coolcept fleX

StecaGrid 1511, StecaGrid 2011, StecaGrid2511, StecaGrid 3011, StecaGrid 3611, StecaGrid 3611_2, Steca Grid 4611_2

Reliable technology – even more versatile

With coolcept fleX Steca introduces the successor generation to the established coolcept-topology. Coolcept fleX offers a creative energy concept for any modern home.

What is coolcept fleX? The brand-new electronic platform is being used as the technological heart of the next generation of solar electronics and connects photovoltaics-based power generation, load management, and even e-mobility for the first time ever. The coolcept fleX platform is open with regard to its future use, it is still implemented on a single board. This extremely small and compact format permits the use of affordable standard components on the circuit board. Thus making it possible to use the same device for various differing applications.

coolcept fleX inverter Coolcept fleX is the centerpiece of the new inverter generation. As usual, with nominal powers of 1.5 – 4.6 kW, they attain particularly high peak efficiencies.

The advantages of coolcept flex inverters coolcept fleX is flexible. Multiple MPP trackers allow handling simple or even complicated module fields.

coolcept fleX is tough und uncomplicated. Indoor and outdoor installation is enabled by a robust IP65- Casing. However, the product line is not only one of the lightest in its class, but is also very easy to install too.

coolcept fleX is future-proof. Steca is offering an integrated, future-proof concept for energy generation, consumption, storage and feeding for the modern home of tomorrow.

WORLD FIRST

One for all This incomparably affordable all-in one solution offers functions for very different applications and is even scalable in relation to the power requirement. Whether you need one or more MPP trackers, high-voltage or low-voltage storage, or a solution with or without an emergency power supply – everything is possible. Steca has already thought of and prepared for charging an electric vehicle straight from a PV generator. The new components and setting options enable use in many countries.

Maximum efficiencies at all input voltages and reliable cooling concept

The maximum efficiencies of the state-of-the-art power electronics topology ensure minimal losses, thus guaranteeing a very long service life thanks to extremely low levels of self-heating.

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	StecaGrid 1511	StecaGrid 2011	StecaGrid 2511	StecaGrid 3011	StecaGrid 3611	StecaGrid 3611_2	StecaGrid 4611_2
DC input side (PV generator)							
Maximum input voltage	450 V	450 V	450 V	750 V	750 V	750 V	750 V
Operating input voltage range	75 V … 360 V	75 V … 360 V	75 V … 360 V	125 V … 600 V	150 V … 600 V	150 V … 600 V	150 V … 600 V
Operating input voltage range at nominal power	120 V … 360 V	160 V … 360 V	200 V … 360 V	230 V … 600 V	280 V … 600 V	280 V … 600 V	
Number of MPP tracker	1	1	1	1	1	2	2
Maximum input current	13.0 A	13.0 A	13.0 A	13.0 A	13.0 A	2 x 13.0 A	2 x 13.0 A
Maximum input power at maximum active output power	1540 W	2050 W	2560 W	3070 W	3770 W	3770 W	4740 W
AC output side (Grid connection)							
Grid voltage	185 V … 276 V (depending on regional settings)						
Rated grid voltage	230 V						
Maximum output current	12.0 A	12.0 A	14.0 A	14.0 A	16.0 A	16.0 A	20.0 A
Maximum active power (cos phi = 1)	1500 W	2000 W	2500 W	3000 W	3680 W	3680 W	4600 W
Maximum apparent power	1500 VA	2000 VA	2500 VA	3000 VA	3680 VA	3680 VA	4600 VA
Rated power	1500 W	2000 W	2500 W	3000 W	3680 W	3680 W	4600 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	single-phase						
Total harmonic distortion (cos phi = 1)	< 3 %						
Power factor cos phi	0.8 capacitive … 0.8 inductive						
Characterisation of the operating performance							
Max. efficiency	97.4 %	97.4 %	97.4 %	97.0 %	97.0 %	97.0 %	97.4 %
European efficiency	96.1 %	96.5 %	96.6 %	96.3 %	96.3 %	96.3 %	96.9 %
MPP efficiency	> 99.7 % (static), > 99 % (dynamic)						
Own consumption	< 20 W						
Power derating at full power from	50 °C (T_{amb})	50 °C (T_{amb})	50 °C (T_{amb})	50 °C (T_{amb})	45 °C (T_{amb})	45 °C (T_{amb})	40 °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)						
Protection class	protection class 2 (RCD typ A sufficient)						
Operating conditions							
Area of application	Outdoors & indoors						
Climate protection class as per IEC 60721-3-4	4K4H						
Ambient temperature	-25 °C … +60 °C						
Storage temperature	-30 °C … +80 °C						
Relative humidity	0 % … 100 %, non-condensating						
Noise emission (typical)	31 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 RST25i3 plug, mating connector included						
Dimensions (X x Y x Z)	399 x 657 x 222 mm						
Weight	12.6 kg	12.6 kg	12.6 kg	13.8 kg	13.8 kg	14.0 kg	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						