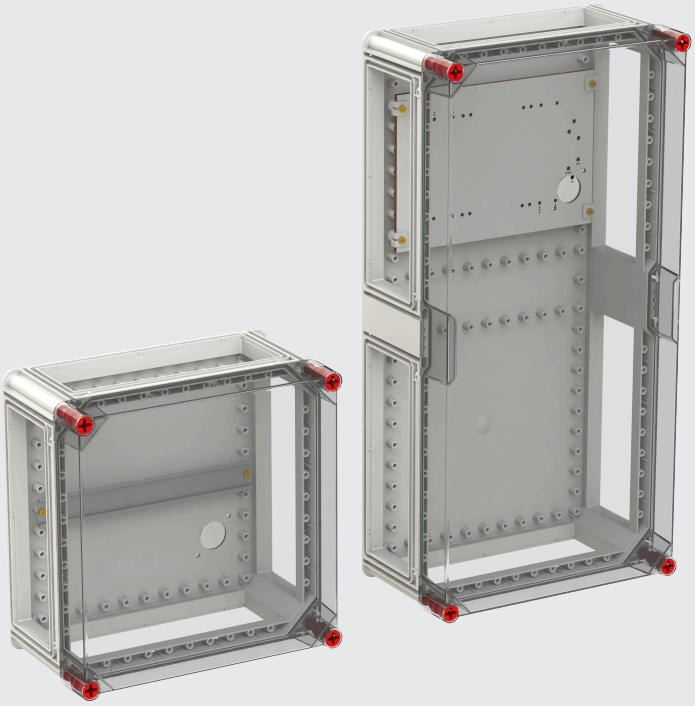
PRODUCT MANUAL

VMS - LV modular system

OT / OS



9AKK108467A4140 Rev. A

Contents

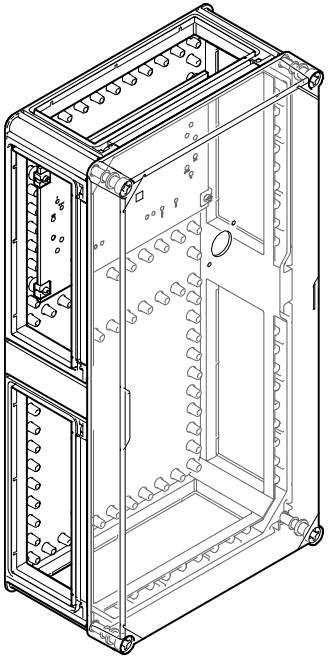
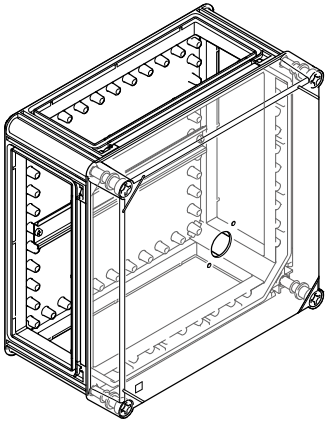
Additional drawings and instructions can be found in the ABB Library:

1 Icons

Icon	Description
	Warning / Caution
	Note
	Material - included
	Material - not included
	Tools
	Tightening torque (Nm)

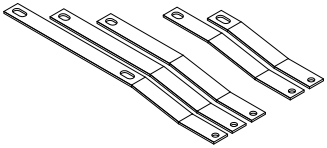
2 Material

2.1 Material - included

Box with mounting plate	SKU-codes	Description
	4TBV853446C0100	VMS33 for OT160-250/OS32-63/OS100-160
	4TBV853447C0100	VMS43V for OT160-250/OS100-160
	4TBV853450C0100	VMS63V for OT160-250/OS100-160
	4TBV853451C0100	VMS64V for OS200-250
	4TBV853452C0100	VMS64V for OT315-400
	4TBV853471C0100	VMS64V for OS315-400 4pbot 3ptop
	4TBV853472C0100	VMS64V for OS315-400 4ptop 3pbot
	4TBV853473C0100	VMS64V for OT630-800 4pbot 3ptop
	4TBV853474C0100	VMS64V for OT630-800 4ptop 3pbot
	4TBV853490C0100	VMS64H for OT1000-1250
Box with DIN-rail		
	4TBV853445C0100	VMS32V for OT16F-OT125F DIN rail
	4TBV853425C0100	VMS32H for OT16F-OT125F DIN rail
	4TBV853519C0100	VMS32V for OT16F-OT125F DIN rail
	4TBV853521C0100	VMS32H for OT16F-OT125F DIN rail
	4TBV853426C0100	VMS33 for OT16F-OT125F DIN rail
	4TBV853528C0100	VMS33 for OT16F-OT125F DIN rail
	4TBV853530C0100	VMS33 for OT16F-OT125F DIN rail

2.2 Material - not included

2.2.1 CU strip sets

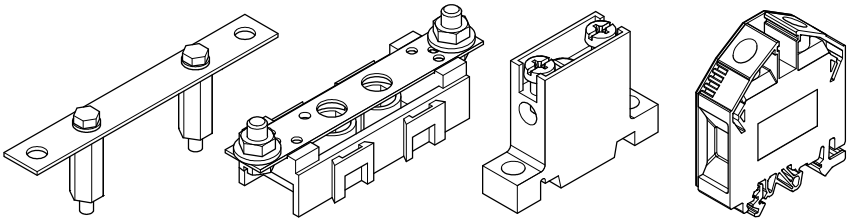


Device/VMS BOX	PHASE1-3	N 4th POLE (TOP)	N 4th POLE (BOTTOM)
OS160 VMS33/63V	4TBV853849C0100	4TBV854252C0100	4TBV854209C0100
OS160 VMS43V	4TBV853852C0100	4TBV854210C0100	4TBV854211C0100
OS200-250 VMS64V	4TBV853855C0100	4TBV854212C0100	4TBV854213C0100
OS315-400 VMS64V	4TBV853858C0100	4TBV854007C0100	4TBV854008C0100
OT160 VMS33/63V	4TBV853805C0100	N.A.	N.A.
OT160 VMS43V	4TBV853808C0100	N.A.	N.A.
OT200-250 VMS33/63V	4TBV853814C0100	N.A.	N.A.
OT200-250 VMS43V	4TBV853817C0100	N.A.	N.A.
OT315-400 VMS64V	4TBV853821C0100	N.A.	N.A.
OT630 VMS 64V	4TBV853824C0100	N.A.	N.A.
OT800 VMS 64V	4TBV853834C0100	N.A.	N.A.
OT1000 VMS 64H	4TBV853839C0100	N.A.	N.A.
OT1250 VMS 64H	4TBV853844C0100	N.A.	N.A.

Device/VMS BOX	PE TOP/N BOT/PEN		N TOP/PE BOT	
OS160 VMS33/63V	4TBV853806C0100		4TBV853807C0100	
OS160 VMS43V	4TBV853809C0100		4TBV853810C0100	
OS200-250 VMS64V	4TBV853856C0100		4TBV853857C0100	
OS315-400 VMS64V	4TBV853859C0100		4TBV853860C0100	
OT160 VMS33/63V	4TBV853806C0100		4TBV853807C0100	
OT160 VMS43V	4TBV853809C0100		4TBV853810C0100	
OT200-250 VMS33/63V	4TBV853815C0100		4TBV853816C0100	
OT200-250 VMS43V	4TBV853819C0100		4TBV853820C0100	
OT315-400 VMS64V	4TBV853822C0100		4TBV853823C0100	
OT630 VMS 64V	100% PE/N	4TBV853827C0100	100% PE/N	4TBV853829C0100
	50% PE	4TBV853825C0100	50% PE	4TBV853826C0100
OT800 VMS 64V	100% PE/N	4TBV853837C0100	100% PE/N	4TBV853838C0100
	50% PE	4TBV853835C0100	50% PE	4TBV853836C0100
OT1000 VMS 64H	100% PE/N	4TBV853840C0100	100% PE/N	4TBV853843C0100
	50% PE	4TBV853842C0100	50% PE	4TBV853841C0100
OT1250 VMS 64H	100% PE/N	4TBV853846C0100	100% PE/N	4TBV853848C0100
	50% PE	4TBV853842C0100	50% PE	4TBV853841C0100

Hardware for mounting the switches is not included!

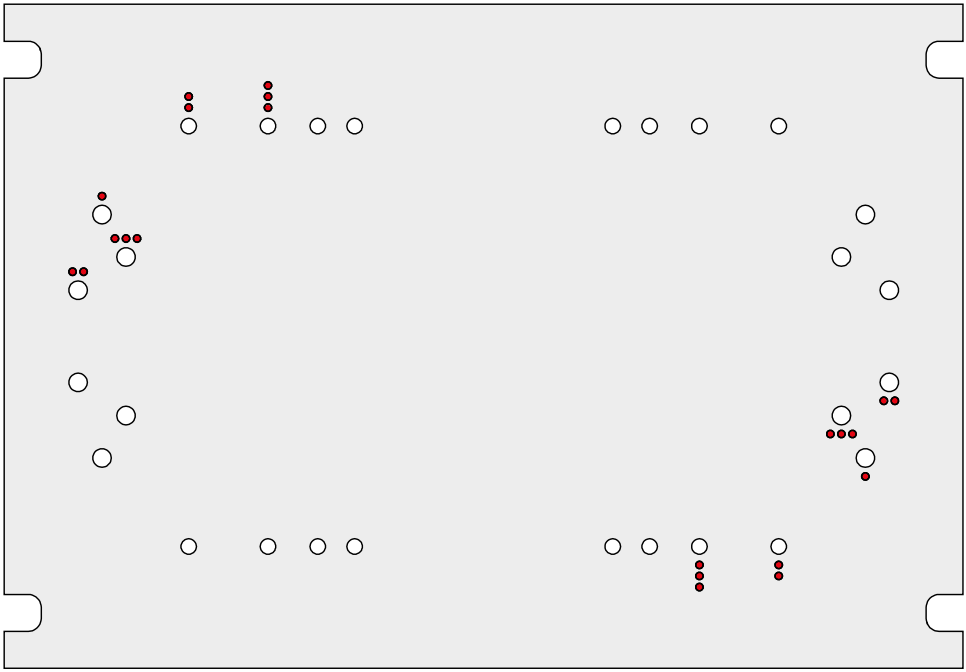
2.2.2 Terminals



Custom terminal | Standard terminals | DIN rail Standard terminal

Device	Terminal SKU		Terminal Description	
OS32-63	4TBV853691C0100		Standard terminal 63A	
OS100-160	4TBV853681C0100		Custom terminal 160A	
OS200-250	4TBV853217C0100		Standard terminal 250A	
OS315-400	4TBV853218C0100		Standard terminal 630A	
OT16-40	N.A.		Din rail Standard terminal 40A	
OT63-80	N.A.		Din rail Standard terminal 80A	
OT100-125	N.A.		Din rail Standard terminal 125A	
OT160	4TBV853681C0100		Custom terminal 160A	
OT200-250	4TBV853682C0100		Custom terminal 250A	
OT315-400	4TBV853683C0100		Custom terminal 400A	
OT630	100% PE/N	4TBV853685C0100	100% PE/N	Custom terminal 630A
	50% PE	4TBV853684C0100	50% PE	Custom terminal 630A 50%
OT800 VMS 64V	100% PE/N	4TBV853687C0100	100% PE/N	Custom terminal 800A
	50% PE	4TBV853686C0100	50% PE	Custom terminal 800A 50%
OT1000 VMS 64H	100% PE/N	4TBV853689C0100	100% PE/N	Custom terminal 1000A
	50% PE	4TBV853688C0100	50% PE	Custom terminal 1000A 50%
OT1250 VMS 64H	100% PE/N	4TBV853690C0100	100% PE/N	Custom terminal 1250A
	50% PE	4TBV853688C0100	50% PE	Custom terminal 1250A 50%

3 Mounting indications

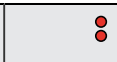
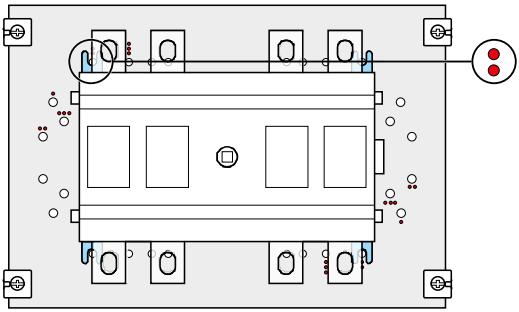
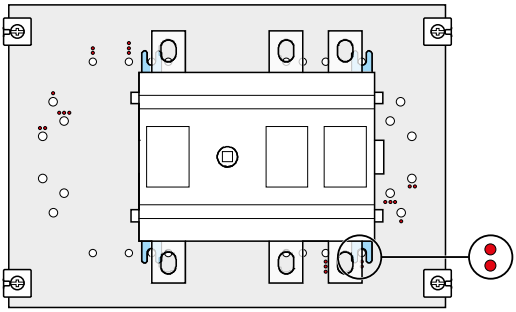
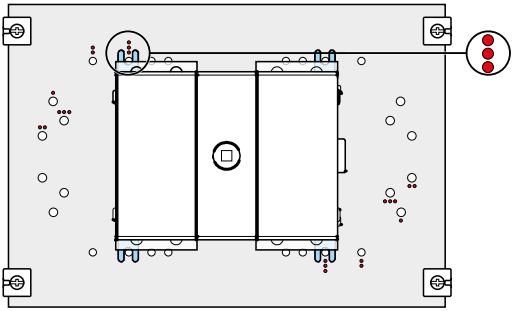
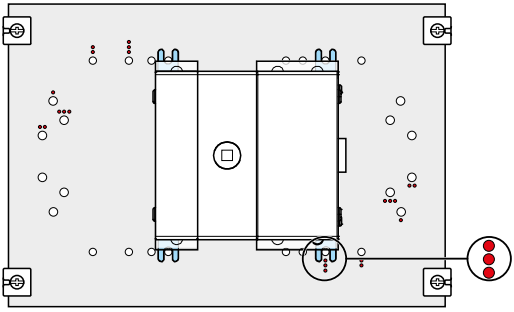


The indicators 1, 2 or 3 red dots show at which hole you need to start mounting:

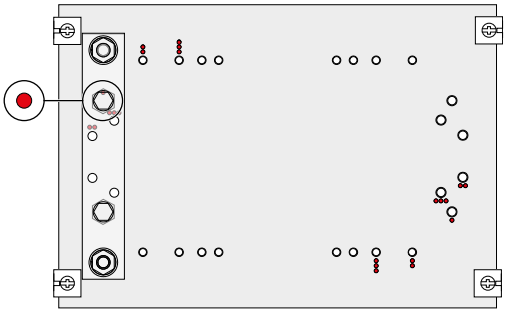
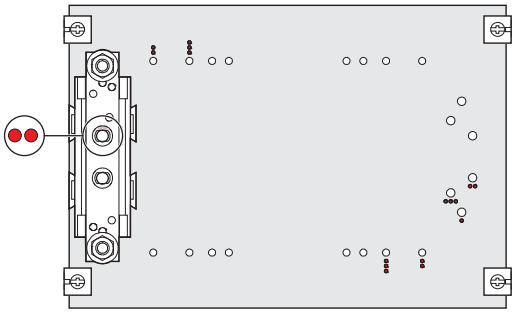
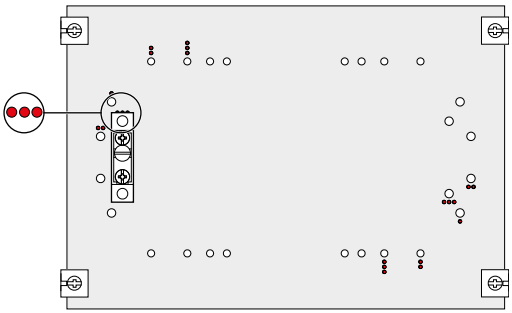
- Vertical dots: switch mounting.
- Horizontal dots: terminal mounting.

The vertical 2 or 3 dots show at which hole in the upper left corner you need to start mounting the 4p devices (22), while those same dots in the lower right show where to start mounting the 3p devices (12).

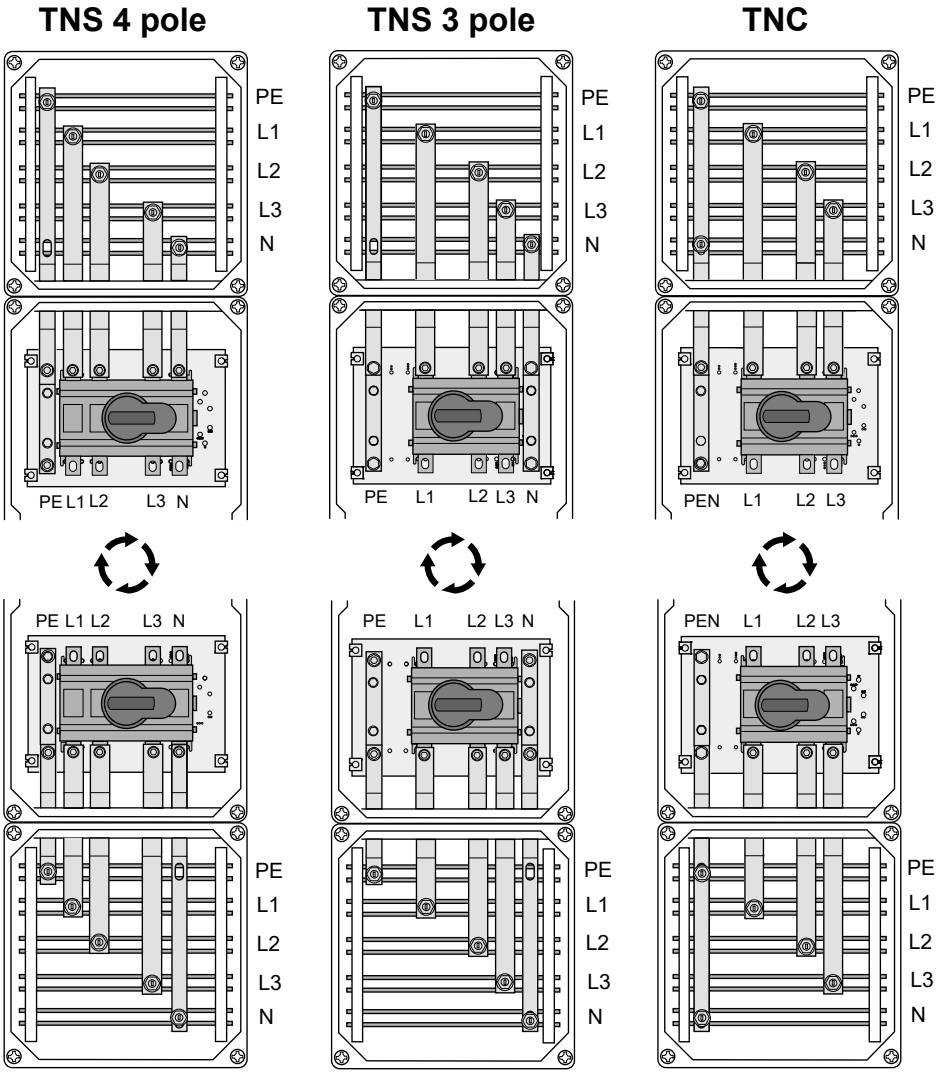
3.1 Mounting indications for switches

Description		
	OS100-160 (22) OS200-250 (22) OS315-400 (22) OT160-250 (22) OT315-400 (22) OT630-800 (22) OT1000-1250 (22)	
	OS100-160 (12) OS200-250 (12) OS315-400 (12) OT160-250 (12) OT315-400 (12) OT630-800 (12) OT1000-1250 (12)	
		OS32-63 (22)
		OS32-63 (12)

3.2 Mounting indications for terminals

Description	●	●●	●●●
	Std.DIN TML Std.ABB TML Cust.TML 160A Cust.TML 250A Cust.TML 400A Cust.TML 630A Cust.TML 800A Cust.TML1000A Cust.TML1250A		
		Std.TML 160A Std.TML 250A Std.TML 160A Std.TML 250A Std.TML 630A	
			Std.TML 63A

4 Network types



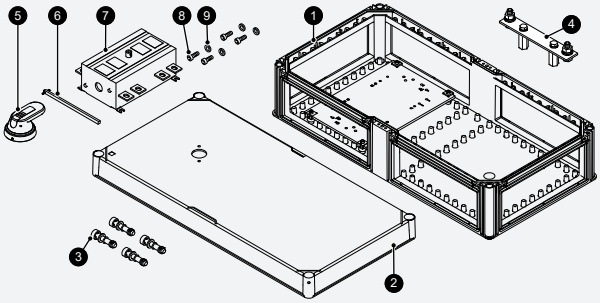
The copper strips version is shown here. This configuration also applies to a wired configuration.

5 Assembly steps

1. Material: overview

1 VMS base with mounting plate
2 Cover
3 Cover screws (4x)

4 N/PE terminals
5 Handle
6 Handle shaft
7 Switch
8 Switch screws (4x)
9 Switch washers (4x)

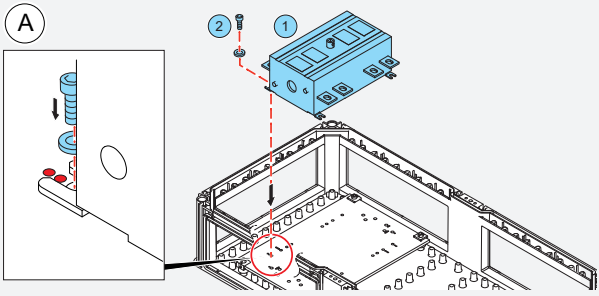


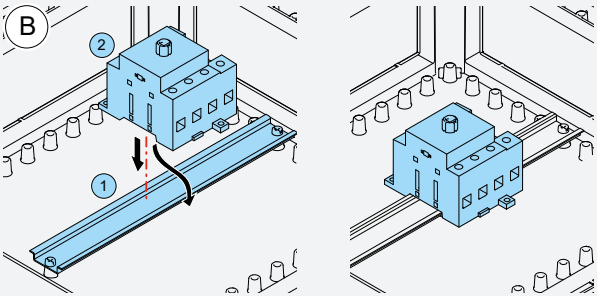
2. Mounting the switch: on a mounting plate (A) or on a DIN rail (B)

1 Switch
2 Screw + washer (4x)
OS32-250: M5x10
OT160-800: M5x10
OT1000-1250: M8x10

M5 1.5 Nm
M8 6 Nm

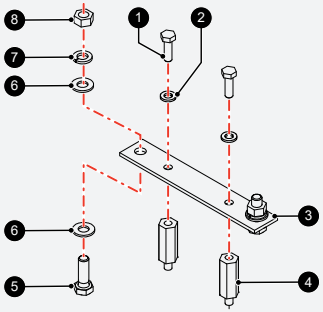
1 DIN rail
2 Switch





3. Mounting a terminal: overview

1 Hex bolt (2x)
2 Washer (2x)
3 Terminal strip (1x)
4 Terminal spacer (2x)
5 Hex bolt (2x)
6 Washer (4x)
7 Spring washer (2x)
8 Hex nut (2x)

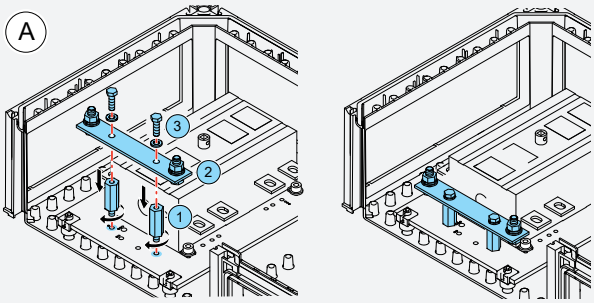


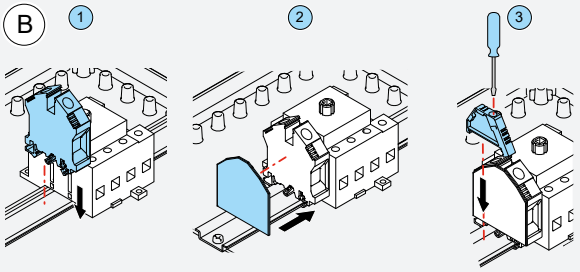
4. Mounting a terminal: on a mounting plate (A) or on a DIN rail (B)

1 Terminal spacers (2x)
2 Terminal strip
3 Terminal bolts + washer (2x)

1 4 Nm
3 6 Nm

1 DIN rail PE/N/PEN terminal
2 Terminal end plate
3 End clamp





5. Installing the busbar box: overview

1 Busbar box

2 Busbar box cover

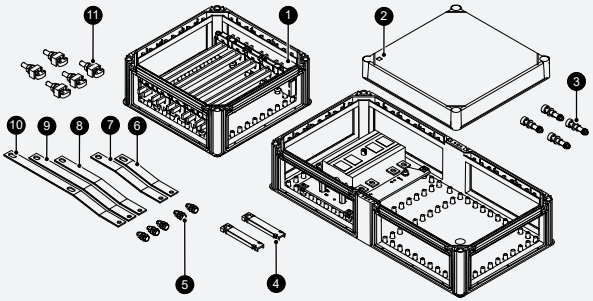
3 Busbar cover screws (4x)

4 Coupling dowels (2x)

5 Copper strip screws (5x)

6-10 Copper strips

11 Anchor bolts (5x)

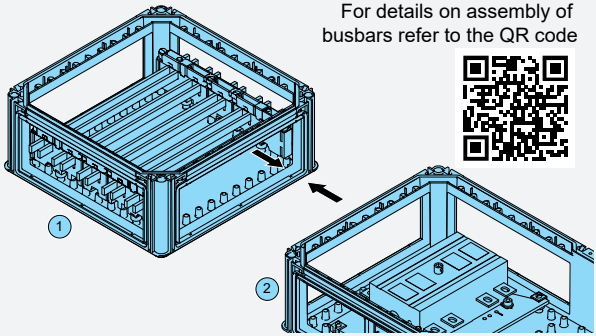


6. Installing the busbar box (A): connecting the boxes

1 Busbar box

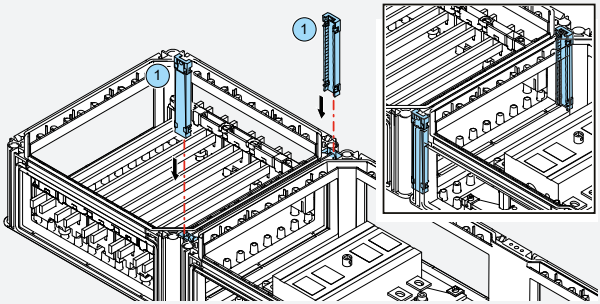
2 OT/OS device box

For details on assembly of busbars refer to the QR code



7. Installing the busbar box (B): inserting the coupling dowels

1 Coupling dowels (2x)



8. Mounting the copper strips (5x)

1 Hex bolt and washer

2 Terminal

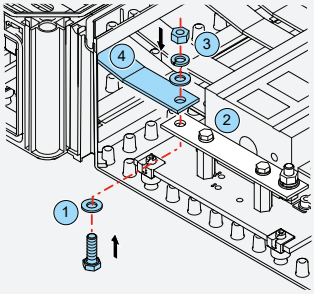
3 Hex nut / spring washer / washer

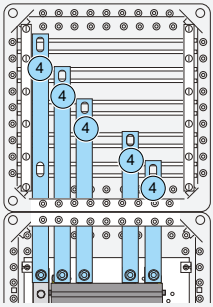
4 Copper strips

M8 15-22 Nm

M10 30-44 Nm

M12 50-75 Nm





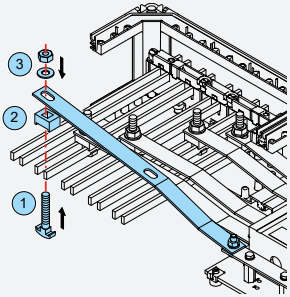
9. Mounting the anchor bolts (5x)

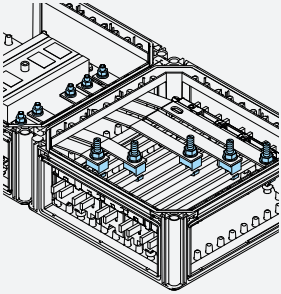
1 Anchor bolt

2 Connecting block

3 Nut / washer

M10 30-44 Nm





10. Fastening the busbar cover

1 Cover screws (4x)

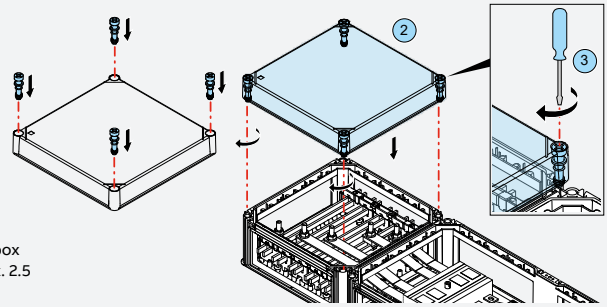
2 Busbar box cover

For fastening busbar box cover:

a. Snap the cover screws in the four corner holes. The cover screws will be captive.

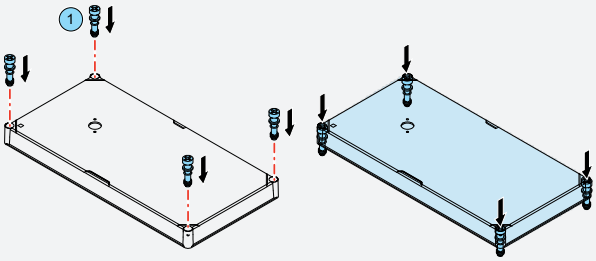
b. Fit the cover on the correct box (one turn on the screws, max. 2.5 Nm).

c. If necessary, stick the double isolation symbol on the cover.



11. Inserting the VMS box cover screws

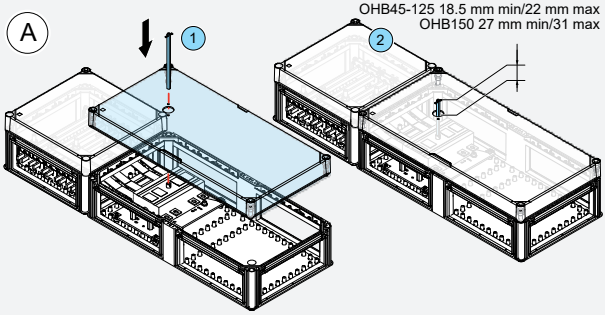
1 Cover screws (4x)

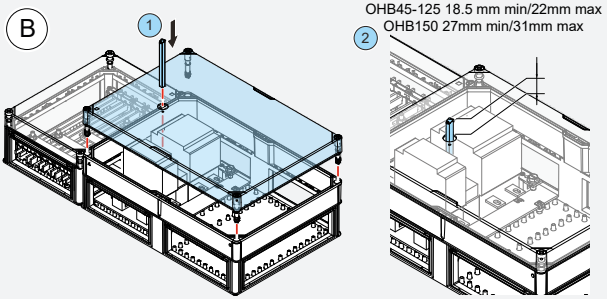


12. Mounting the handle: measuring correct shaft length without extension frame (A) and with extension frame (B)

Make sure the cover is firmly tightened before measuring the shaft length.

For more information please refer to the device user manual.

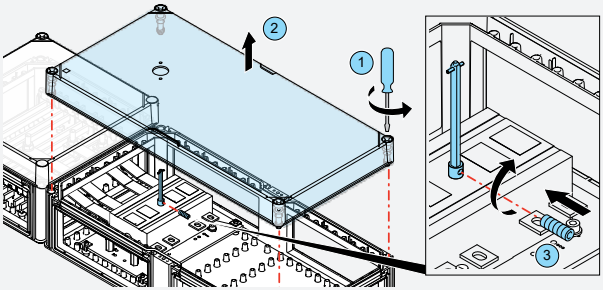




13. Mounting the handle: fastening the shaft screw

3 Shaft screw

OT40	0.8 Nm
OT63	0.8 Nm
OT125	0.8 Nm
OT160-250	1.8-2.0 Nm
OT315-400	1.2 Nm
OT630-800	1.2 Nm

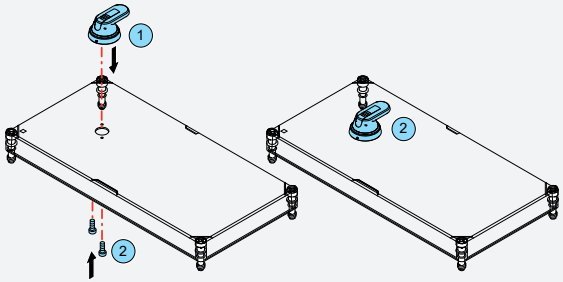


14. Mounting the handle: fastening the handle to the box cover

1 Handle

2 Handle screws (2x)

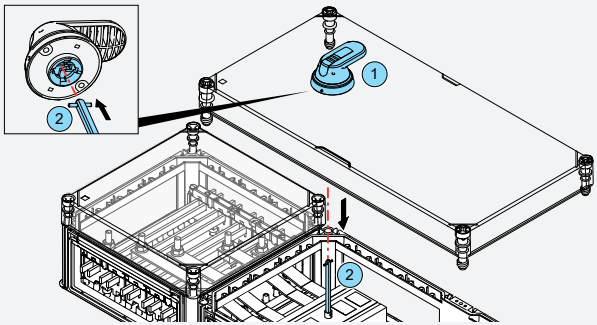
M4 1.5 Nm



15. Mounting the handle: mounting the cover and handle

1 Handle

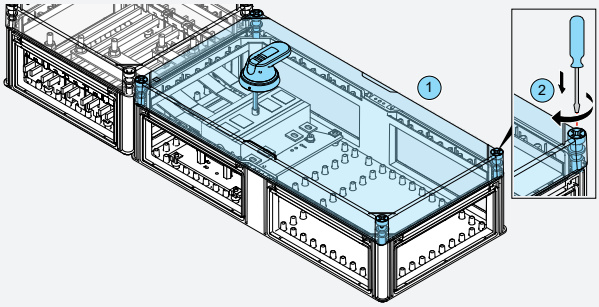
2 Shaft



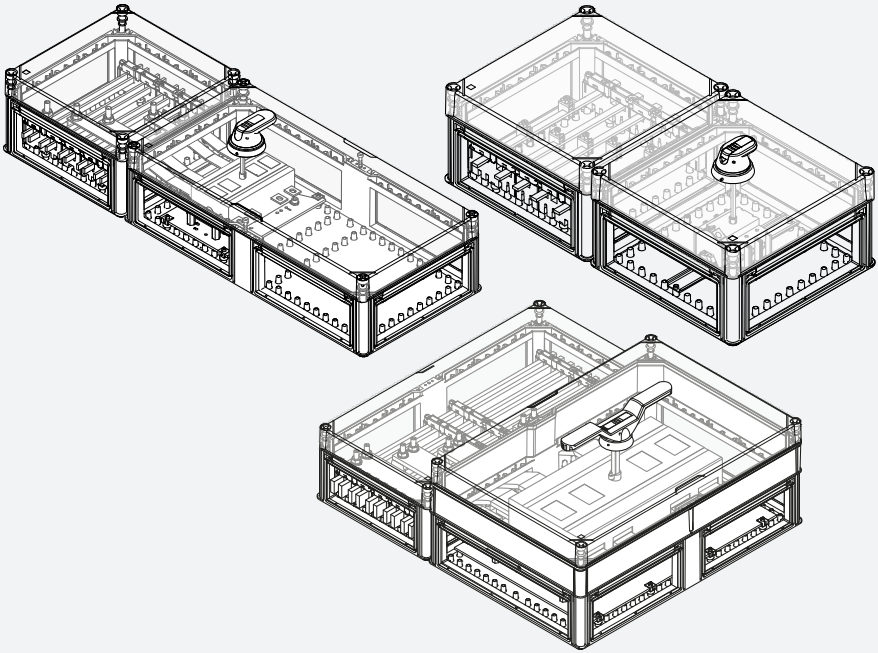
16. Mounting the handle: fastening the VMS box cover

1 Box cover

2 Cover screws



17. Installation complete



Notes:

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