StecaGrid 2020, StecaGrid 3000, StecaGrid 3600 and StecaGrid 4200

StecaGrid 2020
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 98.8 % 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.

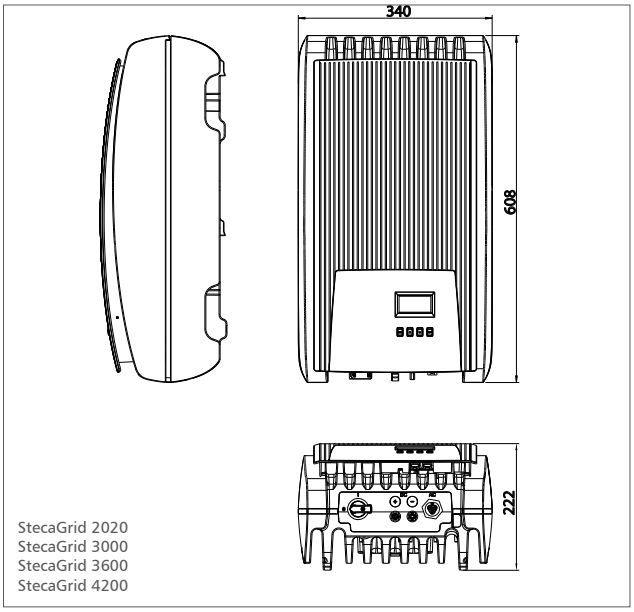
Installation
The lightweights weigh only 9 kg and can be easily and safely mounted on a wall. The supplied wall bracket and practical recessed grips for right and left handed installers make mounting of the device simple and convenient. The device does not need to be opened for installation. All connections 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



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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 2020 (125 V AC)	StecaGrid 3000	StecaGrid 3600	StecaGrid 4200
DC input side (PV-generator)				
Maximum start voltage	450 V	845 V		
Maximum input voltage	450 V	845 V		
Minimum input voltage	190 V	350 V		
Minimum input voltage for rated output	210 V	350 V	365 V	430 V
MPP voltage	190 V ... 400 V	350 V ... 700 V		
Maximum input current	10 A			
Maximum input power at maximum active power	2,090 W	3,060 W	3,690 W	4,290 W
Maximum recommended PV power	2,400 Wp	3,800 Wp	4,500 Wp	5,300 Wp
AC output side (Grid connection)				
Grid voltage	90 V ... 150 V (depending on regional settings)	185 V ... 276 V (depending on regional settings)		
Rated grid voltage	125 V	230 V		
Maximum output current	18 A	16 A		19 A
Maximum active power (cos phi = 1)	2,000 W	3,000 W	3,600 W [1]	4,200 W
Maximum active power (cos phi = 0.95)	-	3,000 W	3,530 W	3,990 W
Maximum apparent power (cos phi = 0.95)	-	3,130 VA	3,680 VA	4,200 VA
Rated power	2,000 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	< 0.9 W			
Feeding phases	single-phase			
Distortion factor (cos phi = 1)	< 2 %			
Power factor cos phi	> 0.99	0.95 capacitive ... 0.95 inductive		
Characterisation of the operating performance				
Maximum efficiency	97.5 %	98.6 %		98.8 %
European efficiency	96.7 %	98.2 %	98.1 %	98.3 %
Californian efficiency	96.8 %	98.3 %	98.2 %	98.4 %
MPP efficiency	> 99.7 % (static), > 99 % (dynamic)			
Own consumption	< 8 W			
Power derating at full power	from 50 °C (T_{amb})		from 45 °C (T_{amb})	
Standby power	6 W			
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	< 39 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 paar)			
AC output side connection	Wieland RST25i3 plug, mating connector included			
Dimensions (X x Y x Z)	340 x 608 x 222 mm			
Weight	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			
Test certificate	CE mark	certificate of compliance as per DIN VDE 0126-1-1, CE mark, VDE AR N 4105, DK 5940, 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.