



steca
Elektronik

Abbreviated Installation Instructions

coolcept coolcept-x

StecaGrid 1500 (-x)
StecaGrid 1800 (-x)
StecaGrid 2000 (-x)
StecaGrid 2300 (-x)
StecaGrid 2500 (-x)
StecaGrid 3000 (-x)
StecaGrid 3010 (-x)
StecaGrid 3600 (-x)
StecaGrid 4200 (-x)

coolcept³ coolcept³-x

StecaGrid 3203 (-x)
StecaGrid 4003 (-x)
StecaGrid 4803 (-x)
StecaGrid 5003
StecaGrid 5503 (-x)
StecaGrid 6003

About these instructions

The Abbreviated Installation Instructions provide the installer with information on mounting, connecting and commissioning the device.

The Abbreviated Operating Instructions contain basic device operating information for the operator. Detailed information is provided in the comprehensive Installation and Operating Instructions, available via the Internet.



Other sources of information are specified via Internet addresses and QR codes. Scan the QR codes using a smartphone and suitable QR code app.
<http://www.steca.com/Wechselrichter-Wohnsiedlung>

Intended use

- The coolcept family of products consists of inverters of different power classes, intended for indoor or outdoor installation and for single-phase or three-phase feeding.
- These inverters may only be used in grid-connected photovoltaic systems.
- The inverter is suitable for use with all solar modules whose connections are not grounded.
- All connected solar modules must be classified as Class A according to IEC 61730, because these inverters do not have galvanic isolation.
- The maximum permissible system voltage of the photovoltaic generator must be higher than the AC grid voltage.
- Connections for an optional energy storage system are provided on some models. The connector must never be connected directly to a battery.

Installation



- Ensure that you do not impair the fire safety measures of the building when routing cables for the device.
- Make sure that no inflammable gases are present.
- Observe all applicable installation regulations and standards, national laws and connection values specified by the regional power supply company.
- Risk of death by electrocution!
 - Switch off all AC line circuit breakers and secure them against being unintentionally switched on again.
 - Check that all pins of the AC cable are free of voltage.
 - Set the DC circuit breaker on the inverter to position 0 and secure it against being unintentionally switched on again.
 - DC cables carry voltage when the solar modules are subjected to sunlight.

The mounting location and immediate environment must be: permanently fixed, vertical, flat, non-inflammable and not subject to constant vibration. The mounting surface must be able to securely hold the fastening screws.

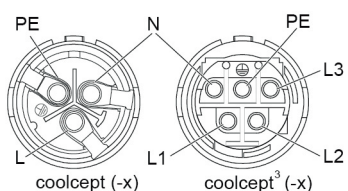
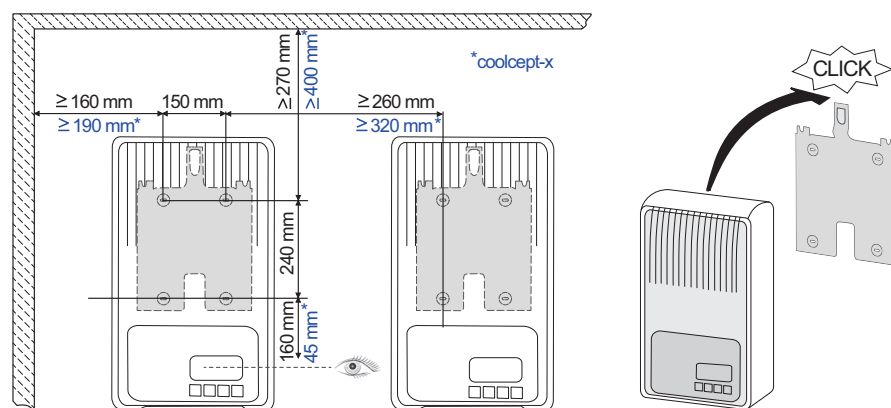
Ensure conformance to the permissible ambient conditions.

Do not install the inverter in areas where animals are kept.

Observe the connection ratings specified on the type plate.

Lay the cables such that the connection cannot come loose accidentally.

Do not connect the DC cables to an earth potential.



a. Connect the **AC plug** to the grid cable as shown (view of the cable connections).
<http://www.wieland-electric.com/de/produkte/rundsteckverbinder-photovoltaik>



b. Connect the **DC plugs** to the cables to the photovoltaic generator, observing the correct polarity.
<https://www.phoenixcontact.com/online/portal/de>



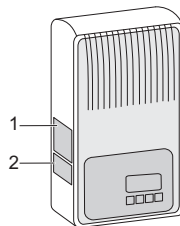
Safety



- This document must be read and understood in full before installing and/or using the device.
- Connection, commissioning and repair may only be performed by a qualified electrician who is specially trained in solar technology.
- If one of the following components is damaged, immediately take the device out of operation and disconnect it from the grid and solar modules:
 - Device (not functioning, visible damage, smoke, penetration of liquid etc.)
 - Cables
 - Solar modules
- Do not switch on the system again until it has been repaired and checked by a suitably qualified and authorised technical specialist.
- Dangerous voltages can remain present on the components up to 10 minutes after switching off the DC circuit breaker and the line circuit breaker.
- Attention, there are 2 voltage sources present: the power grid and the solar modules. Disconnect both voltage sources from the device before working on the device.
- Do not cover the device.
- The factory-applied labels on the device must not be modified or removed.
- Do not open the device.
- Keep children away from photovoltaic systems.
- Follow the general and national safety and accident prevention regulations.
- This document must be stored safely and be available for the entire service life of the device and must be passed on to any subsequent user.

Signs and labels on the device

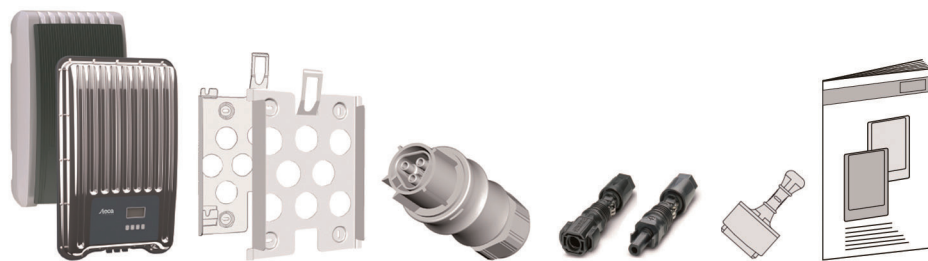
- Type plate with the main technical data and serial number
- Safety label with warning notices



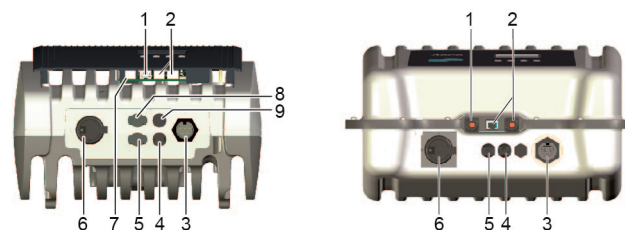
When connecting external components (e.g. data logger): be sure to observe the manufacturer's instructions. Incorrectly connected components can damage the device.

Incorrect operation or settings, especially during the initial commissioning process, can reduce the yields of the system

Scope of delivery



coolcept	1	1	1	-	1
coolcept ³					
coolcept-x	1	1	1	3	1
coolcept ³ -x					



- If present, plug in the TCP-IP (1) and Modbus RTU (7) data connections.
- If present, plug in the RS485 (2) data connection. Plug in any termination plugs that may be required.
- coolcept-x and coolcept³-x only: close any open RJ45 sockets (1, 2) with the sealing caps provided.
- Press the cable plugs of the photovoltaic generator into the PV connectors (4, 5) on the inverter (they click audibly into place).
- Only in the case of coolcept³, only if power converter SolUse is present: press cable plugs of the power converter SolUse into BAT connections (8, 9) on the inverter (they click audibly into place). It is not allowed to connect a photovoltaic generator to the BAT connections.
- Plug the AC plug into the coupling (3) on the inverter (this clicks audibly into place).
- Switch on the AC circuit breaker. This switches on the inverter. The display shows the start page for initial commissioning. Initial commissioning starts. A number of basic settings are queried in a pre-defined sequence.



Detailed information on installation of the AC cables and the line circuit breaker is provided in the downloadable version of the Operating Instructions.
<http://www.steca.com/Wechselrichter-Wohnsiedlung>

- Set the display language.
- Set the date/time.
- Set the country of use. Attention, the country can only be set once!



For detailed information on the country settings, see:
<http://www.steca.com/Wechselrichter-Wohnsiedlung>
Additional configuration may need to be entered, depending on the selected country.

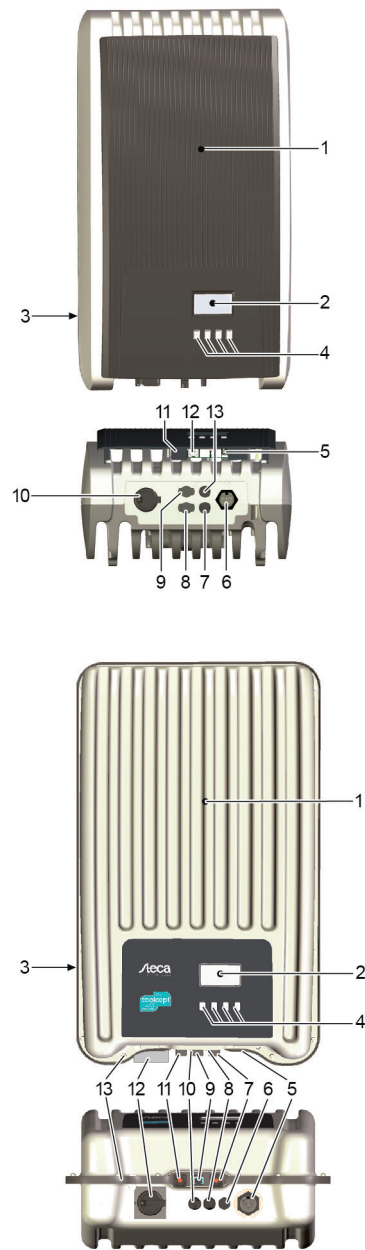
- Select **Finish** and press **SET**.
- If the settings are incomplete then a dialogue stating **Settings are incomplete** is displayed. Press **SET** and complete the missing basic settings.
- When all settings have been made, a dialogue stating **Are all settings correct?** is displayed. To correct any settings: press **ESC**. To finish initial commissioning: press **SET** for a longer period of time (> 1 s). If **SET** was pressed for a longer time then the inverter starts anew and synchronises itself with the grid.
- Switch on the DC circuit breaker (6) on the underside of the inverter. The inverter is ready for operation.



In the case of questions or if more installation information is required, please refer to the full Operating Instructions, which are available for download.
<http://www.steca.com/Wechselrichter-Wohnsiedlung>

Abbreviated Operating Instructions

Structure



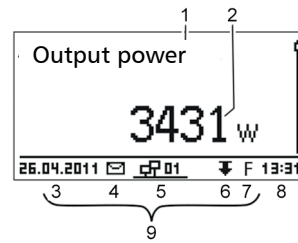
coolcept/coolcept³

- 1 Hood
- 2 Display (monochrome, 128 x 64 pixels)
- 3 Type plate, serial number, warning notices
- 4 Operating buttons: ESC, △, ▽, SET (from left to right)
- 5 RJ45 sockets (2 x RS485 bus)
- 6 AC connection
- 7 DC connection, Minus (-) for solar module
- 8 DC connection, Plus (+) for solar module
- 9 DC connection, Plus (+) for optional energy storage system
- 10 DC circuit breaker (interrupts the plus and minus inputs simultaneously)
- 11 RJ10 socket (Modbus RTU)
- 12 RJ45 socket (LAN)
- 13 DC connection, Minus (-) for optional energy storage system

coolcept-x/coolcept³-x

- 1 Hood
- 2 Display (monochrome, 128 x 64 pixels)
- 3 Type plate, serial number, warning notices
- 4 Operating buttons: ESC, △, ▽, SET
- 5 AC connection
- 6 Pressure equalisation membrane
- 7 RJ45 socket (RS485 bus)
- 8 DC connection, Minus (-) for solar module
- 9 RJ45 socket (RS485 bus)
- 10 DC connection, Plus (+) for solar module
- 11 RJ45 socket (LAN)
- 12 DC circuit breaker (interrupts the plus and minus inputs simultaneously, can be secured with a padlock)
- 13 Hole for optional ground or mechanical fastening (safety chain)

Display



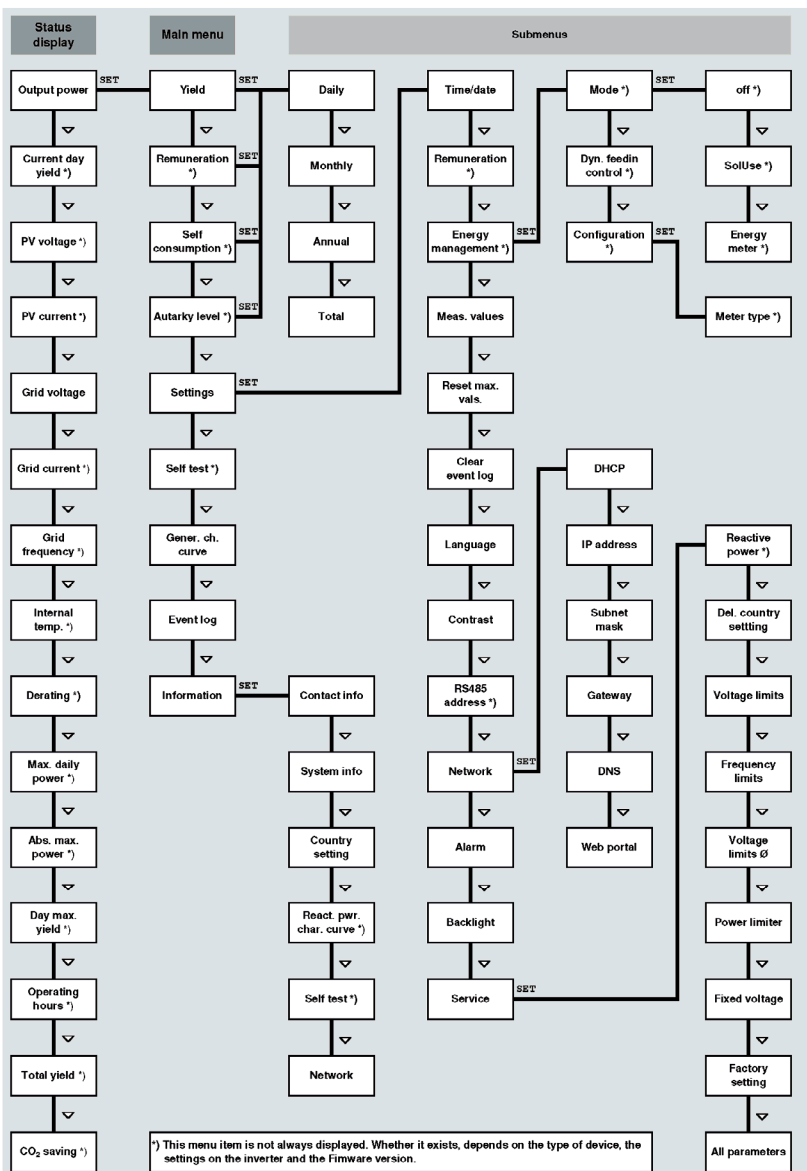
Example status display of the output power:

- 1 Display label
- 2 Measurement with units
- 3 Date
- 4 Symbol *Non-confirmed event messages*
- 5 Animated symbol *Connect* (indicates data traffic on the RS485 bus)
- 6 Symbol *Derating*
- 7 Symbol *Fixed voltage mode activated*
- 8 Time
- 9 IP address of the device when a network connection has been established, display alternates with ③ - ⑦

Operating buttons

Button	Action	Function	
		General information	Guided configuration process
ESC	Press briefly	Jumps up by 1 menu level	Navigates 1 step back
	Press longer (≥ 1 second)	Discards changes	
△	Press briefly	Jumps to status display	Jumps to the start of the guided configuration process
		<ul style="list-style-type: none"> ▪ Moves the selection bar or the display content upwards ▪ Moves the selection 1 position to the left when entering numeric values ▪ Increases the setting value by 1 step 	
▽	Press briefly	<ul style="list-style-type: none"> ▪ Moves the selection bar or the display content downwards ▪ Moves the selection 1 position to the right when entering numeric values ▪ Decreases the setting value by 1 step 	
SET	Press briefly	Jumps down by 1 menu level	-
	Press longer (≥ 1 second)	<ul style="list-style-type: none"> ▪ A selected numerical value starts flashing and can be changed ▪ Accepts any entered changes ▪ Changes the state of a control element (check box/radio button) 	
	Press longer (≥ 1 second)	Answers a query dialogue with Yes	Navigates 1 step forward

Menu structure

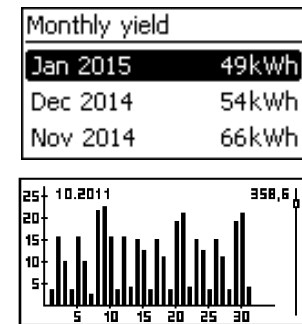


Errors are indicated by a red flashing background. An event message is also displayed at the same time.

For detailed information on the menu structure and event messages, see: <http://www.steca.com/Wechselrichter-Wohnsiedlung>



Example: Numerical and graphical display of the monthly yields



The status display is shown.

1. Press SET. The main menu is displayed with Yield selected.
2. Press SET. A list of yield periods (Day, Month, Year) is displayed.
3. Press ▽△ to select a yield period.
4. Press SET. The individual yields for the yield period are shown in a list (Fig. left).
5. Press ▽△ to select an individual yield.
6. Press SET. The selected individual yield is shown in a chart (Fig. left).
7. Press ▽△ to page through the charts.
8. Press SET to return to the list.
9. Yields can also be displayed as monetary values (remuneration) (see menu structure).

The following data is stored in the inverter:

- Event messages with date
- Energy yields on a daily, monthly and annual basis

Energy yield data	Storage resolution/period
10-minutes values	31 days
Daily values	13 months
Monthly values	30 years
Annual values	30 years
Total yield	Permanent

Data communication

For data analysis purposes, the inverter can provide a wide range of data via the RS485 and LAN data interfaces (e.g. data logger). Multiple inverters can be interconnected via the RS485 bus.

For detailed information on data communication, see: <http://www.steca.com/Wechselrichter-Wohnsiedlung>



System monitoring

Registration of the operator and the system in the StecaGrid portal at: <http://www.steca.com/portal>



Care/Maintenance

- Remove dust with compressed air (max. 2 bar).
- Remove soiling with a slightly damp cloth (clear water or a 2% hard soap solution).