

Coolcept

StecaGrid 1800, StecaGrid 2300, StecaGrid 3010, StecaGrid 3000, StecaGrid 3600, StecaGrid 4200

Inverter topology

The new „coolcept“ inverter topology, with an innovative circuit design that achieves highest efficiency, has now been integrated into these StecaGrid inverters.

The „coolcept“ inverter topology is based on a single-stage transformerless switching concept that uses proven standard components to implement symmetric step-down converters with downstream pole-reversing circuits.

Highest efficiency with longer service life

The high efficiency results in a peak efficiency of 98.6 % and a European efficiency of up to 98.3 %, which results in less lost power that must be dissipated into the environment. This improves your yields.

The efficiencies of these inverters are only very slightly dependent on the module input voltage. This allows the number and type of modules to be freely selected without resulting in a yield loss.

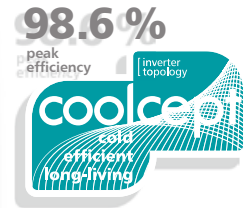
In addition to this, a new and unique cooling concept inside the inverter ensures an even distribution of the dissipated heat and a long service life for the device.

Product design and visualisation

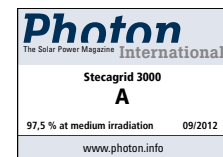
For the first time, the very high efficiency allows the use of a design housing made of plastic. This offers many advantages, for example in the installation. The overall surface temperature of the StecaGrid remains very low. The inverters have protection class II.

The StecaGrid has a graphical LCD display for visualising the energy yield values, current performance and operating parameters of the system. Its innovative menu allows individual selection of the various measurements.

The guided, pre-programmed menu allows easy final commissioning of the device.



StecaGrid 1800
StecaGrid 2300
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Installation

The lightweight weigh only 9 kg / 10 kg and can be easily and safely mounted on a wall. The supplied wall bracket and practical recessed grips for right and left handed installers make mounting of the device simple and convenient. The device does not need to be opened for installation. All connections and the DC circuit breaker are externally accessible.

Product features

- Highest efficiency
- Simple installation
- Integrated data logger
- Firmware update possible
- Low housing temperature at full load
- Functionally perfect, environmentally-friendly plastic housing
- Lowest possible own consumption
- Integrated DC circuit breaker
- Protective insulation according to protection class II
- Very long service life
- Droop Mode for integration in hybrid systems (further information: Catalogue Steca PV Off Grid / Single-phase and three-phase AC hybrid systems)
- Fixed voltage mode for other energy sources
- Service menu for parameter adjustment
- 7-year warranty after registration

Displays

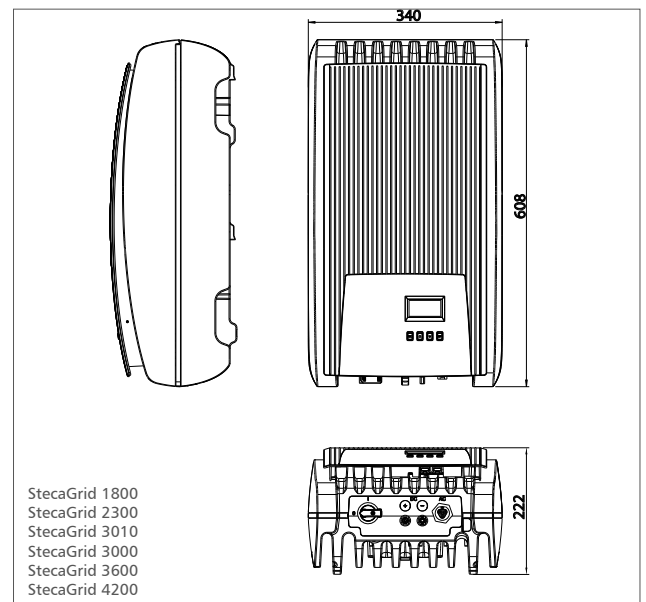
- Multifunction graphical LCD display with backlighting
- Animated representation of yield

Operation

- Simple menu-driven operation
- Multilingual menu navigation

Options

- System monitoring with Solar-Log™ and WEB'log
- Can be connected to the StecaGrid Vision display unit or a large-format display



System monitoring and accessories



StecaGrid User
Visualisation software



StecaGrid Vision
Display unit



**Meteocontrol WEB'log and
Meteocontrol WEB'log Comfort**
Data logger



Solar-Log 500/1000™
Data logger

	StecaGrid 1800	StecaGrid 2300	StecaGrid 3010	StecaGrid 3000	StecaGrid 3600	StecaGrid 4200
DC input side (PV-generator)						
Maximum input voltage	600 V			845 V		
Minimum input voltage for feeding	125 V			350 V		
MPP voltage for rated output	160 V ... 500 V	205 V ... 500 V	270 V ... 500 V	350 V ... 700 V		360 V ... 700 V
Maximum input current	11.5 A			12 A		
Maximum input power at maximum active output power	1,840 W	2,350 W	3,070 W	3,060 W	3,690 W	4,310 W
Maximum recommended PV power	2,200 Wp	2,900 Wp	3,800 Wp	3,800 Wp	4,500 Wp	5,200 Wp
AC output side (Grid connection)						
Grid voltage	185 V ... 276 V (depending on regional settings)					
Rated grid voltage	230 V					
Maximum output current	12 A	14 A		16 A		18,5 A
Maximum active power (cos phi = 1)	1,800 W	2,300 W	3,000 W	3,000 W	3,600 W ¹⁾	4,200 W ¹⁾
Maximum active power (cos phi = 0.95)	1,800 W	2,300 W	3,000 W	3,000 W	3,530 W	3,990 W
Maximum apparent power (cos phi = 0.95)	1,900 VA	2,420 VA	3,160 VA	3,130 VA	3,680 VA	4,200 VA
Rated power	1,800 W	2,300 W	3,000 W	3,000 W	3,600 W ²⁾	4,200 W ³⁾
Rated frequency	50 Hz and 60 Hz					
Frequency	45 Hz ... 65 Hz (depending on regional settings)					
Night-time power loss	< 1.2 W			< 0.7 W		
Feeding phases	single-phase					
Distortion factor (cos phi = 1)	< 2 %					
Power factor cos phi	0.95 capacitive ... 0.95 inductive					
Characterisation of the operating performance						
Maximum efficiency	98.1 %			98.6 %		
European efficiency	97.5 %	97.6 %	97.7 %	98.3 %	98.3 %	98.2 %
Californian efficiency	97.6 %	97.7 %	97.8 %	98.4 %	98.3 %	98.2 %
MPP efficiency	> 99.7 % (static), > 99 % (dynamic)					
Own consumption	< 4 W					
Power derating at full power	from 50 °C (T _{amb})		from 45 °C (T _{amb})	from 50 °C (T _{amb})		from 45 °C (T _{amb})
Safety						
Isolation principle	no galvanic isolation, transformerless					
Grid monitoring	yes, integrated					
Residual current monitoring	yes, integrated ⁴⁾					
Operating conditions						
Area of application	indoor rooms with or without air conditioning					
Ambient temperature	-15 °C ... +60 °C					
Storage temperature	-30 °C ... +80 °C					
Relative humidity	0 % ... 95 %, non condensating					
Noise emission (typical)	23 dBA	25 dBA	29 dBA	26 dBA	29 dBA	31 dBA
Fitting and construction						
Degree of protection	IP 21 (casing: IP 51; display: IP 21)					
Overvoltage category	III (AC), II (DC)					
DC Input side connection	MultiContact MC 4 (1 pair)					
AC output side connection	Wieland RST25i3 plug, mating connector included					
Dimensions (X x Y x Z)	340 x 608 x 222 mm					
Weight	10 kg			9 kg		
Communication interface	RS485; 2 x RJ45 sockets; connectable to StecaGrid Vision, Meteocontrol WEB'log or Solar-Log™					
Integrated DC circuit breaker	yes, compliant with VDE 0100-712					
Cooling principle	temperature-controlled fan, variable speed, internal (dustproof)					
Test certificate	CE mark, VDE AR N 4105, G83 under preparation: CEI 0-21			certificate of compliance as per DIN VDE 0126-1-1, CE mark, VDE AR N 4105, G83, UTE C 15-712-1, AS4777, CEI 0-21		

¹⁾ Belgium: 3,330 W ²⁾ Portugal: 3,450 W ³⁾ Portugal: 3,680 W ⁴⁾ The design of the inverter prevents it from causing DC leakage current.

