

coolcept³ fleX

StecaGrid 3213, StecaGrid 4013, StecaGrid 5013, StecaGrid 6013

inverter topology

The coolcept inverter topology was implemented in the single-phase StecaGrid inverters for the first time and achieved maximum efficiency thanks to the innovative circuit. The three-phase coolcept³-fleX inverters also enjoy the advantages of this circuit. The three-phase topology is fully reactive-current capable and thus also prepared for future requirements.

Always symmetrical

The advantage of three-phase feed-in is that the solar power produced is always distributed symmetrically over all three grid conductors and fed into the public grid. This is the case with these inverters over the entire power range. The symmetrical feed-in is entirely in the interest of the energy supply companies and also corresponds to the three-phase consumption in the household.

Highest efficiency with long service life

The very high efficiency results in a peak efficiency of 98.6%, which means that less power loss has to be generated and dissipated to the environment. These are your yield advantages. Since a three-phase feed-in feeds energy into the grid on at least two phases at any time, intermediate energy storage in the device - as is the case with single-phase feed-in - is not necessary. Thus the coolcept³-fleX inverters completely dispense with the electrolytic capacitors required for intermediate storage, which can influence the service life of an electronic device through possible drying out. When using coolcept³-fleX inverters, the plant operator therefore has the prospect of a long service life. In addition, a new, unique cooling concept inside the inverters guarantees an even distribution of heat and thus a long service life of the devices.

Product design and visualization

The StecaGrid has a graphic LCD display with which energy yield values, current performance and operating parameters of the system can be visualised. The innovative menu offers the possibility of an individual selection of the different measured values. A guided, pre-programmed menu ensures smooth, final commissioning of the device.

assembly

The lightweights with only 12 kg can be easily and safely mounted on the wall. The supplied wall bracket enables simple and very convenient installation. It is also not necessary to open the device for installation. All connections and the DC circuit breaker are accessible from the outside. For the DC connection, the Sunclix mating connectors are included in the scope of delivery.

Product features

- Highest efficiency
- Three-phase, symmetrical grid feeding
- Simple installation
- Integrated data logger
- Low housing temperature at full load
- Robust metal casing
- Suitable for outdoor installation
- Integrated DC circuit breaker
- Very long service life
- Droop Mode for integration in hybrid systems
- Fixed voltage mode for other energy sources
- Optimised shadow management using global MPP tracking

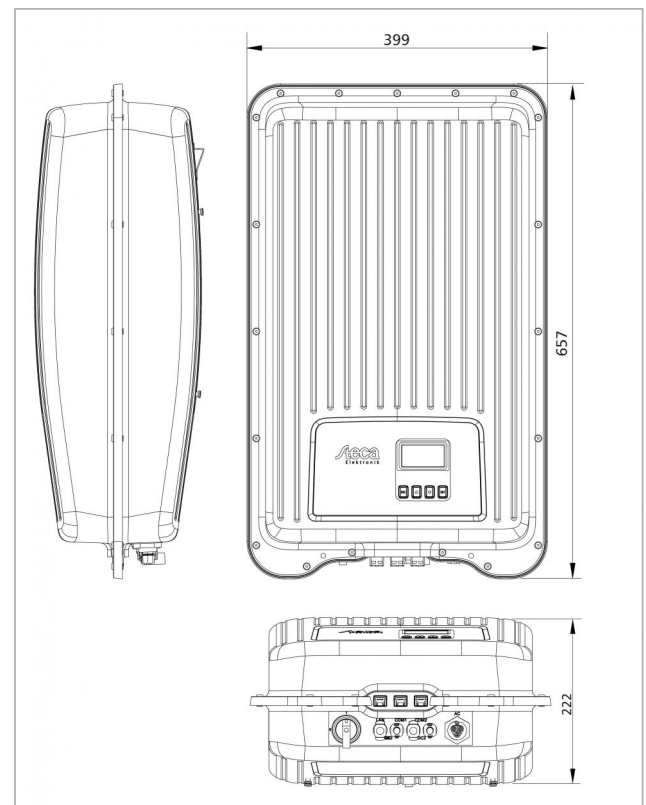
Displays

- Multifunction graphical LC display with backlighting
- Animated representation of yield

Operation

- Simple menu-driven operation
- Multilingual menu navigation

3 ph



| | StecaGrid 3213 | StecaGrid 4013 | StecaGrid 5013 | StecaGrid 6013 |
|--|---|----------------|----------------|----------------|
| DC input side (PV generator) | | | | |
| Maximum input voltage | 1000 V | | | |
| MPP voltage range | 250 V ... 800 V | | | |
| Number of MPP tracker | 1 | | | |
| Maximum input current | 11.0 A | | | |
| Maximum input power at maximum active output power | 3300 W | 4100 W | 5110 W | 6130 W |
| AC output side (Grid connection) | | | | |
| Grid voltage | 320 V ... 480 V (depending on regional settings) | | | |
| Rated grid voltage | 400 V | | | |
| Maximum output current | 7.0 A | 7.0 A | 10.0 A | 10.0 A |
| Maximum active power (cos phi = 1) | 3200 W | 4000 W | 5000 W | 6000 W |
| Maximum apparent power | 3200 VA | 4000 VA | 5000 VA | 6000 VA |
| Rated power | 3200 W | 4000 W | 5000 W | 6000 W |
| Rated frequency | 50 Hz and 60 Hz | | | |
| Frequency | 45 Hz ... 65 Hz (depending on regional settings) | | | |
| Night-time power loss | < 3 W | | | |
| Feeding phases | three-phase | | | |
| Total harmonic distortion (cos phi = 1) | < 1 % | | | |
| Power factor cos phi | 0.8 capacitive ... 0.8 inductive | | | |
| Characterisation of the operating performance | | | | |
| Max. efficiency | 98.0 % | | | |
| European efficiency | 97.0 % | 98.0 % | 98.0 % | 98.0 % |
| MPP efficiency | > 99.7 % (static), > 99 % (dynamic) | | | |
| Own consumption | < 8 W | | | |
| Power derating at full power from | 50 °C (T _{amb}) | | | |
| Safety | | | | |
| Isolation principle | no galvanic isolation, transformerless | | | |
| Grid monitoring | yes, integrated | | | |
| Residual current monitoring | yes, integrated (The design of the inverter prevents it from causing DC leakage current) | | | |
| Operating conditions | | | | |
| Area of application | outdoors & indoors | | | |
| Climate protection class as per IEC 60721-3-4 | 3K3 | | | |
| Ambient temperature | -15 °C ... +60 °C | | | |
| Storage temperature | -30 °C ... +70 °C | | | |
| Relative humidity | 0 % ... 100 %, non-condensating | | | |
| Noise emission (typical) | 29 dBA | | | |
| Fitting and construction | | | | |
| Degree of protection | IP 65 | | | |
| Overvoltage category | III (AC), II (DC) | | | |
| DC Input side connection | Phoenix Contact SUNCLIX (1 pair), mating connector included | | | |
| AC output side connection | Wieland RST25I5 plug, mating connector included | | | |
| Dimensions (X x Y x Z) | 399 x 657 x 222 mm | | | |
| Weight | 12.0 kg | | | |
| Communication interface | RS-485 (1 x RJ45 sockets; connectable to Meteocontrol WEB'log or Solar-Log™, Ethernet interface (1 x RJ45), Modbus RTU (1 x RJ45 socket; connectable to energy counter) | | | |
| Integrated DC circuit breaker | yes, compliant with VDE 0100-712 | | | |
| Cooling principle | temperature controlled fan, variable speed, internal (dustproof) | | | |
| Test certificate | see certificate download on the product page | | | |