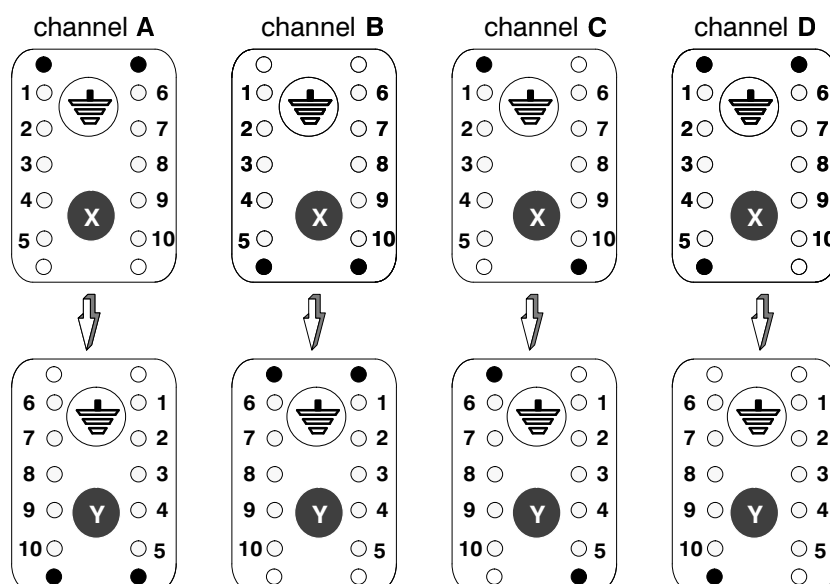


polarisation of the HARTING connectors

Trunnion positions.
pin side views



● polarisation is archived by screw-on trunnions



**overview of additions
and changes**
new index continued

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		2 function range extensible to the right	9
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		handling	12
		centre of gravity transport	13
		reminder	13
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		information	
		reminder	14
		specific recommendations for long-term storage	17
	handling using rollers		18
	checking the accessories delivered with the unit		
	characteristic		19
	identification		20
installation recommendation	reminder		21
	temperature		
		recommendation	22
		example of correct	
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		access preparation	51
		customer connection example	52
		marking the connection terminal block	54
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