



Fronius Symo 3.0-3-S Grid Connected Inverter Instruction Manual

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Installation instruction
Grid connected inverter














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Safety

	<p>WARNING! Incorrect operation or poorly executed work can cause serious injury or damage. Only qualified staff are authorized to commission your inverter and only within the scope of the respective technical regulations. Read the safety rules before commissioning the equipment or carrying out maintenance work.</p>
	<p>WARNING! An electric shock can be fatal. Danger due to grid voltage and DC voltage from solar modules that are exposed to light.</p> <ul style="list-style-type: none">– Ensure that both the AC side and the DC side of the inverter are de-energized before carrying out any connection work.– Only an authorized electrical engineer is permitted to connect this equipment to the public grid.

	<p>WARNING! An electric shock can be fatal. Danger due to grid voltage and DC voltage from solar modules.</p> <ul style="list-style-type: none"> – The DC main switch is only to be used to de-energize the power stage set. The connection area is still live when the DC main switch is switched off. – Ensure that the power stage set and connection area are disconnected from one another before carrying out any maintenance or service tasks. – The power stage set, which is enclosed in a separate housing, must only be disconnected from the connection area when in a de-energized state. – Maintenance and servicing in the power stage set of the inverter must only be carried out by Fronius-trained service technicians.
	<p>WARNING! An electric shock can be fatal. Danger due to residual voltage in capacitors. Wait for the capacitors to discharge. The discharge time is five minutes.</p>
	<p>WARNING! An inadequate ground conductor connection can cause serious injury or damage. The housing screws provide a suitable ground conductor connection for grounding the housing and must NOT be replaced by any other screws that do not provide a reliable ground conductor connection.</p>
	<p>CAUTION! Risk of damage to the inverter from dirt or water on the terminals and contacts of the connection area.</p> <ul style="list-style-type: none"> – When drilling, ensure that terminals and contacts in the connection area do not become dirty or wet. – Without a power stage set, the mounting bracket does not conform to the protection class of the inverter as a whole and so must not be installed without the power stage set. The mounting bracket should be protected from dirt and moisture during installation.
	<p>CAUTION! Risk of damage to the inverter as the result of incorrectly tightened terminals. Incorrectly tightened terminals can cause heat damage to the inverter that may result in a fire. When connecting AC and DC cables, ensure that all the terminals are tightened to the specified torque.</p>
	<p>CAUTION! Risk of damage to the inverter from overload.</p> <ul style="list-style-type: none"> – The maximum amperage when connecting to a single DC terminal is 32 A. – Connect the DC+ and DC- cables to the DC+ and DC- terminals on the inverter, taking care to ensure that the polarity is correct. – The maximum DC input voltage must not exceed 1000 V DC.

	<p>Fire prevention</p> <p>CAUTION! Risk of damage to inverters and other live photovoltaic system components due to poor or unprofessional installation. Poor or unprofessional installation can cause overheating of cables and terminal connections and result in arcs. These can cause heat damage, which in turn may lead to fires. Observe the following when connecting AC and DC cables: – Tighten all terminals to the torque specified in the Operating Instructions – Tighten all grounding terminals (PE / GND), including free ones, to the torque specified in the Operating Instructions – Do not overload cables – Check cables for damage and verify that they are laid correctly – Take note of the safety instructions, Operating Instructions and any local connection regulations Using fastening screws, always screw the inverter firmly to the mounting bracket to the torque specified in the Operating Instructions. Ensure that the fastening screws are tight before starting the inverter!</p>
	<p>NOTE! Protection class IP65 is only applicable if the inverter is permanently attached to the mounting bracket with screws.</p> <p>Protection class IP20 applies to the mounting bracket with no inverter or venting duct.</p>
	<p>NOTE! The solar modules connected to the inverter must comply with the IEC 61730 Class A standard.</p>
	<p>NOTE! When photovoltaic modules are exposed to light they supply current to the inverter.</p>
	<p>NOTE! If the cable insulation of the AC cable is not designed for a maximum of 1000 V, AC and DC cables must not be crossed when connecting to the inverter. If crossing the cables during connection is unavoidable, the AC cable must be laid in one piece of the protective hose supplied with the inverter. AC and DC cables can only be laid together if the insulation on both cables is designed for the max. the possible voltage of 1000 V.</p>

Observe the manufacturer's connection, Installation, and Operating Instructions at all times. To reduce the hazard potential to a minimum, perform all installation and connection work carefully according to the instructions and regulations.

Refer to the device Operating Instructions / Installation Instructions for the tightening torques to be used at the relevant terminal connections.

Fronius manufacturer's warranty

Detailed, country-specific warranty terms are available on the internet: www.fronius.com/solar/warranty

To obtain the full warranty period for your newly installed Fronius inverter or storage system, please register at: www.solarweb.com.

Installation Help and Recycling

More information on installation

eManual Installation Fronius Symo 3 – 8.2 kW: manuals.fronius.com/html/4204260172



Recycling

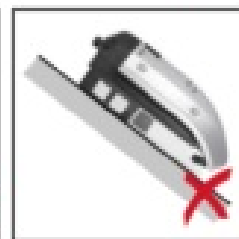
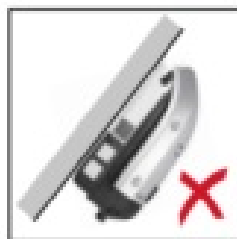
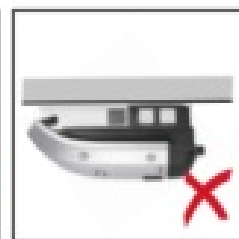
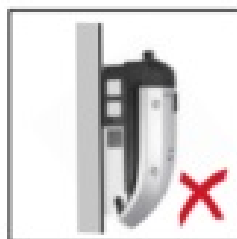
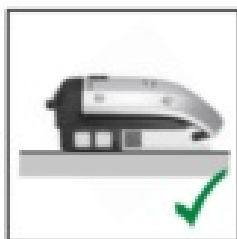
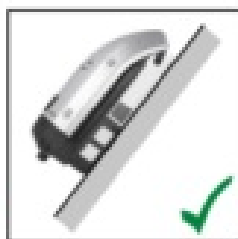
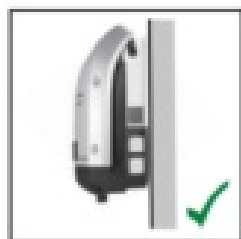
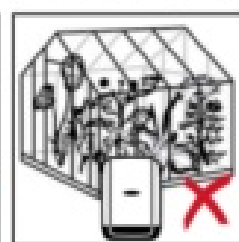
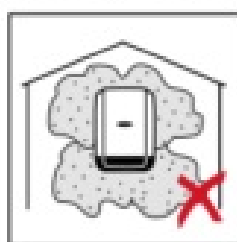
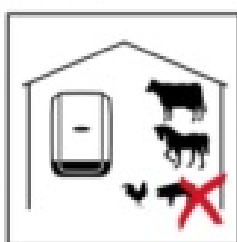
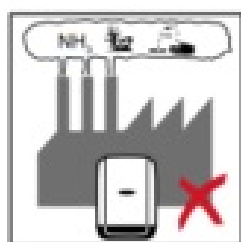
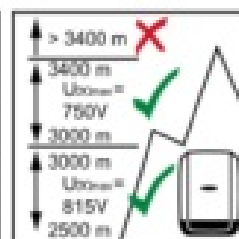
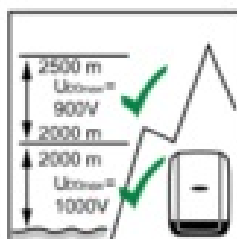
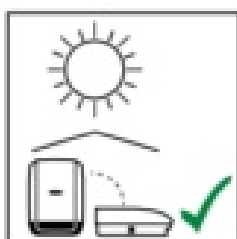
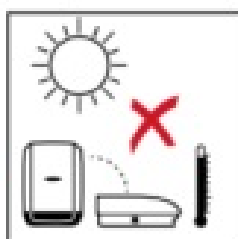


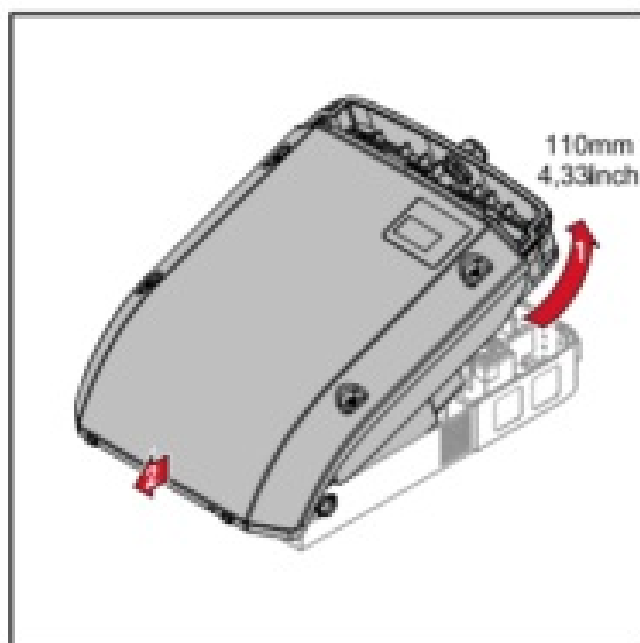
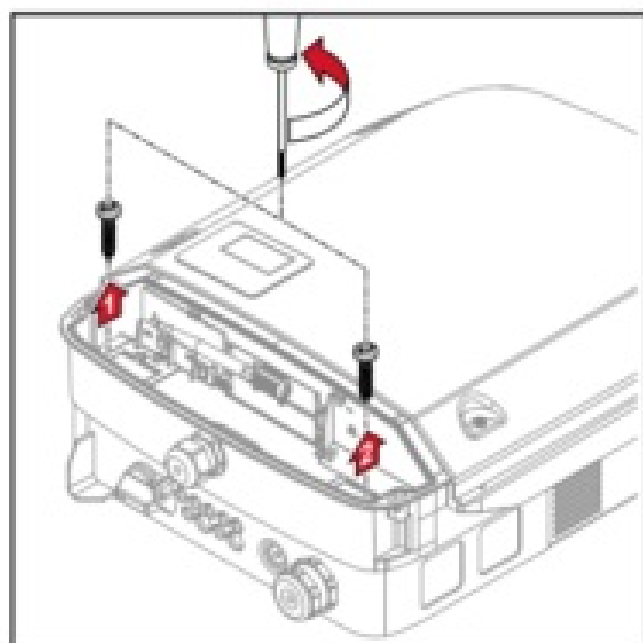
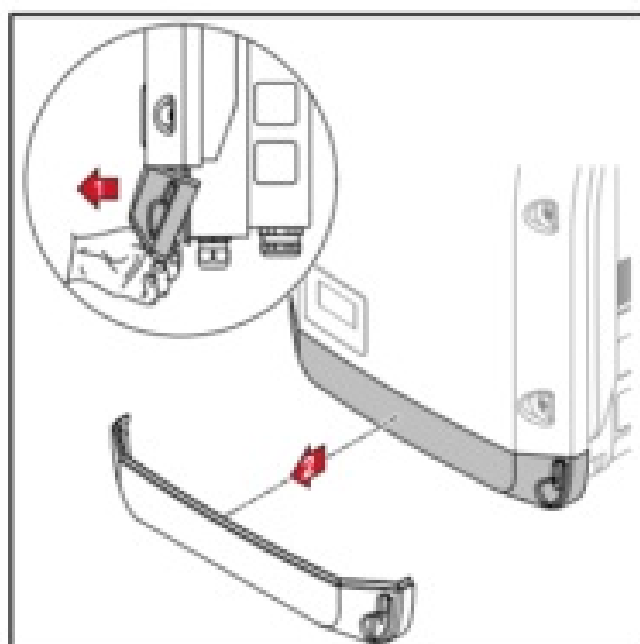
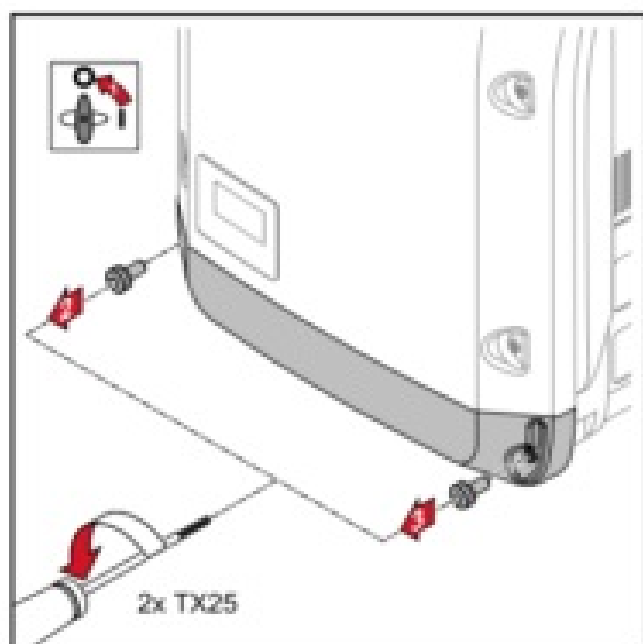
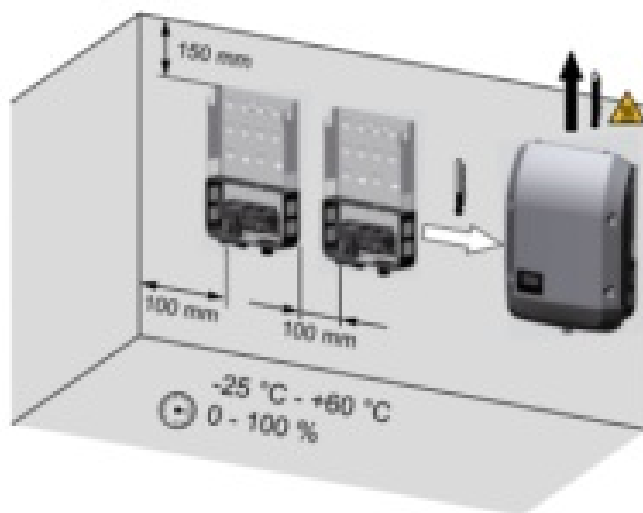
Recycling. Check the provisions of your municipality. Reduce the volume of the box.

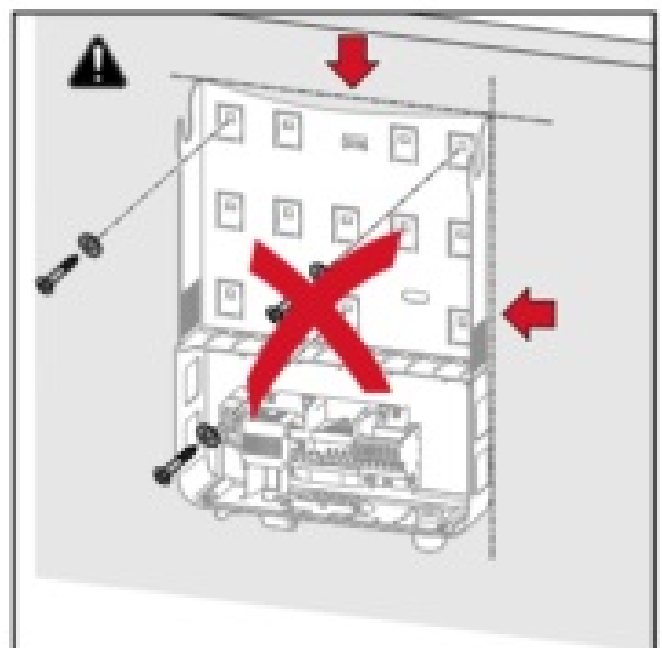
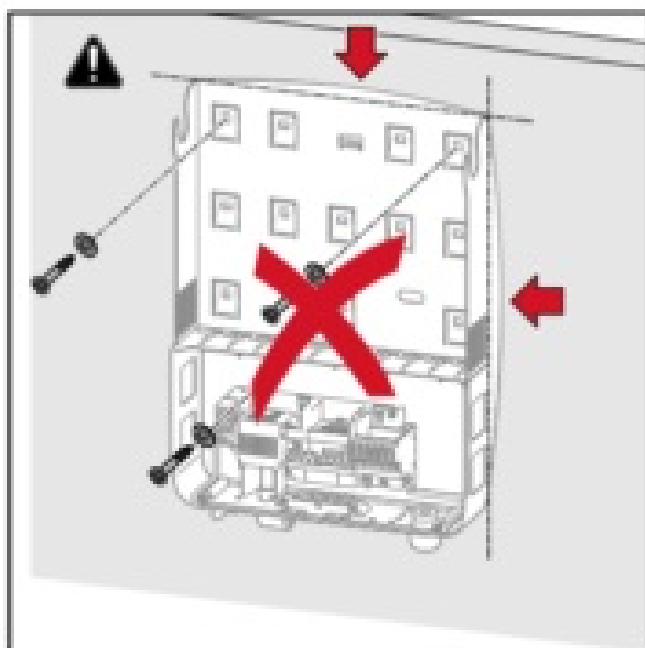
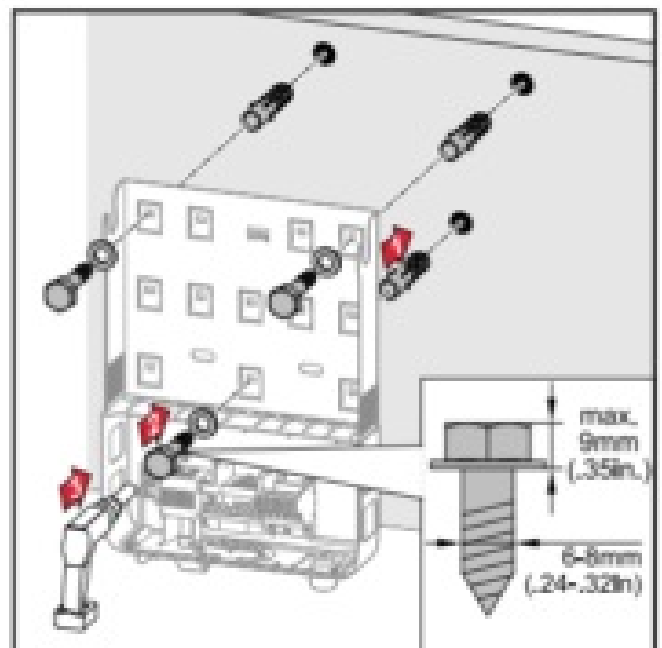
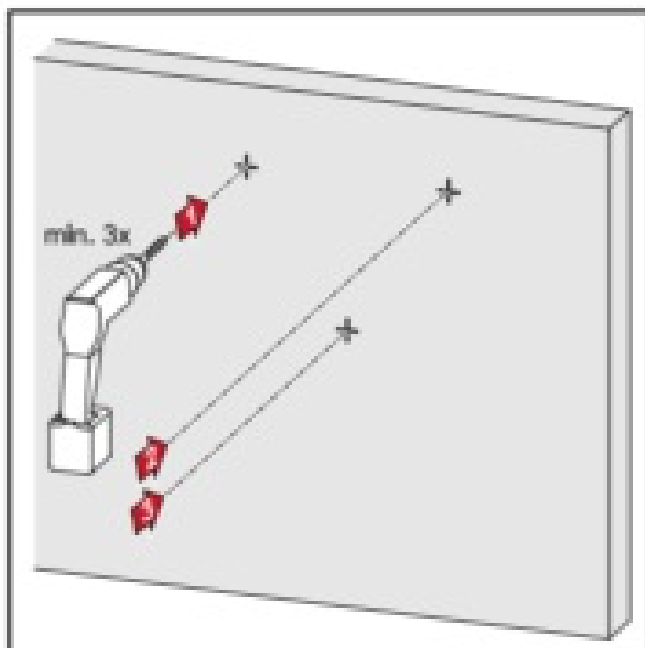
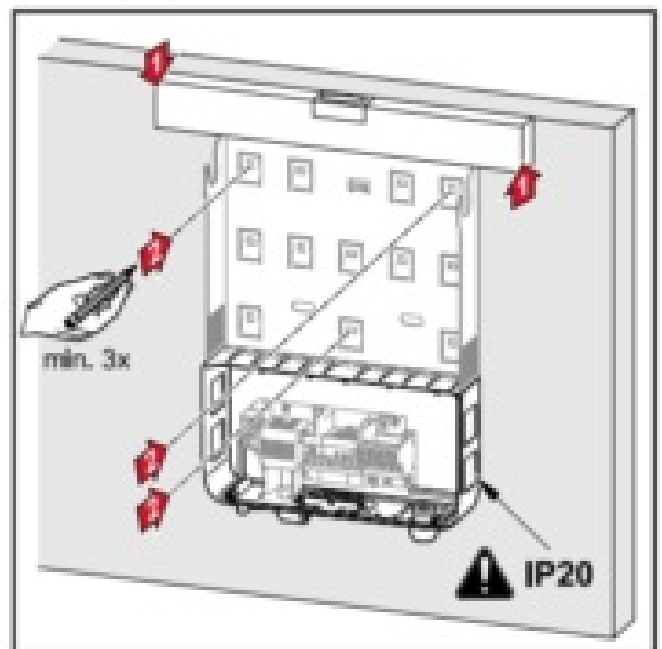
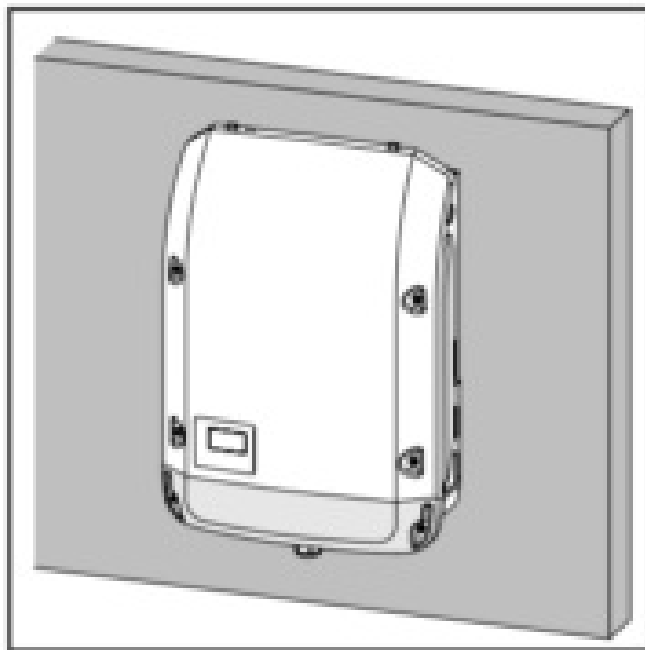
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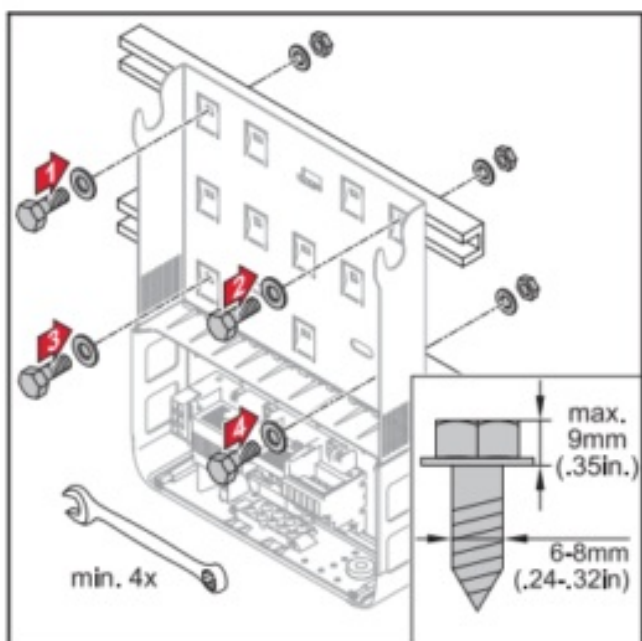
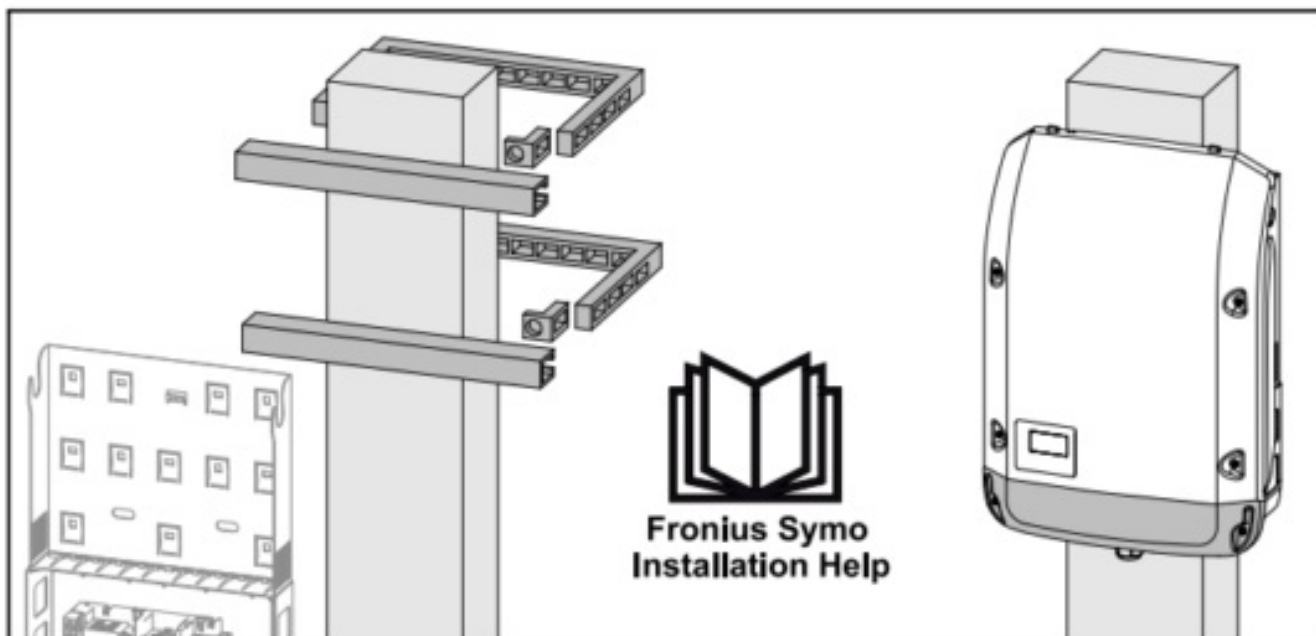
Hereby, Fronius International GmbH declares that the radio equipment type Fronius Symo is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.fronius.com

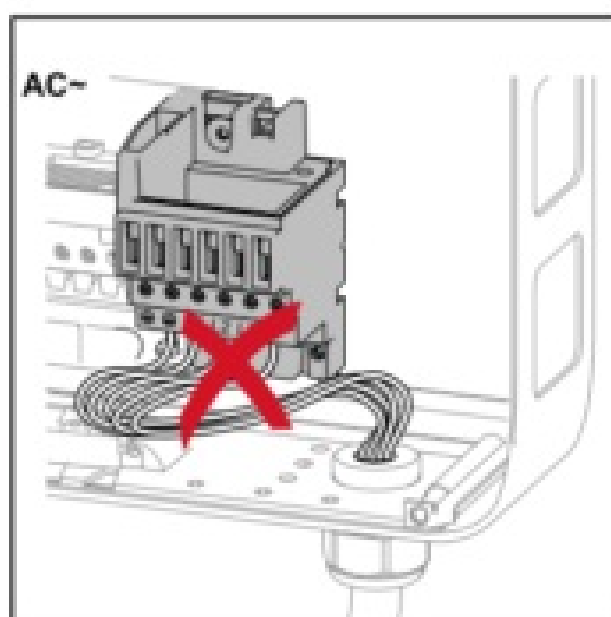
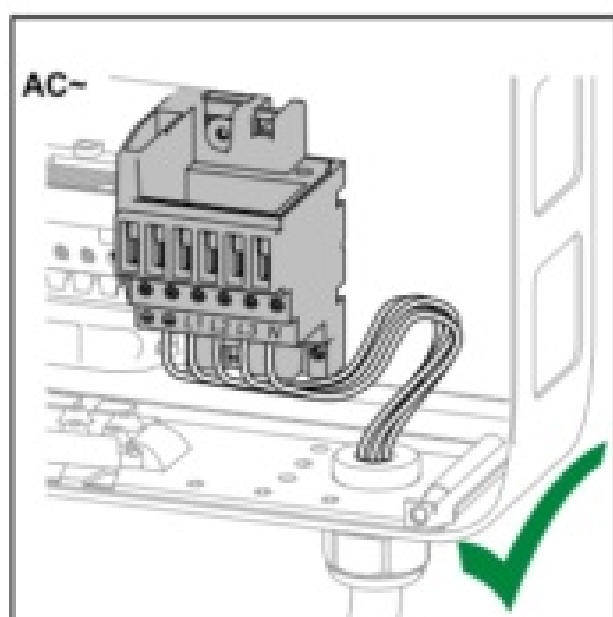
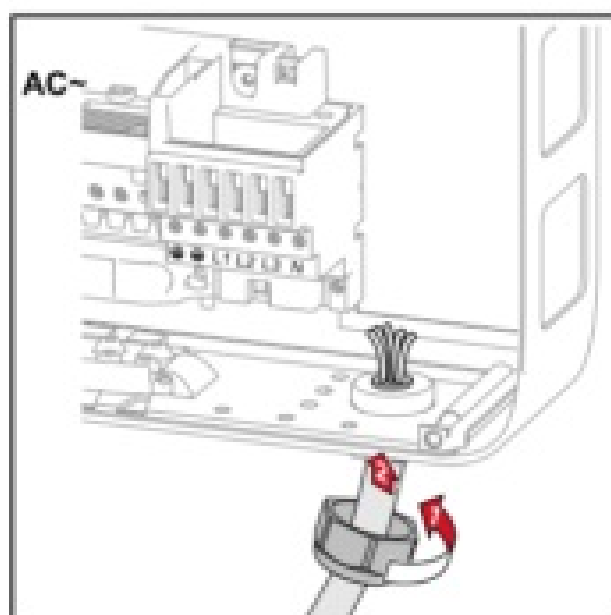
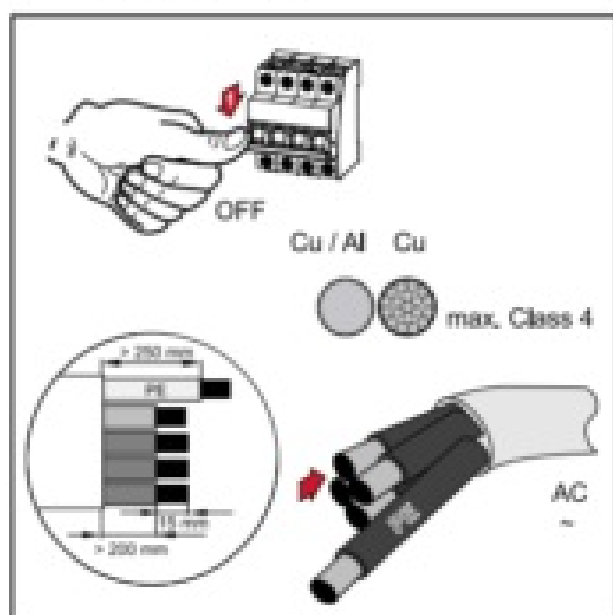
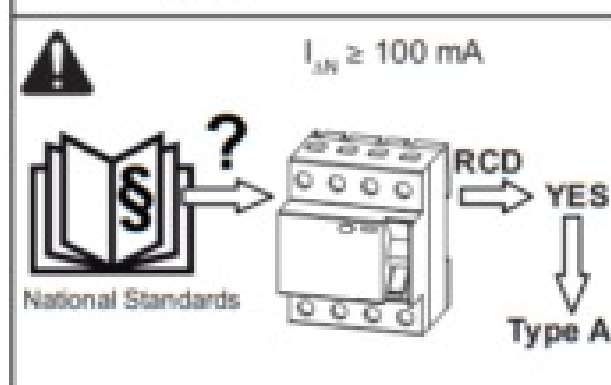
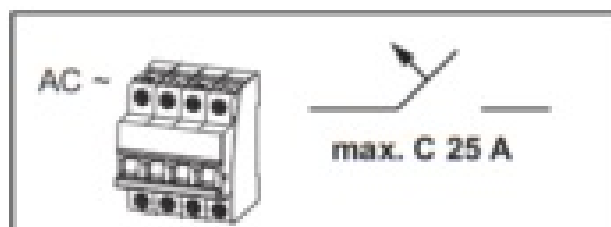
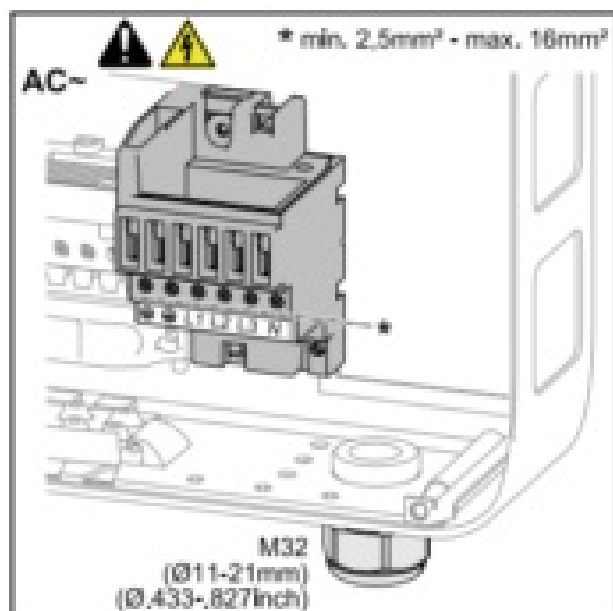
Fronius Symo Installation

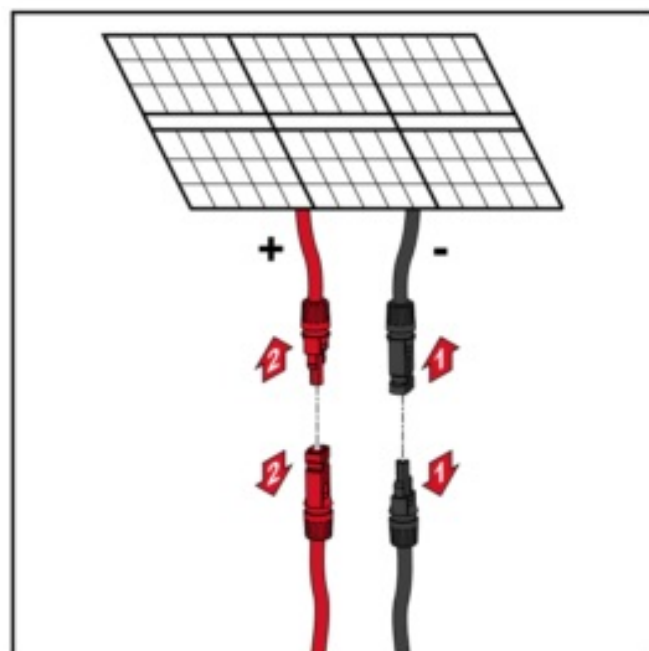
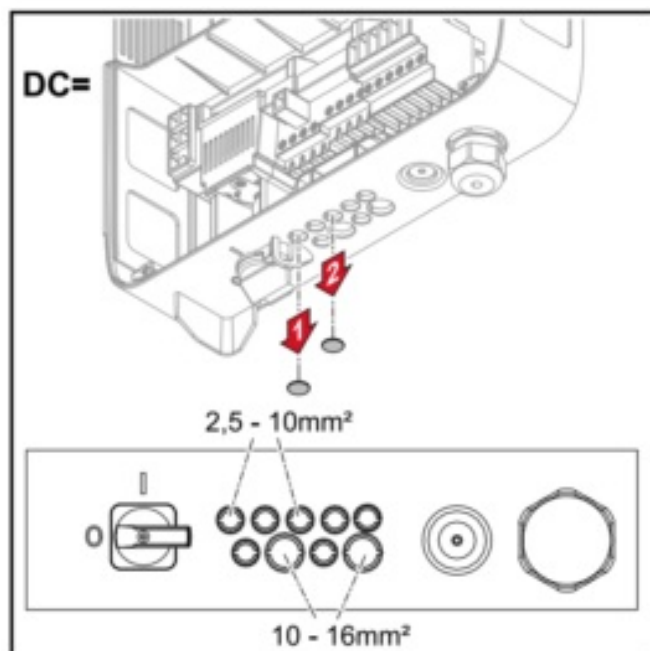
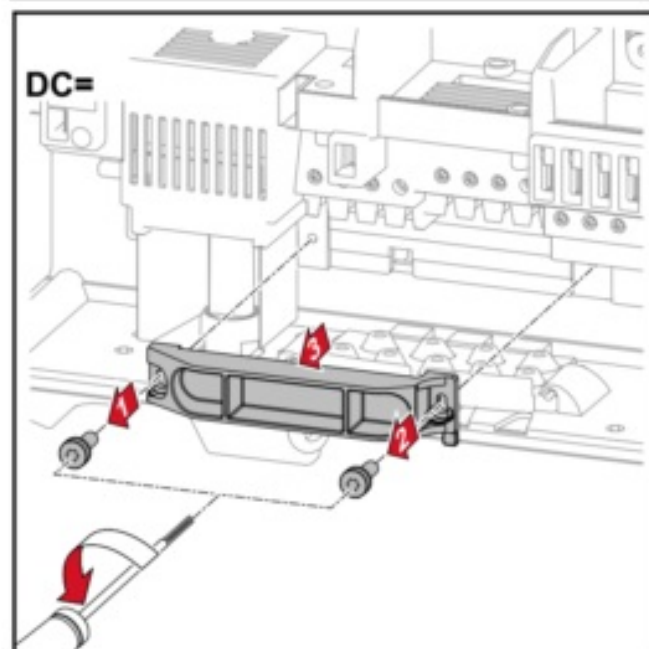
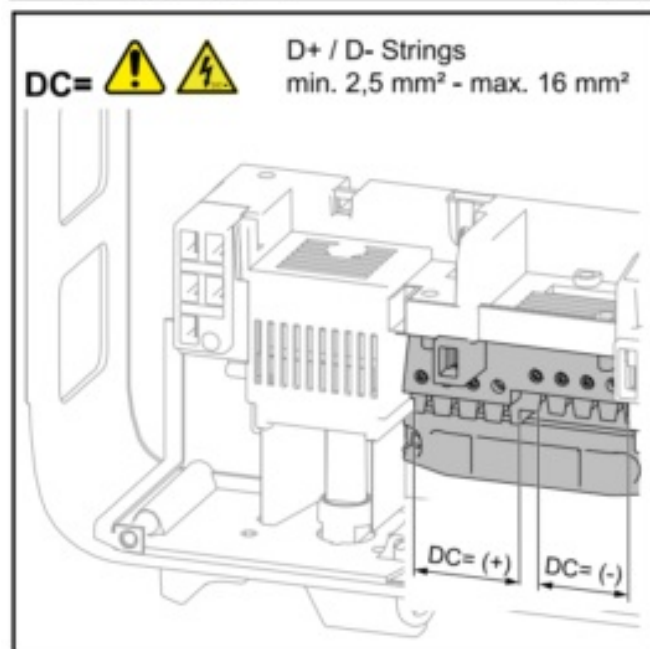
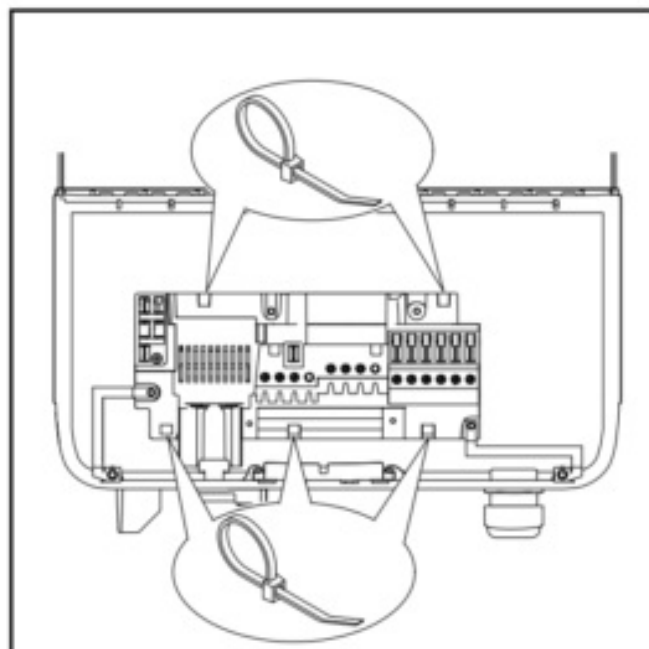
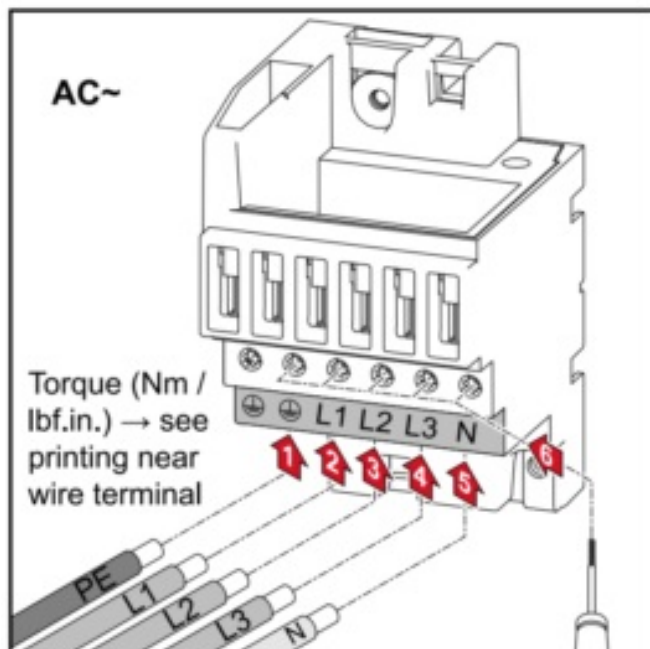


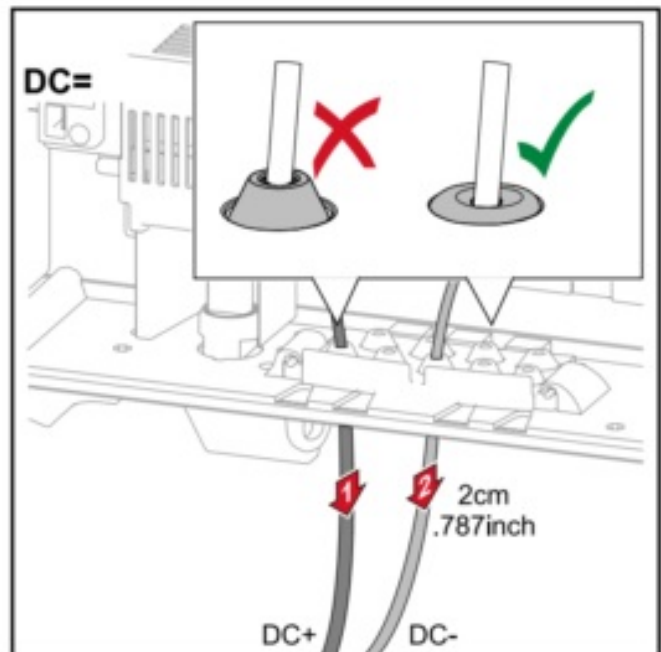
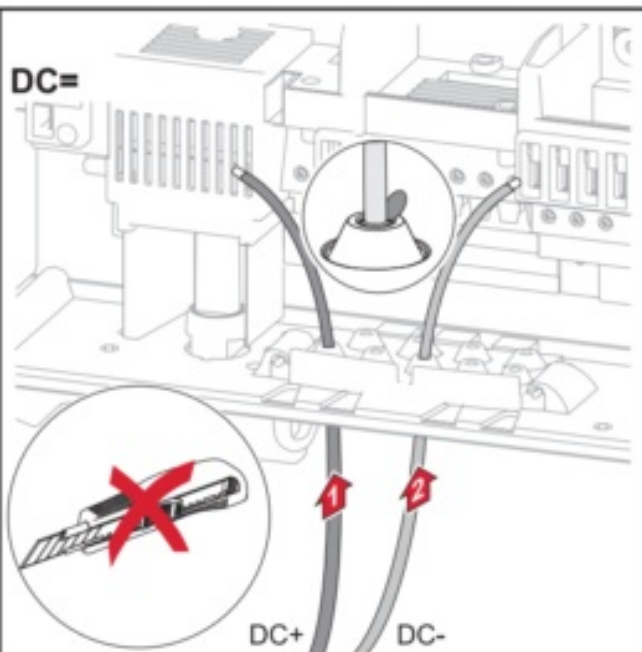
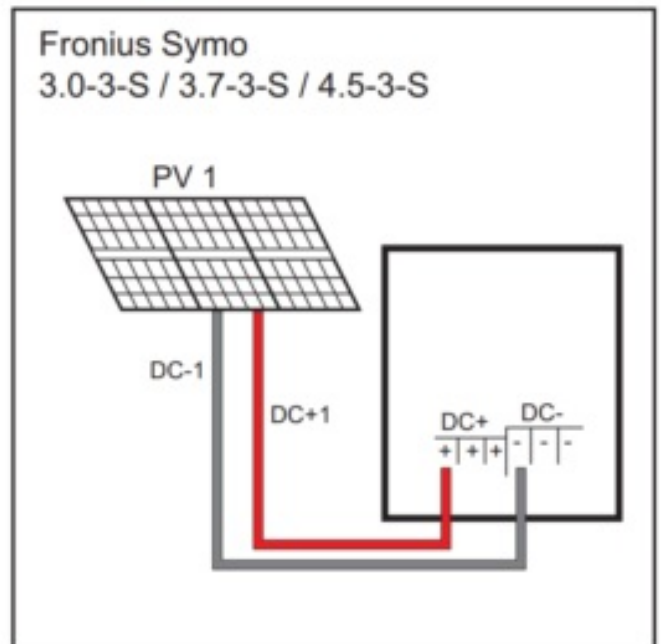
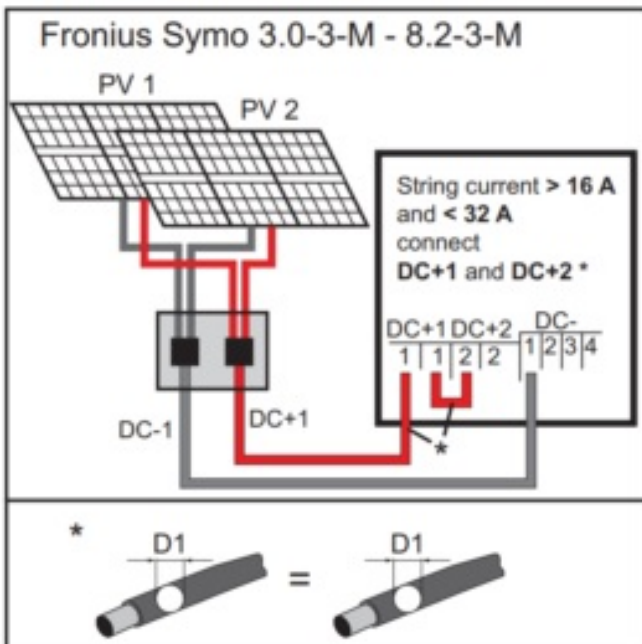
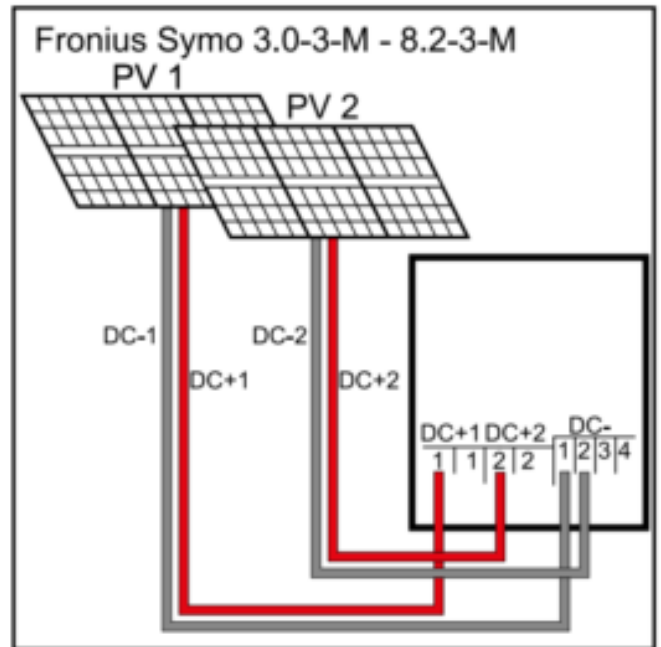
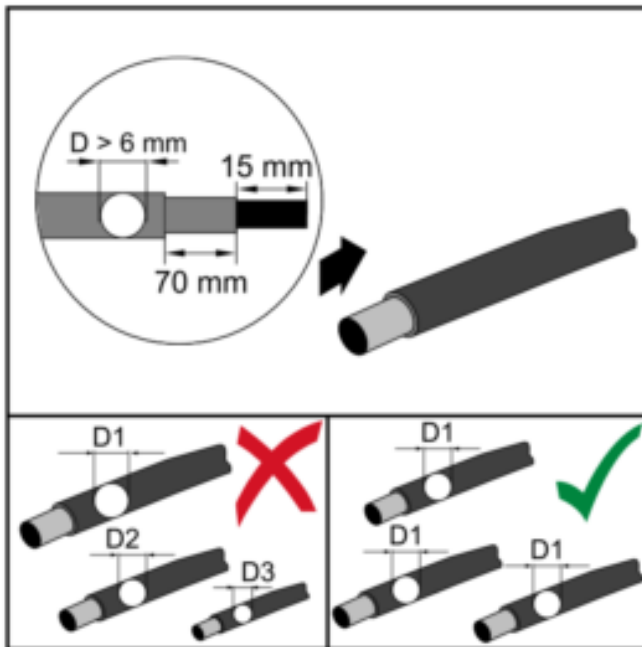


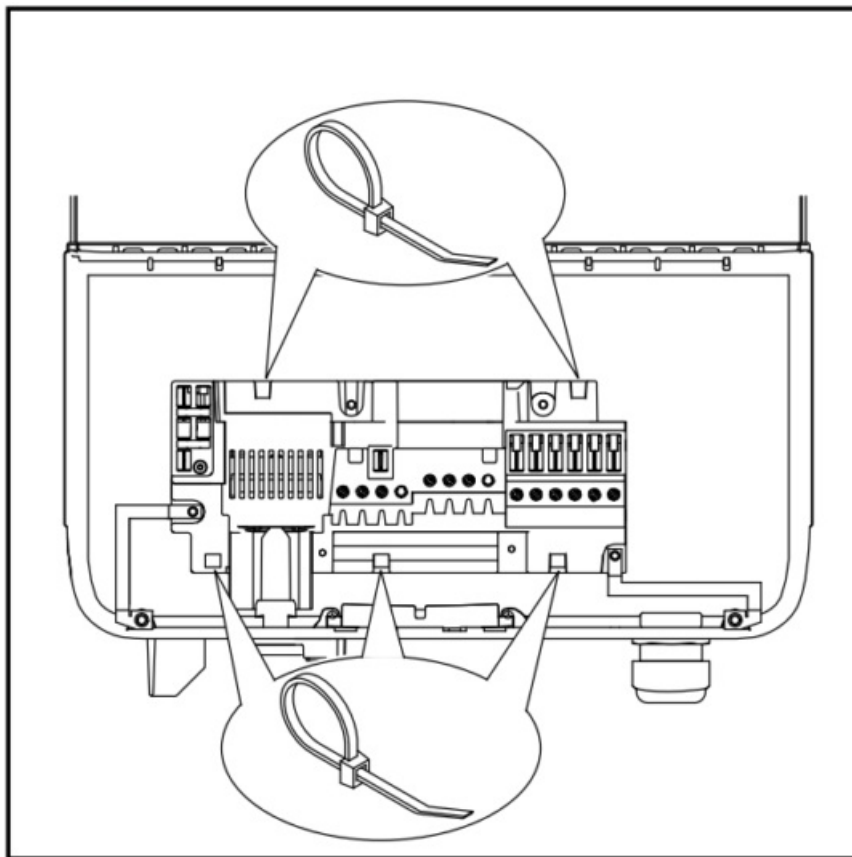
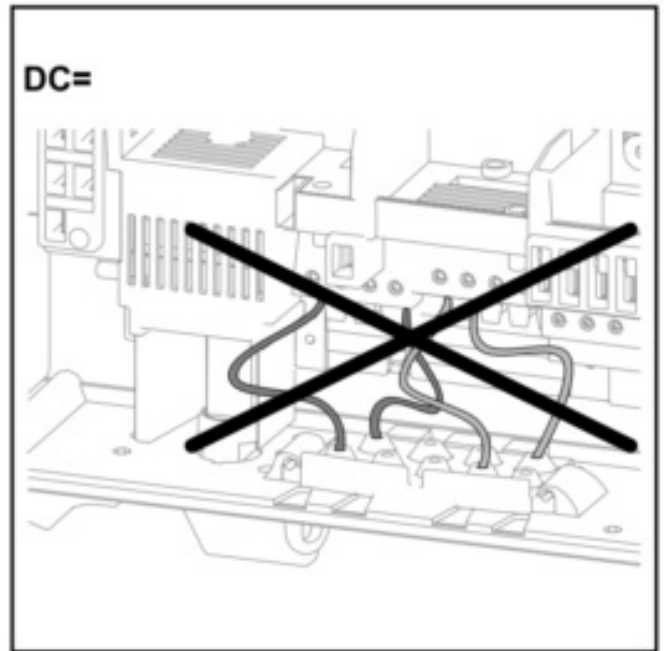
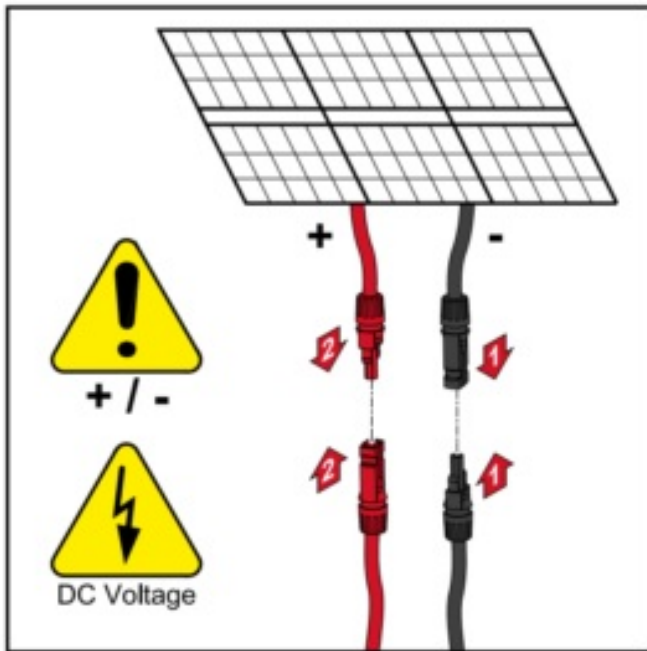




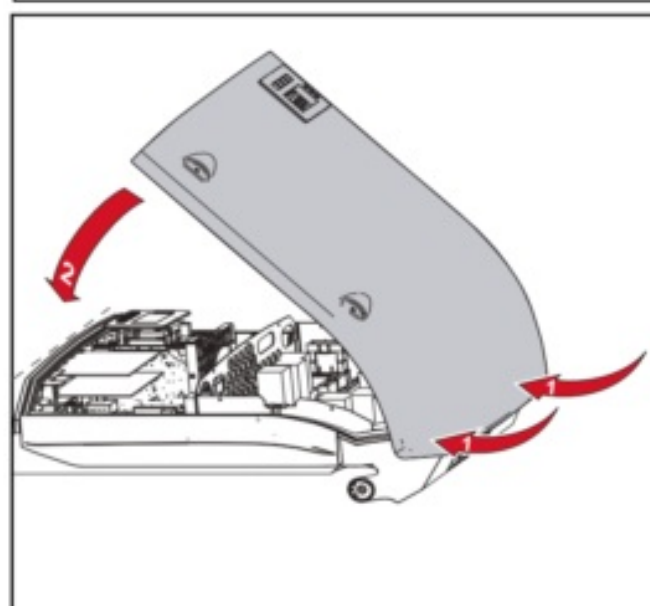
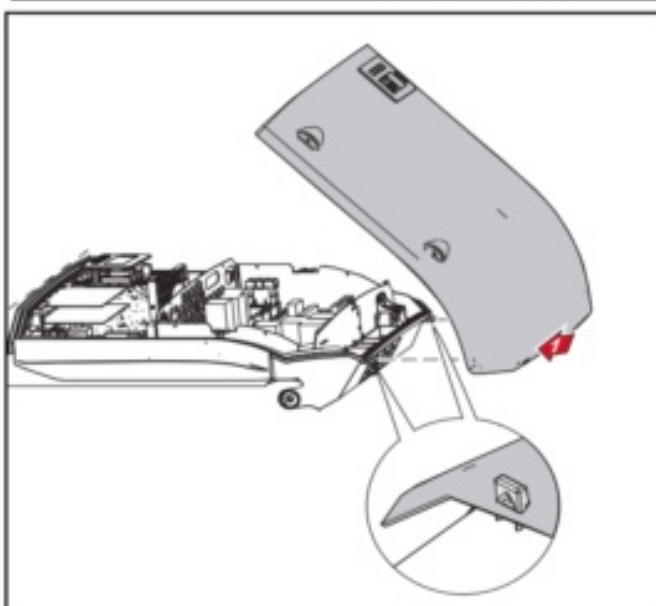
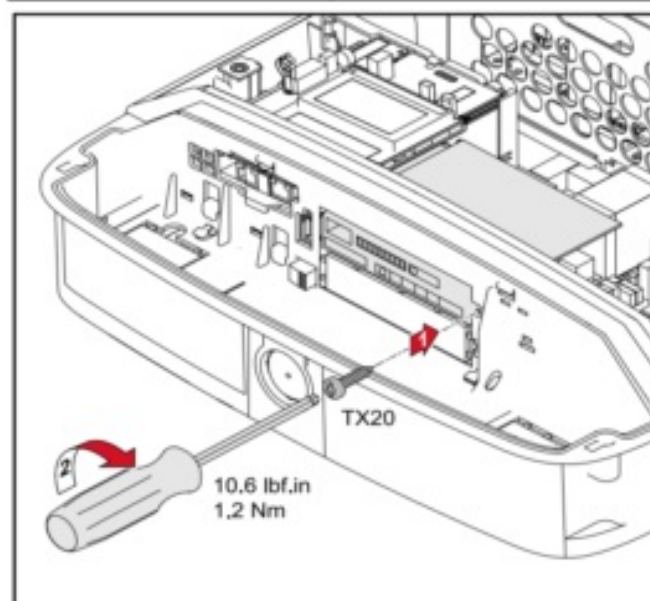
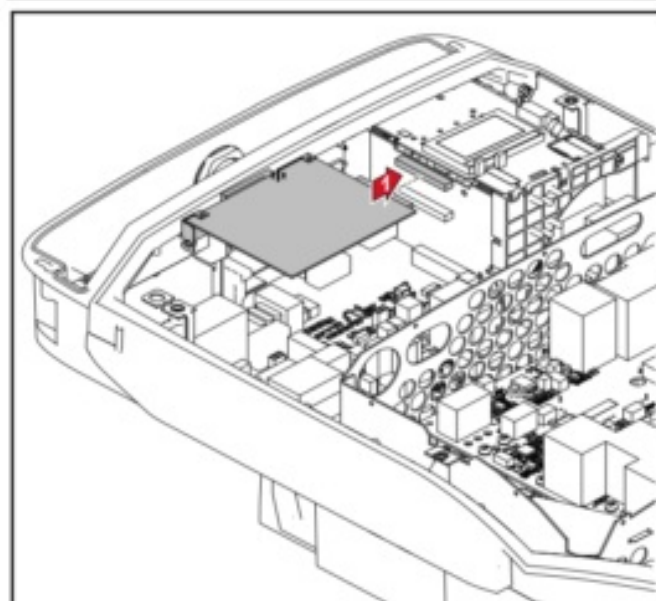
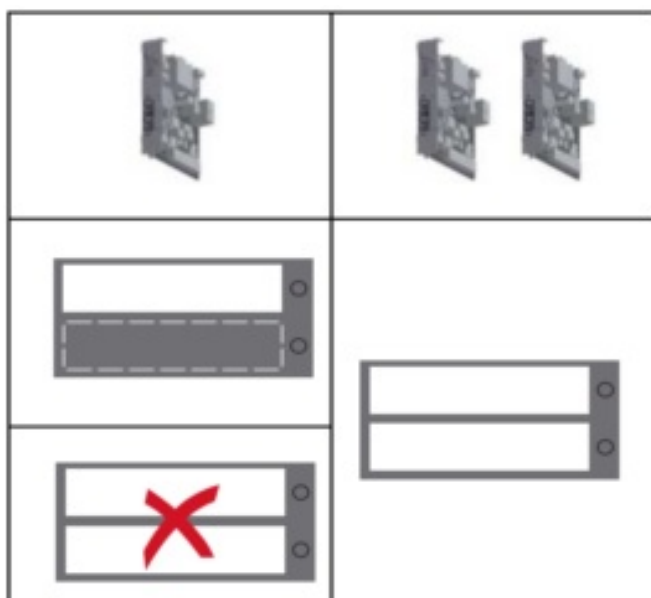
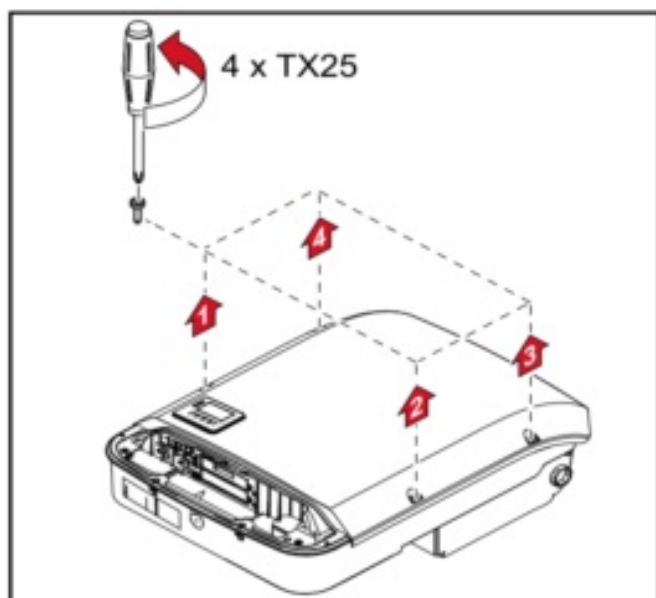


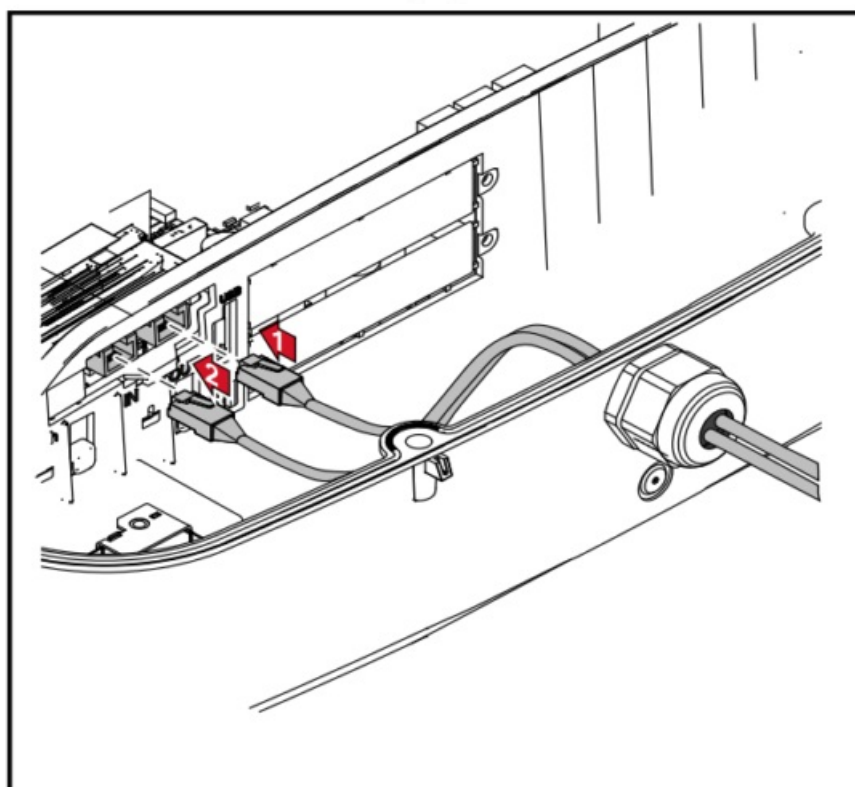
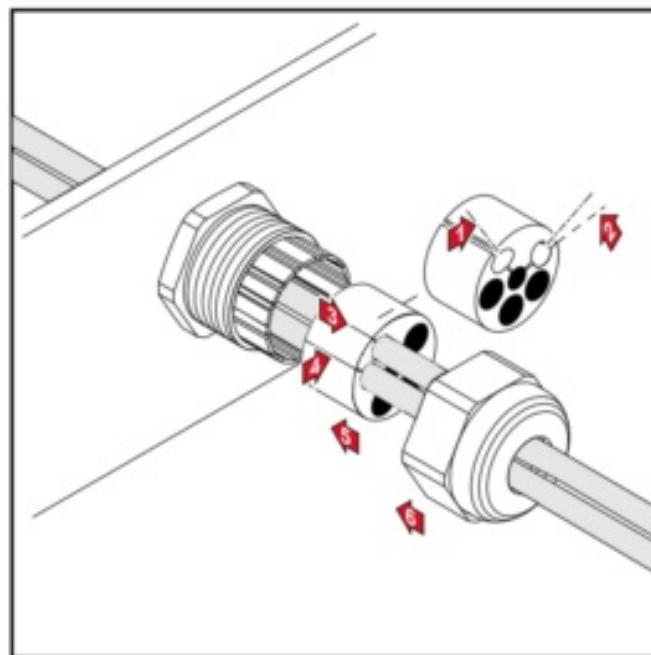
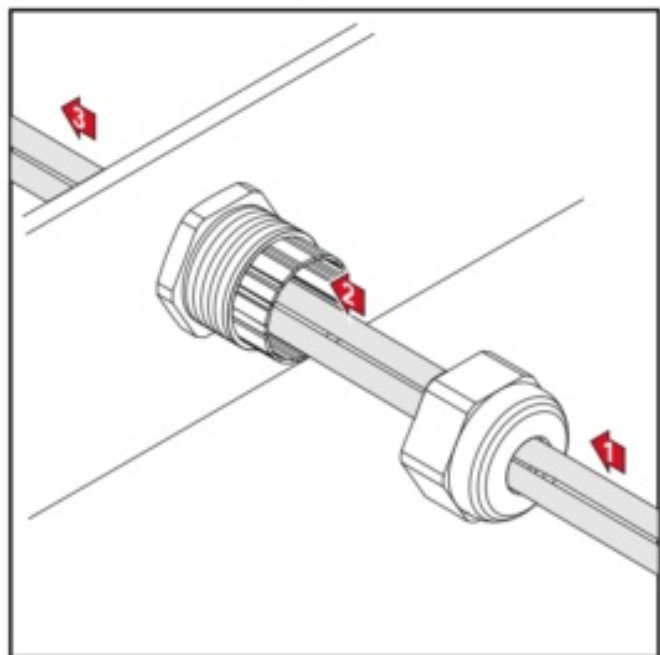
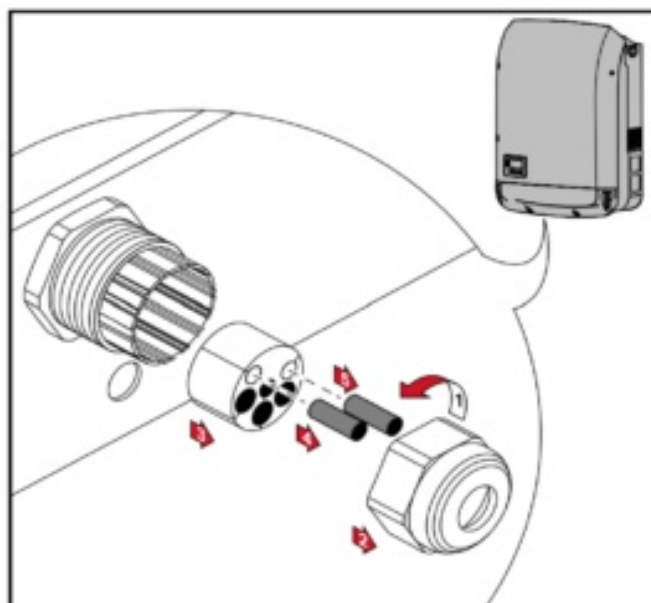
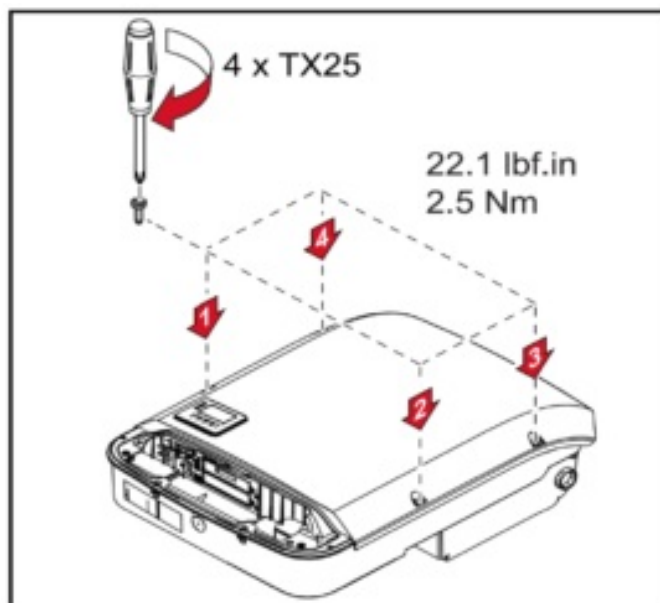




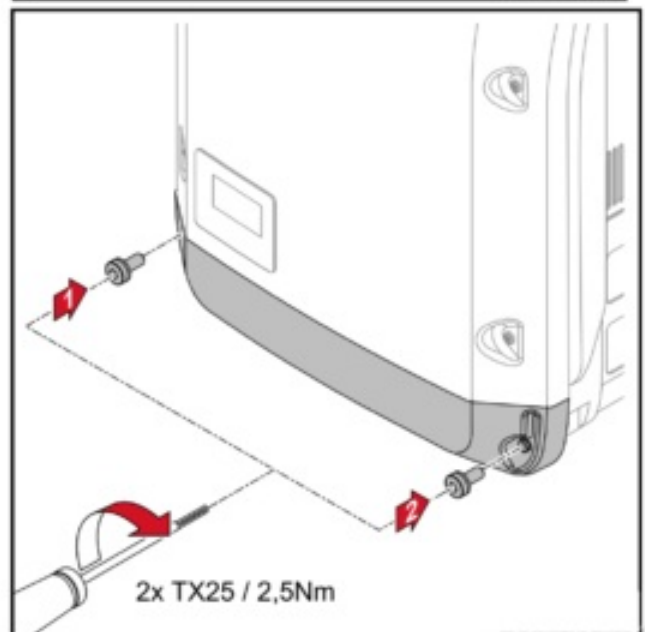
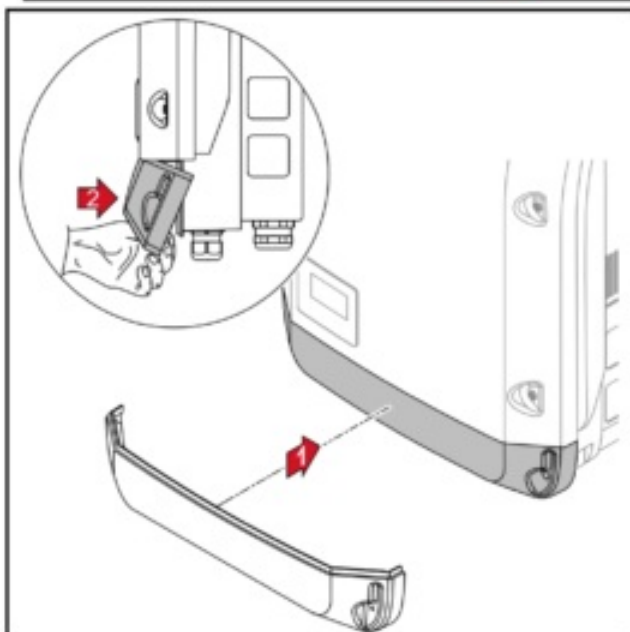
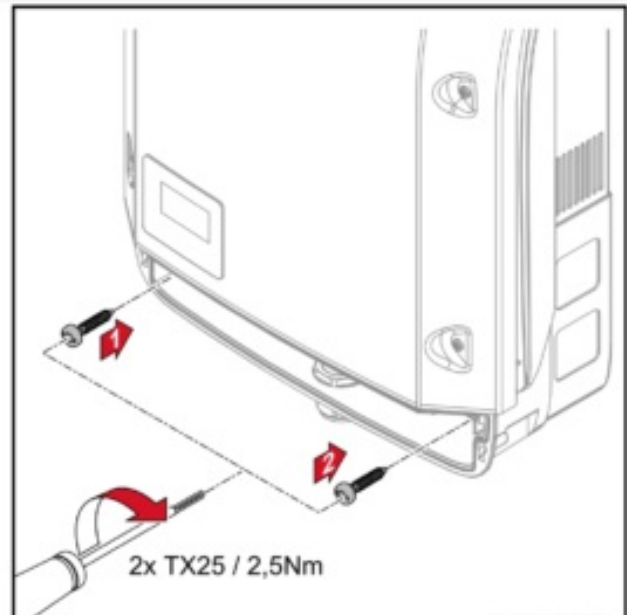
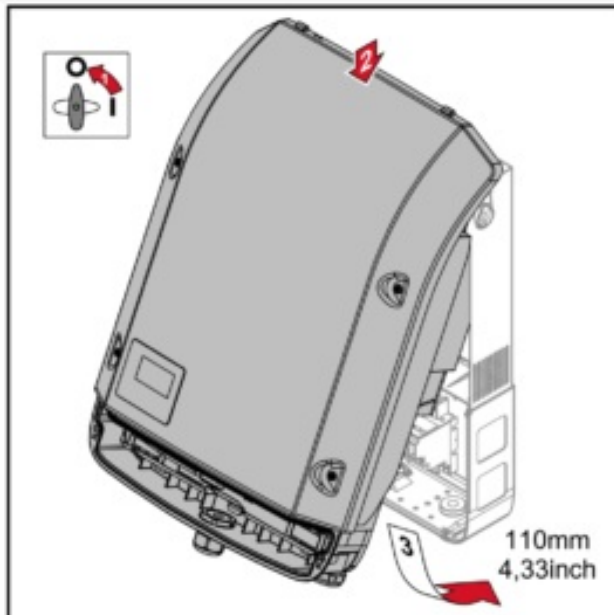


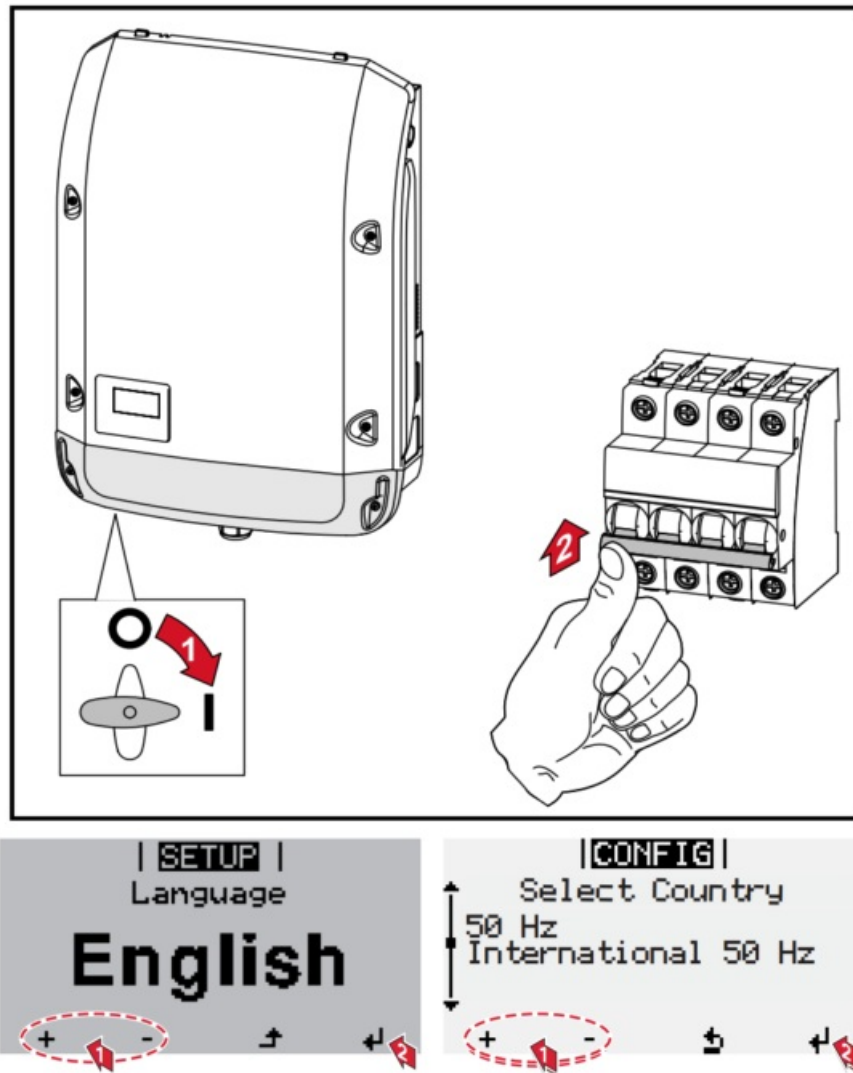
DATCOM





Operation



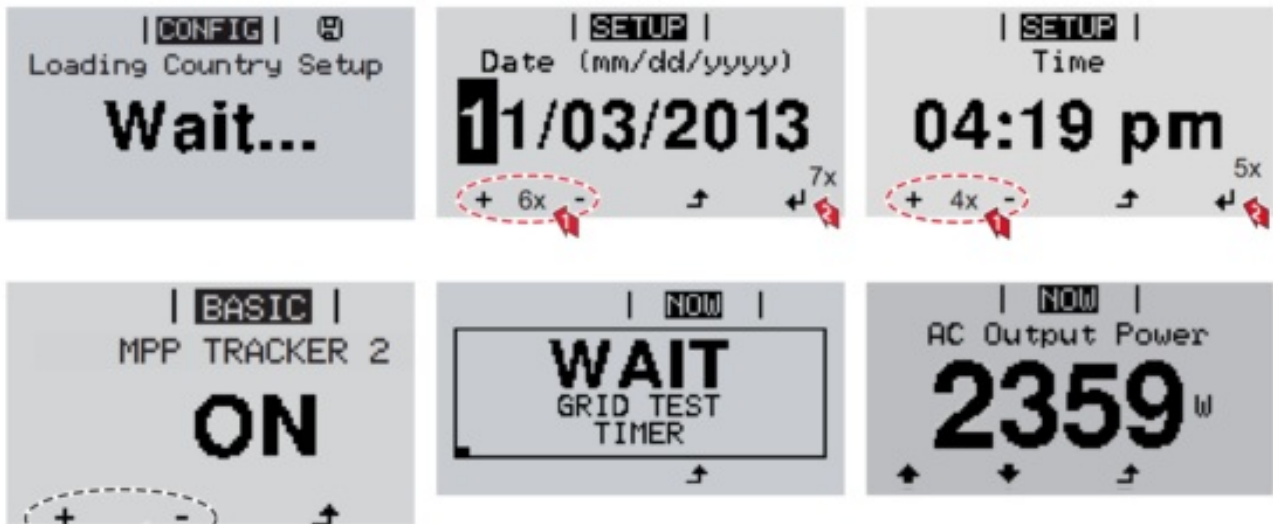


Example Country Setups

The available country setups may change during a software update. Therefore, the following list may not exactly match the display on the inverter.

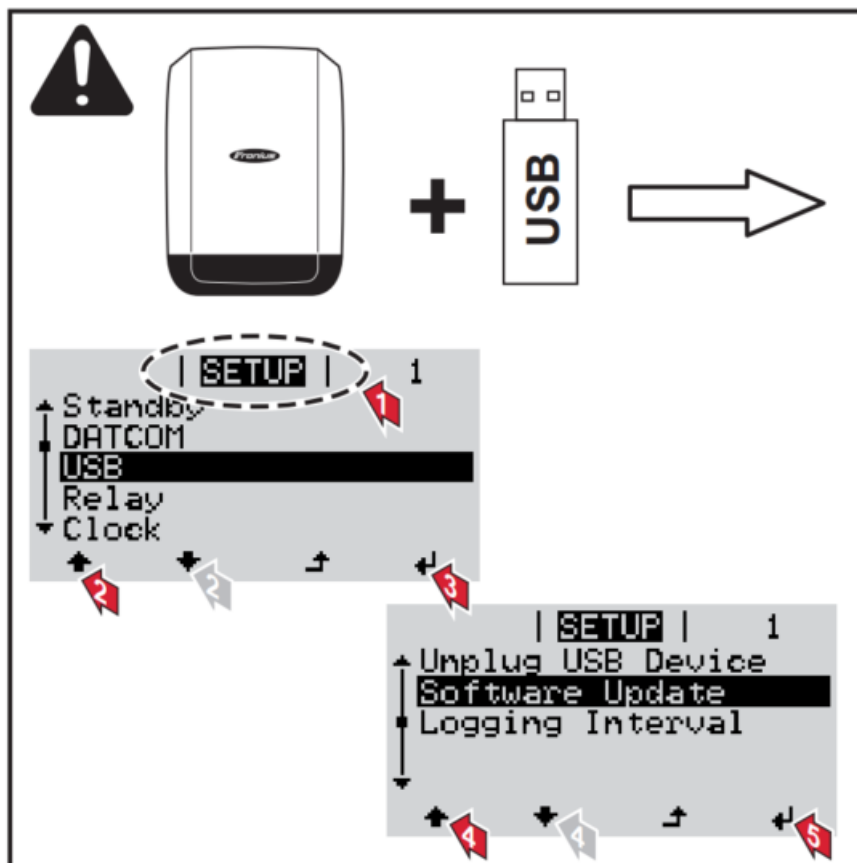
50Hz International 50 Hz
 60Hz International 60 Hz
 AT1E Österreich cosphi = 1
 AT2E Österreich cosphi P 0,9
 AT3E Österreich: Q(U)
 AUS1 Australia AUS1 – AS/
 NZS4777.2
 AUS2 Australia AUS2 – VIC
 AUS3 Australia AUS3 – NSW
 Ausgrid
 AUS4 Australia AUS4 – QLD
 AUS5 Australia AUS5 – SA
 AUS6 Australia AUS6 – WA –
 WP
 AUS7 Australia AUS7 – WA –
 HP
 AUA Australia Region A 2020
 AUB Australia Region B 2020
 AUC Australia Region C 2020
 BE Belgique / België
 BR2 Brasil: ≤ 6 kVA
 BR3 Brasil: > 6 kVA
 CH Schweiz / Suisse / Svizzera /
 Size
 CL
 Chile
 CY ?????? / Kıbrıs / Cyprus
 CZ Česko
 DE1F Deutschland (≤ 4,6 kVA)
 – konst. cos phi(1)
 DE1P Deutschland (≤ 4,6 kVA)
 – cos phi(P) 0,95

DE2F Deutschland (> 4,6 kVA)
 – konst. cosPhi(1)
 DE2P Deutschland (> 4,6 kVA)
 – cosPhi(P) 0,9
 DE2U Deutschland (> 4,6 kVA)
 – Q(U)
 DKA1 West Denmark – 125kW
 DKA2 East Denmark – 125kW
 DU1 Dubai < 10 kW
 DU2 Dubai 10 kW – 400 kW
 EE Estonia
 ES España
 ESOS Territorios españoles en
 el extranjero (Spanish
 Oversea Islands)
 EULV EU – low voltage
 EUMV EU – medium voltage
 FI Finland
 FR France
 FROS Territoire d’Outre-Mer
 (French Oversea Islands)
 G98
 Great Britain GB – G98
 GB Great Britain
 GR ??????
 HR Hrvatska
 HU Magyarország
 IE Éire / Ireland IL
 ?????? / ???????? / Israel IN
 India



The display of parameters to be configured depends on the selected device type

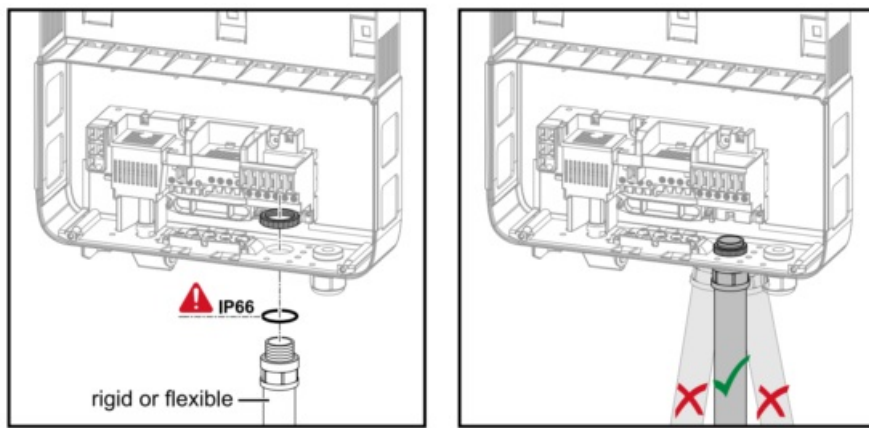
Firmware-/Software-Update



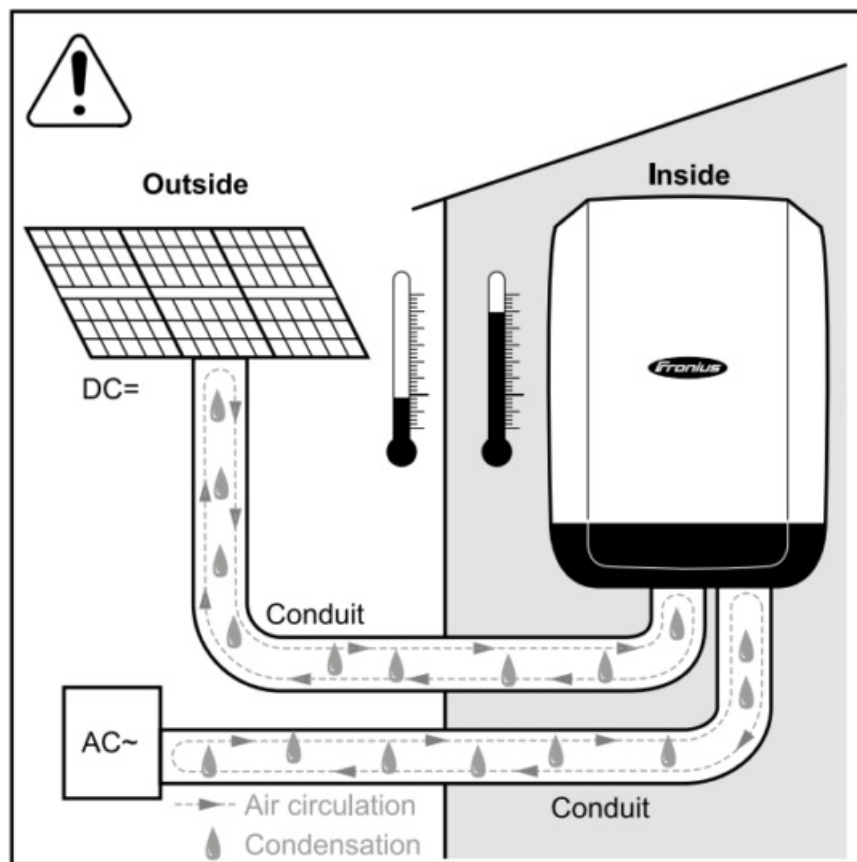
Australia – Conduits

Tightly sealing the conduits

Ensure that the conduits are tightly sealed.



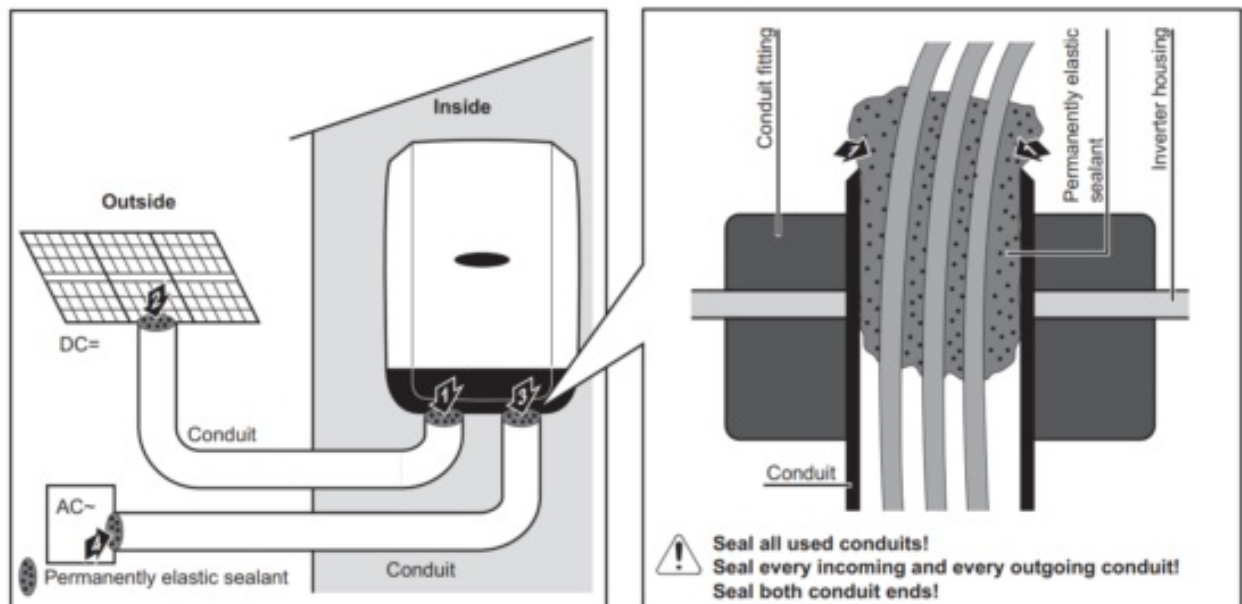
Seal Conduits



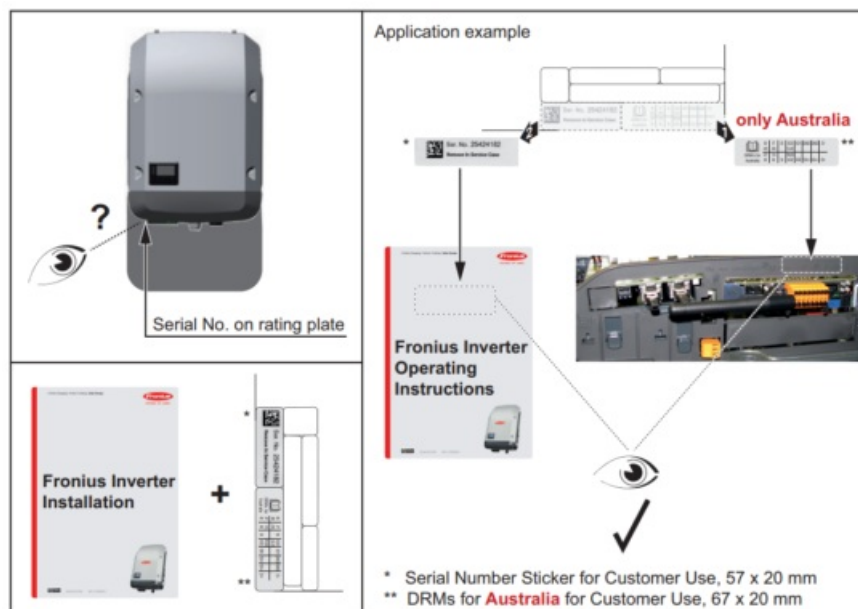
HINWEIS!

Condensation within the conduits can damage the inverter or components of the photovoltaic systems. To avoid undesirable air circulation and condensation in the conduits,

- ▶ seal all conduits being used with a permanently elastic sealant,
- ▶ seal every incoming and outgoing conduit,
- ▶ seal both conduit ends.



Serial Number Sticker for Customer Use




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Documents / Resources

	<p>Fronius Symo 3.0-3-S Grid Connected Inverter [pdf] Instruction Manual Symo 3.0-3-S, Symo 3.7-3-S, Symo 4.5-3-S, Symo 3.0-3-M, Symo 3.7-3-M, Symo 4.5-3-M, Symo 5.0-3-M, Symo 6.0-3-M, Symo 7.0-3-M, Symo 8.2-3-M, Grid Connected Inverter, Symo 3.0-3-S Grid Connected Inverter</p>
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References

- [Fronius Symo 3-8,2 kW \(Online\)](#)
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