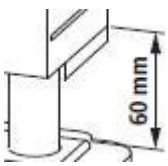
Powering Business Worldwide

After-Sales-Service – Work Instructions for Replacing XMC Kits

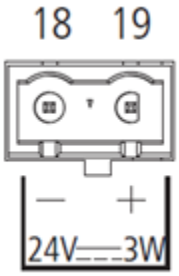
Emergency On Call Service: Local representative (www.eaton.eu/aftersales) or +49 (0) 180 5 223822 (de, en)

Tools required

8 mm		Momentum wrench for 31 or 50 Nm
Z2		Pozidrive 2
		Standard screwdriver with holding mechanism
1.5 mm		Standard screwdriver
2.5 mm		Internal hexagon insulated
10 mm		Open-end spanner insulated
		60 mm distance
		Insulation tester
		Heat gun

Preparation

Notice: The power supply voltage tolerance has changed.
It is now **24 VDC +/- 10%** (21.6 VDC to 26.4 VDC).
This voltage needs to be checked without fail before placing the unit into operation.
If it falls outside the permissible limits, make sure to company operating the system accordingly.

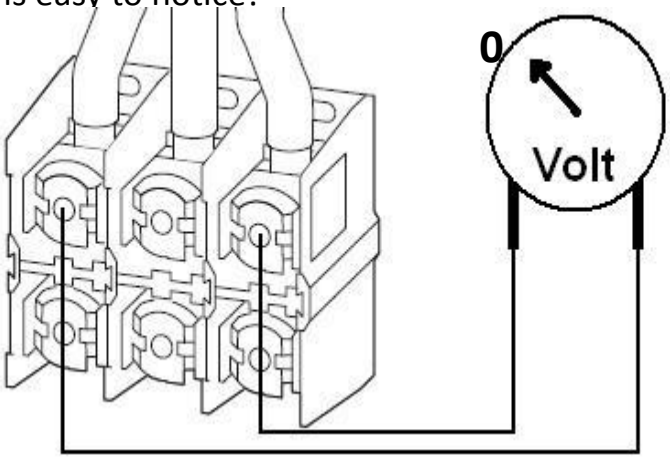


The DC-to-DC converter inside the module is approved for an input voltage range of 18 VDC to 36 VDC.

Notice! The default direction in which current flows has been changed in the <u>new</u>
XMC modules - see manual.
This direction must be changed if necessary (step 24).

Notice! Arrange for the **person authorized to switch the power on and off** to switch off the power supply on the system and secure the switch with a lockout device so that it cannot be switched back on by accident!
Place a warning sign that is easy to notice!

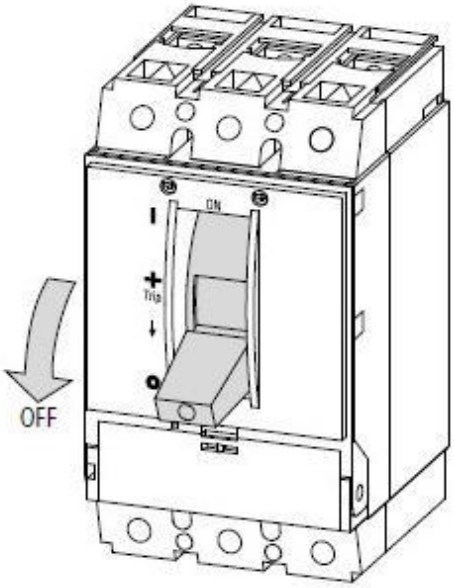
Notice: Check to make sure that the terminal block is de-energized!



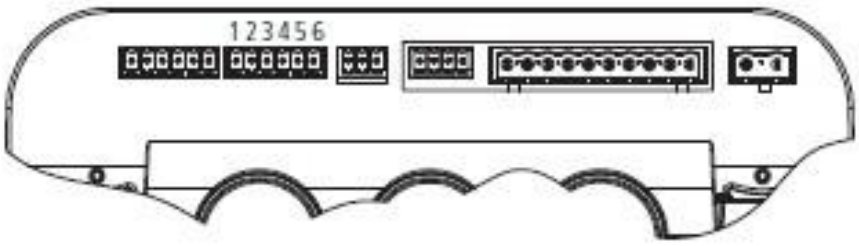
Notice: Ground and bond with grounding gear!

Removing

1 Switch off NZM circuit-breaker



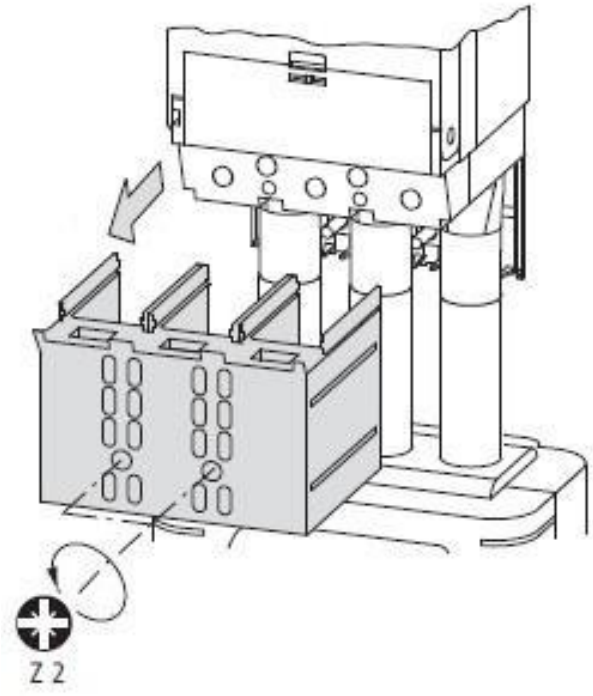
2 Disconnect the communication and power supply connectors.



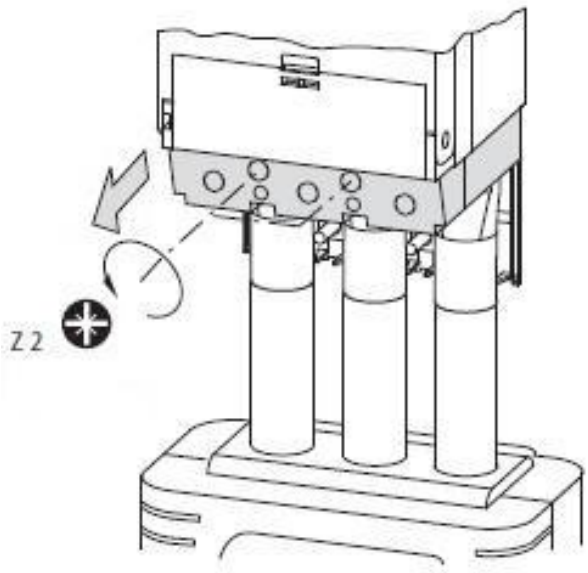
Label the cables correctly! Recommendation: Use adhesive labels!

Removing

3 Removing shroud

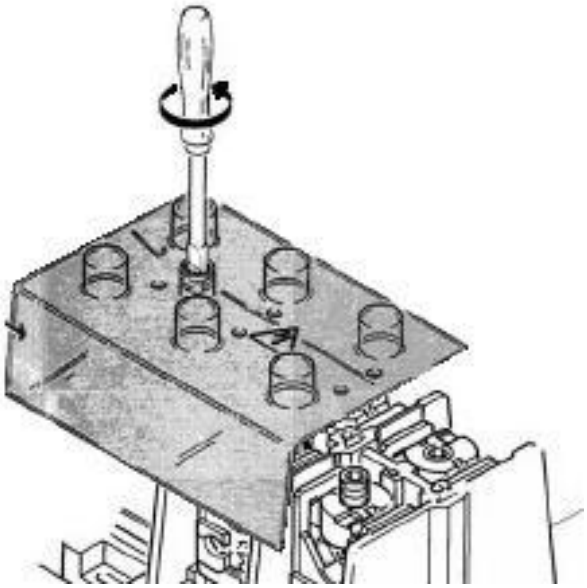


4 Removing terminal shroud

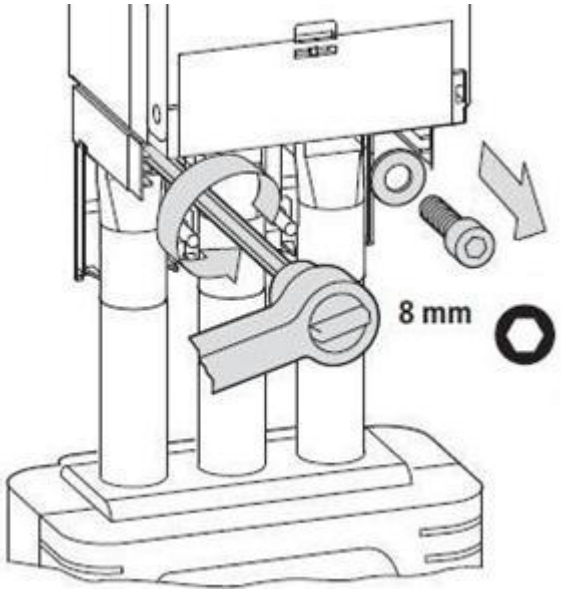


Removing

5 Remove the K2x240/3 unit's transparent cover

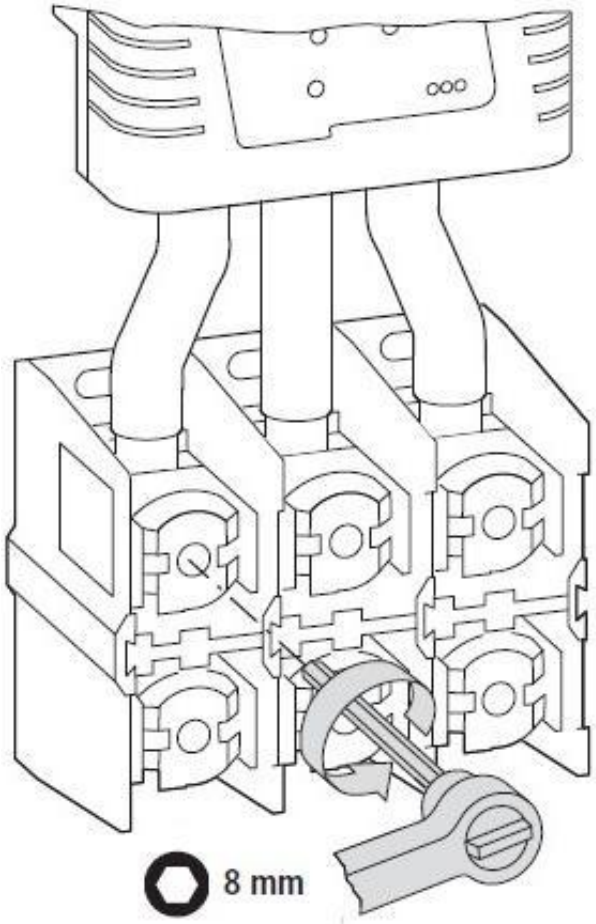


6 Disconnect the cables from the circuit-breaker

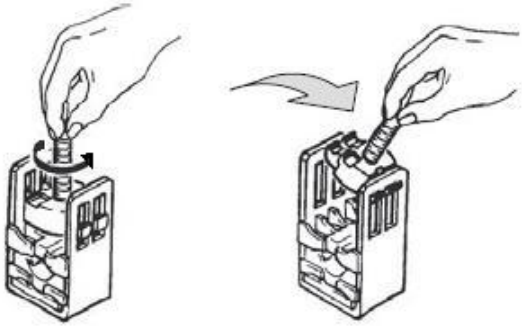


Removing

7 Loosen the screws on the K2x240/3 unit

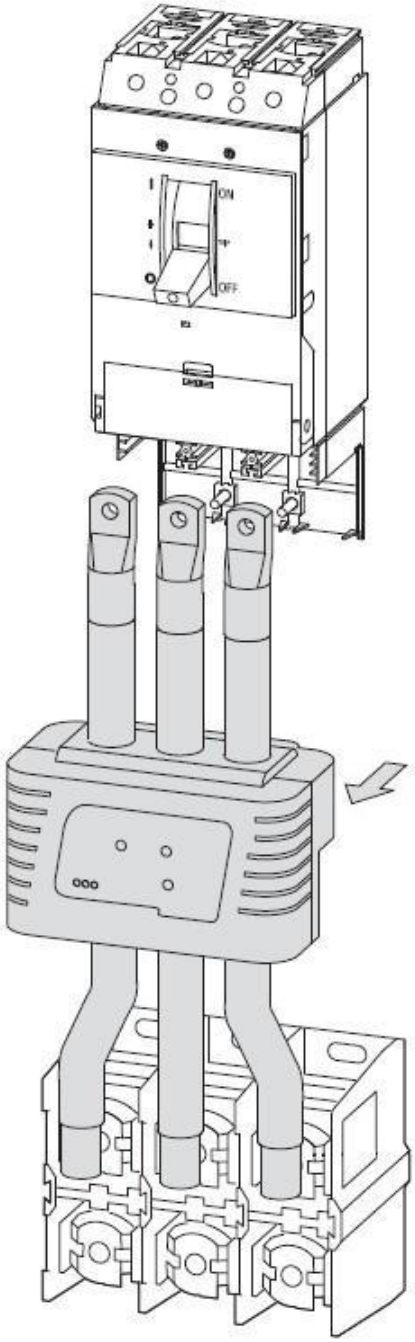


8 Remove the terminals



Removing

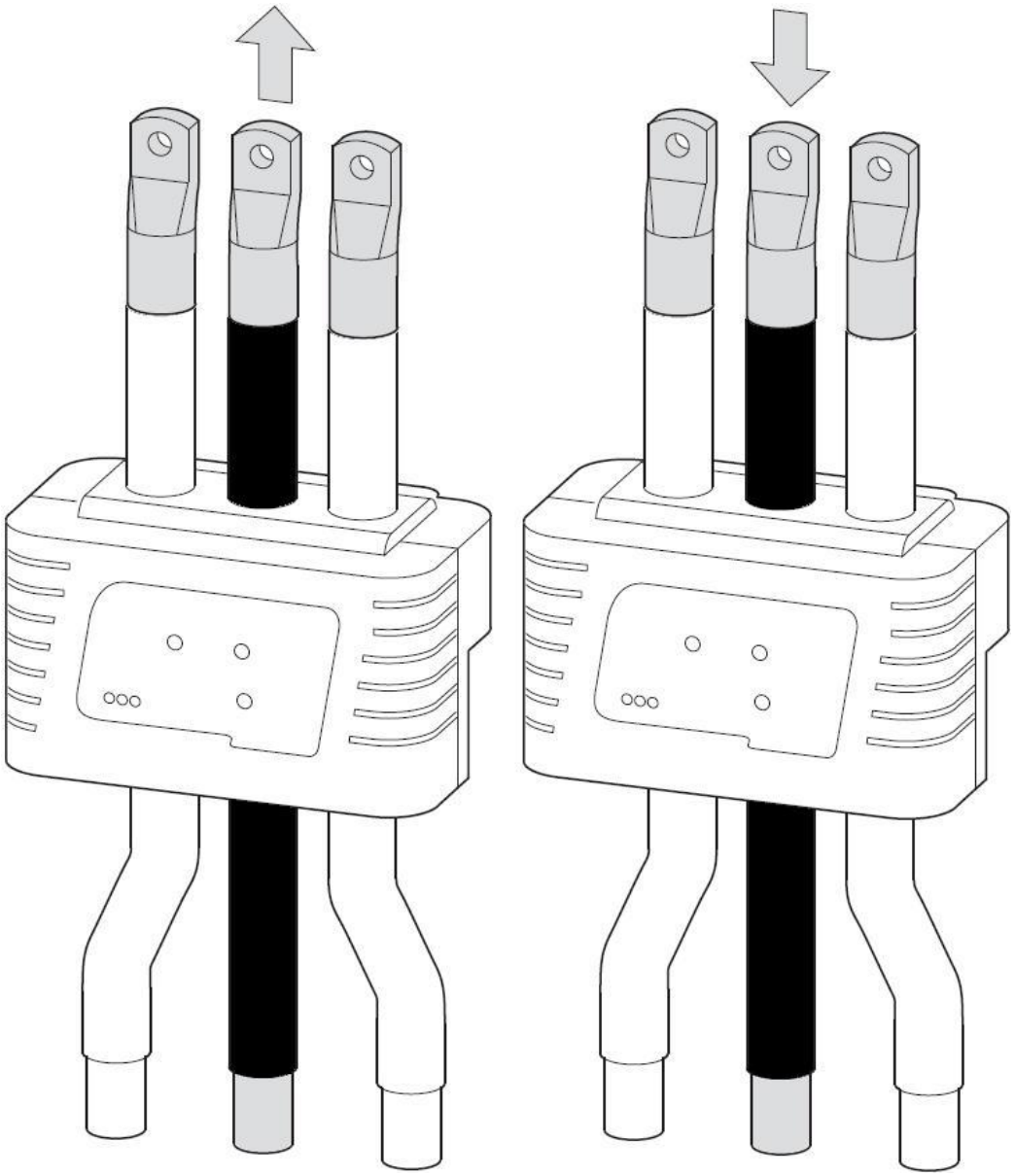
9 Remove the entire XMC module together with the corresponding cables



Removal - Mounting

10

Pull out cable L2 from the kit you just removed and slide it into the L2 hole on the new kit.
The new kit already comes with cables L1 and L3.

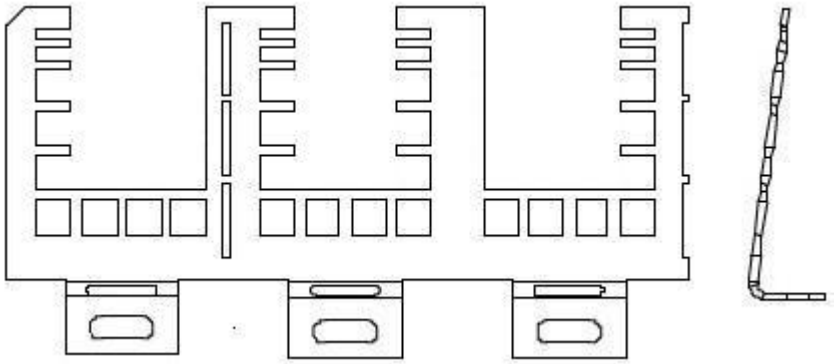


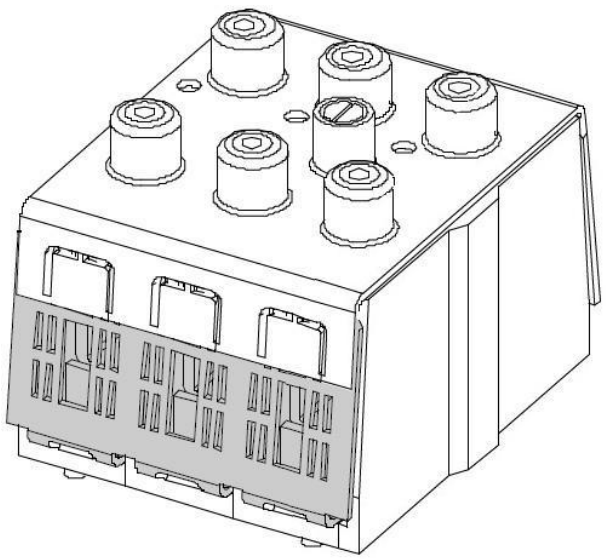
removed XMC

new XMC

Mounting

11 If an IP20 partition is not installed, install it on the K2x240/3 unit. To do this, unscrew the three screws and install the partition.

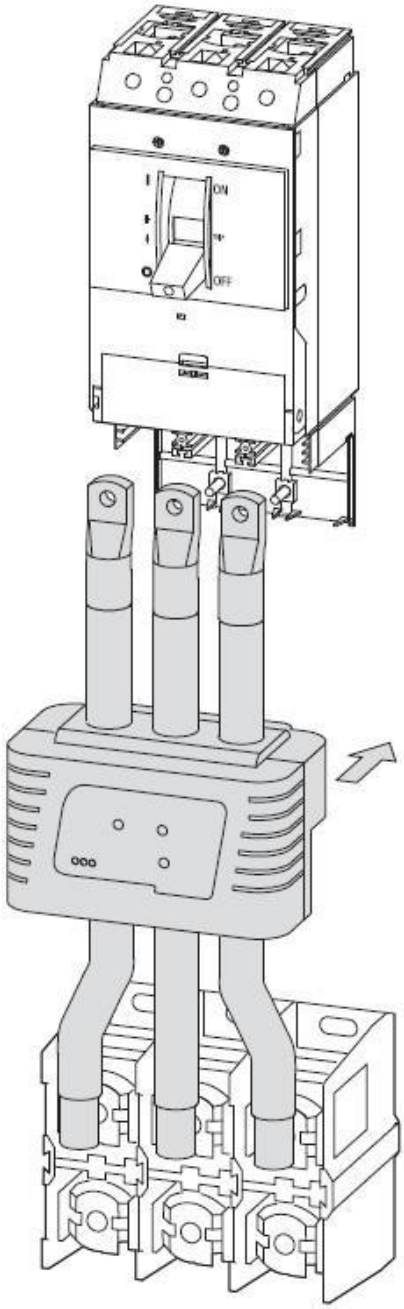




Final assembled condition / Wait until step 16 to install the terminal cover

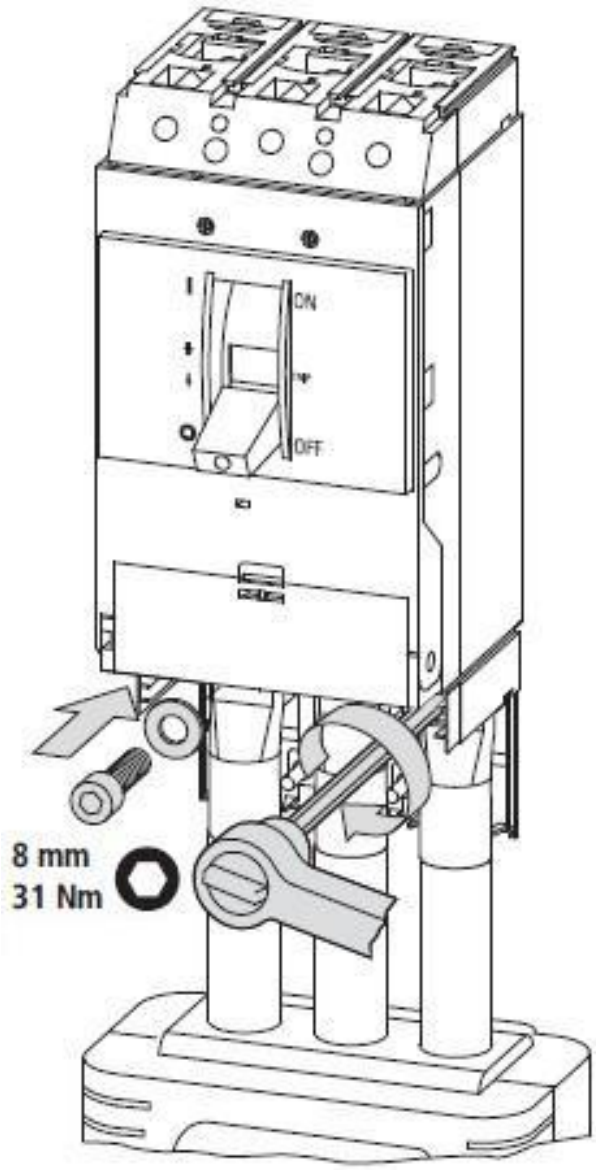
Mounting

12 Put the new XMC kit into place



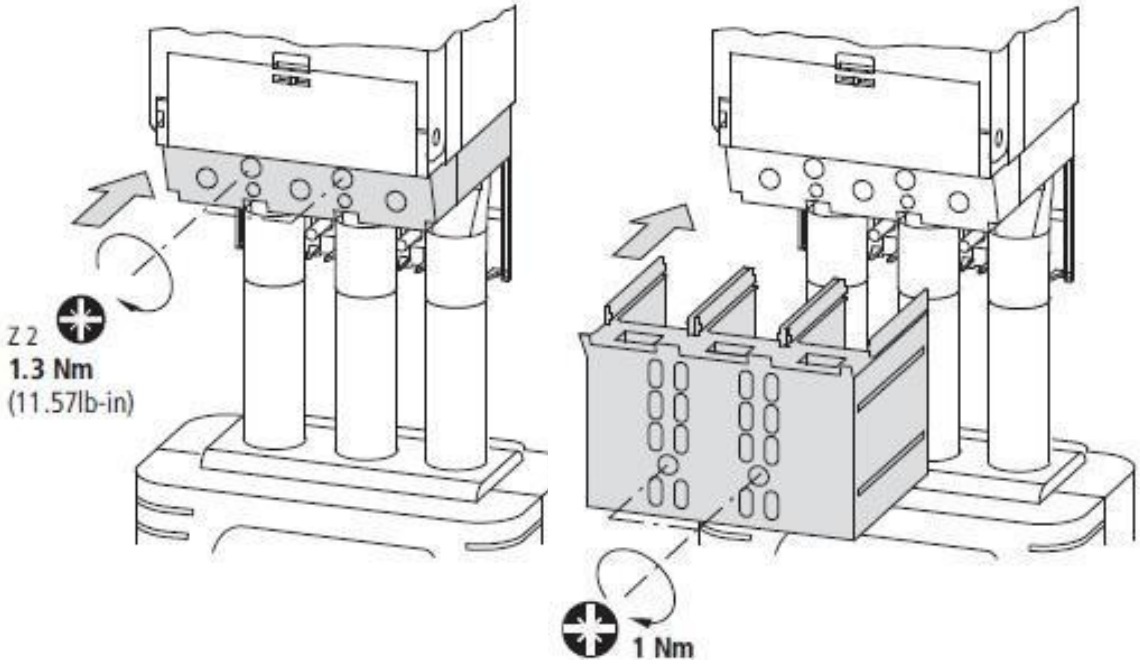
Mounting

13 Place the screws on the circuit-breaker and tighten them with 31 Nm.

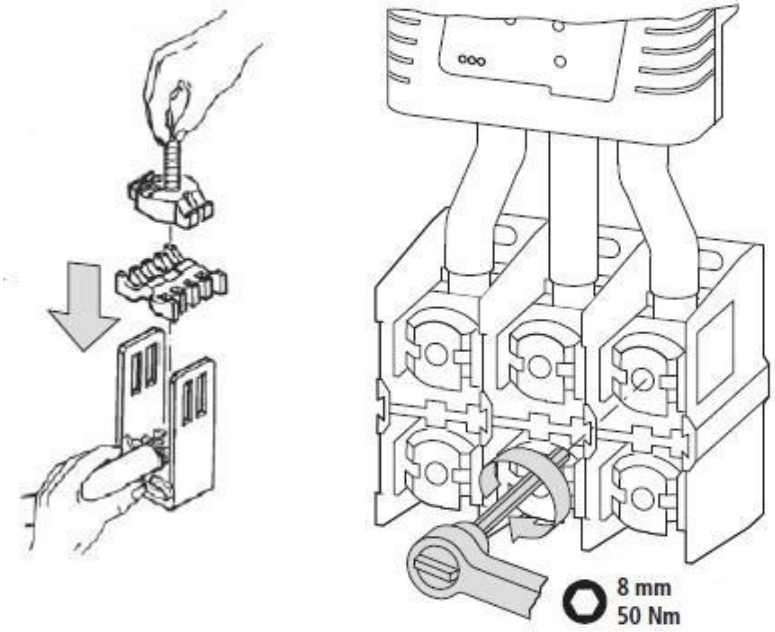


Mounting

14 Install the covers on the circuit-breaker.



15 Install the terminals on the terminal block and tighten them with 50 Nm.

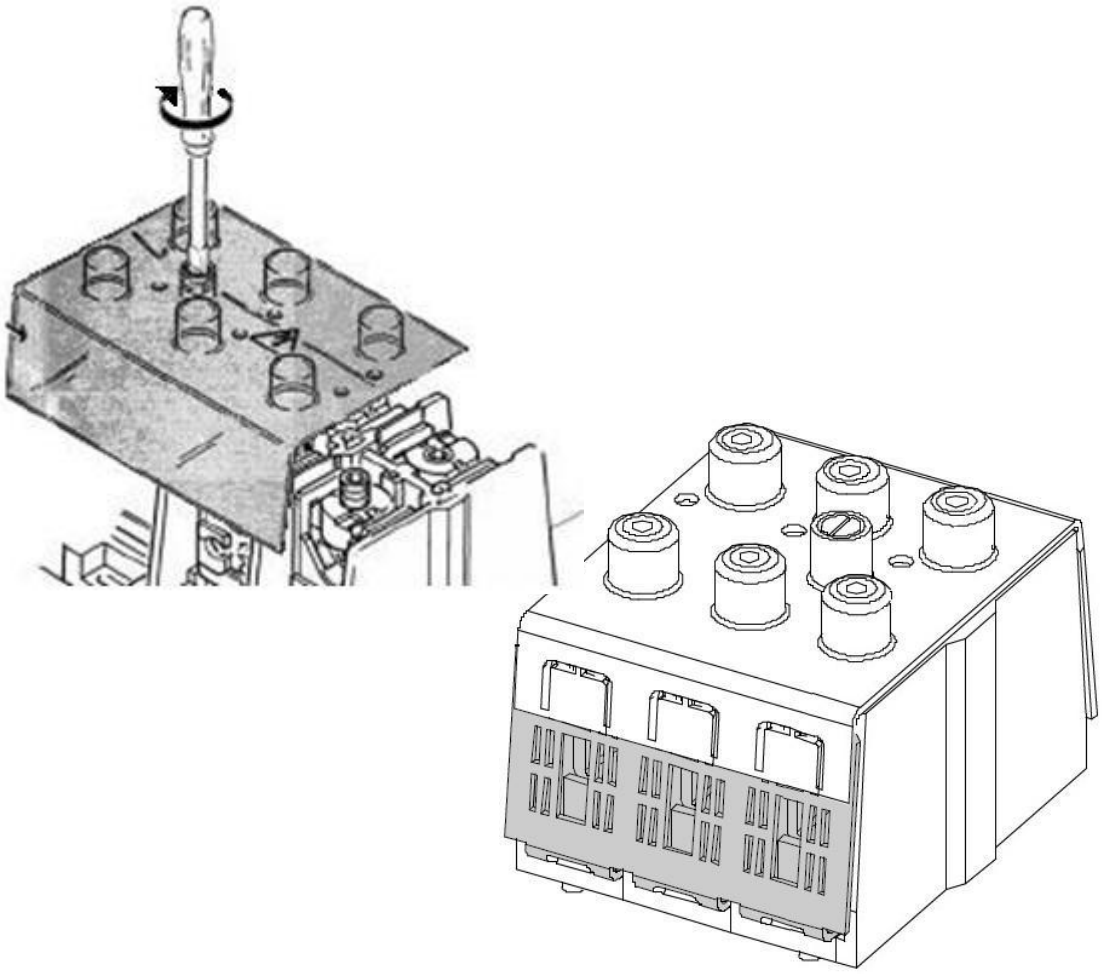


Mounting / Insulation Resistance Test

16 Perform a visual inspection and then remove the bonding jumpers!

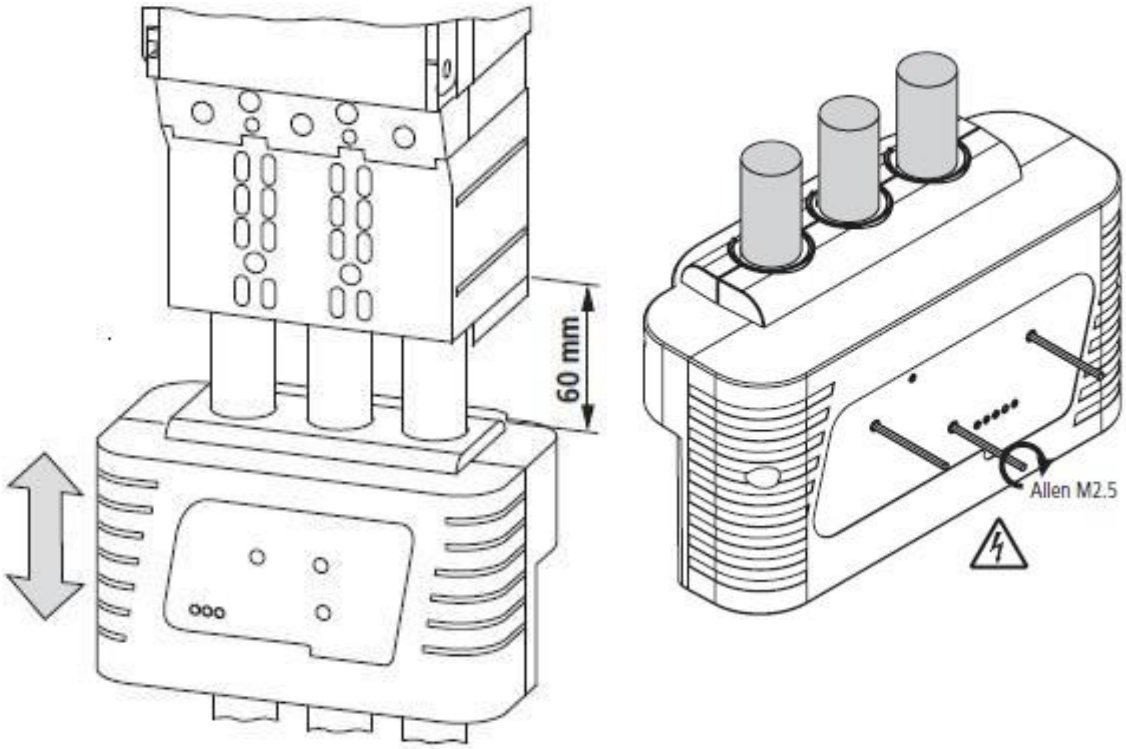
17 Conduct an insulation resistance test (the measured resistance must be ≥ 1 MΩ!).
Measuring voltage: 1 kV. Document the corresponding values!

18 Install the K2x240/3 unit's transparent cover.



Mounting

19 Position the XMC unit and tighten the grub screws

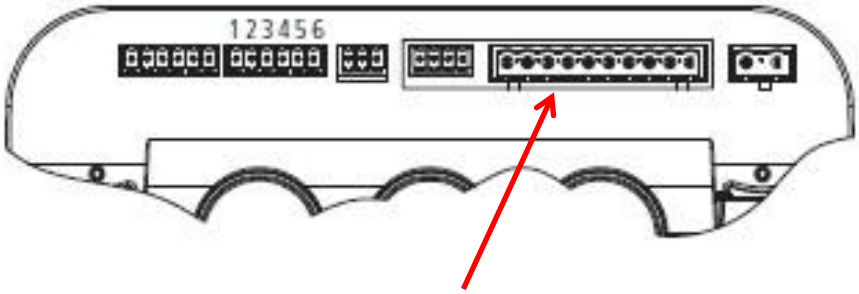


Notice! Risk of electric shock!
Use **insulated tools**!
Screws must punch the copper in order to perform the voltage sensing

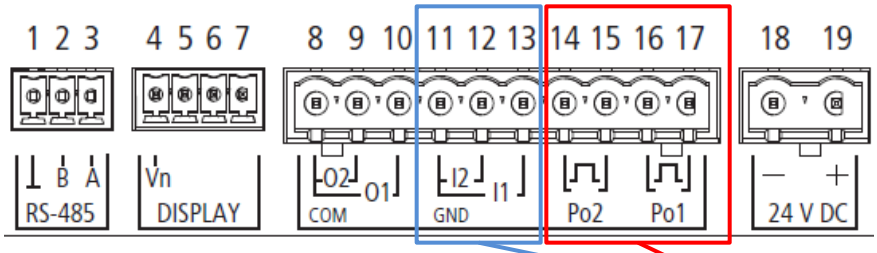
Hexagon keys with a ball head are not suitable for tightening the screws.

Wiring

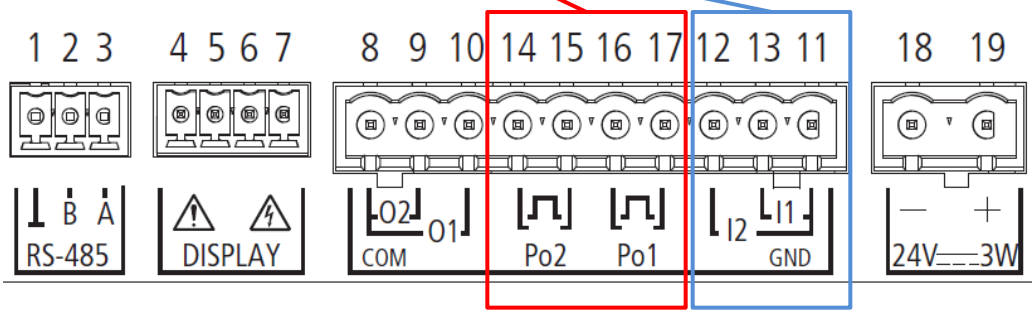
20 Communication and power supply connector wiring



Notice! The pinout has changed!
The order of connections 11–17 has changed!
The unit needs to be rewired accordingly.
The position of the terminal cables on the XMC plug needs to be changed accordingly.



XMC until Dec. 2012
S/N ≤800003999



XMC from May 2013
r.B.
S/N ≥800004001

Wiring

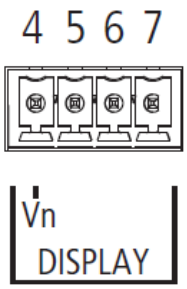
21

Notice!

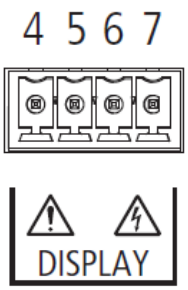
If the **Vn** connection on terminal 4 was being used, make sure to disconnect it!

Make sure that the disconnected cable is properly insulated or removed.

XMC until Dec. 2012
S/N ≤800003999



XMC, r.B., starting May 2013
S/N ≥800004001



22a

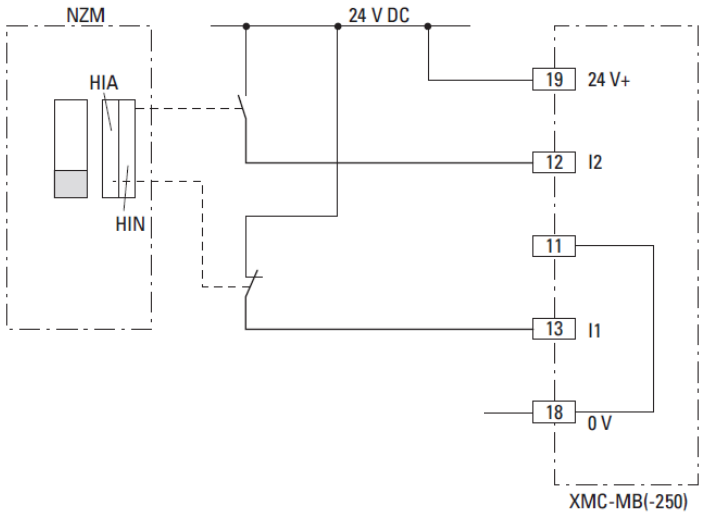
If the NZM unit's auxiliary contact signaling function is being used, you will have to check the corresponding wiring. It may be necessary to modify it.

Wiring

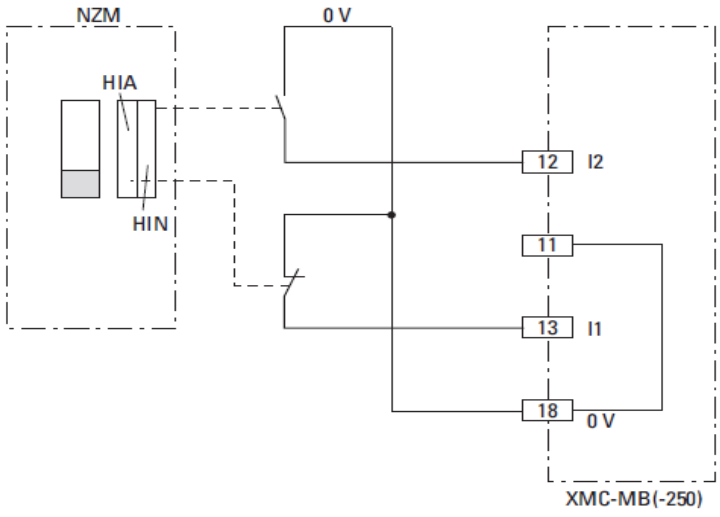
22b

See the circuit diagram for modules dated up to 12/2012 and the circuit diagram for modules dated May 2013 or later, r.B.
Notes: Discuss with the company operating the system if necessary. In certain cases, they will have to change their documentation/drawing accordingly!

XMC bis Dec 2012
S/N ≤800003999



XMC, r.B., ab Mai 2013
S/N ≥800004001

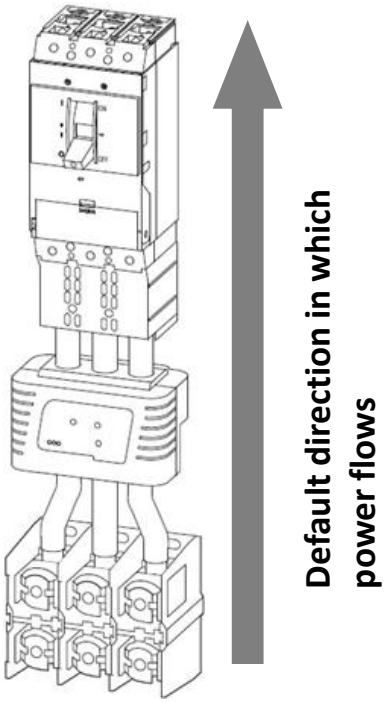


Wiring

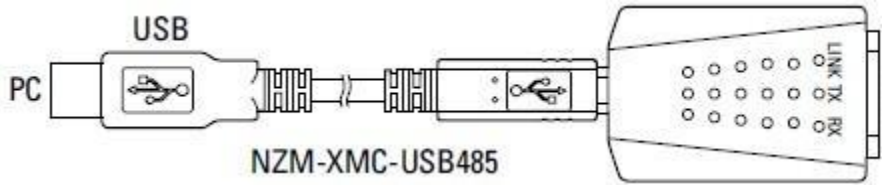
23

Notice!

The default direction in which power flows in modules dated May 2013 r.B.
or later (S/N ≥800004001) is from the bottom up!
If the customer needs power to flow from the top down, use register 1301, bit 1 to change the direction
(see manual!).

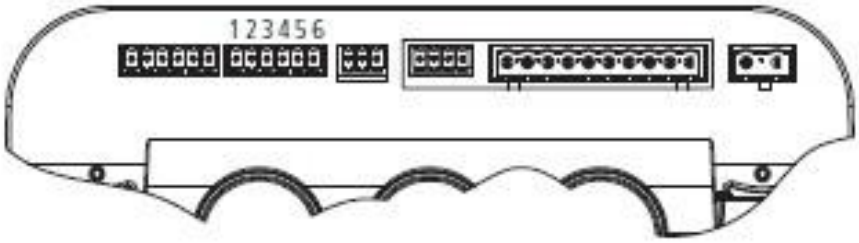


In order to change the register bit's value, you will need a "USB to RS485 adapter„ and a laptop/PC!



Connect / Transfer

24 Plug in the communication and power supply connectors.



25 Hand over the system to the customer.
Arrange for the power supply to be switched back on.
Remove all warning signs!

26 Check that the power supply is correct!
LEDs L1; L2; L3 must light up.
The LED Power ON will flash!

27 Fill out the final documentation!