



StecaGrid 10 000 3ph

Always symmetrical

The advantage of three-phase feeding is that the produced solar capacity is always symmetrically distributed on all three power conductors to the public power grid. This is the case across the whole output range offered by StecaGrid 10 000 3ph. When designing a system, the laborious avoidance of an asymmetry of more than 4.6 kW through the appropriate selection of separate inverters is thus dispensed with. Symmetrical feeding is greatly in the interests of energy supply companies. Lengthy discussions with such companies are therefore a thing of the past.

Long service live

While the voltage passes through zero on the grid-feeding phase, single-phase inverters must temporarily accommodate all energy supplied by the solar modules within the device. This is usually realised by electrolytic capacitors. These components influence the service life of an electronic device, due to the possibility of drying out.

With three-phase inverters, energy is fed into the grid on at least two phases at all times. Thus, the necessity of intermediate storage of energy in the device is greatly reduced, which is of benefit to the system operator with regard to a longer service life (see figure on right hand side).

Flexible connection

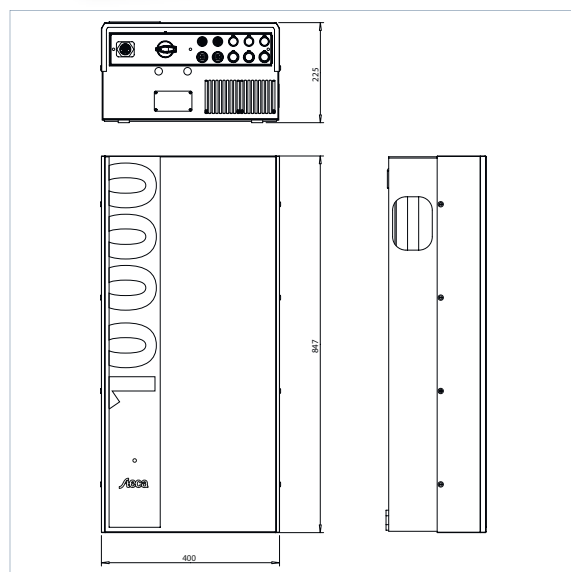
Due to the wide input voltage range of 350 V to 845 V, and a maximum input current of 32 A, all commonly available crystalline solar modules can be connected to the StecaGrid 10 000 3ph in various configurations. Beyond this, the system is also approved for use with CdTe and CIS / CIGS thin-film modules. Five plug/socket pairs are available for flexible, mechanical DC connection.

Easy handling

Despite its high output, the StecaGrid 10 000 3ph is a wall-mounted device. Thanks to the high degree of protection, this inverter can be installed indoors or outdoors. Due to the integrated DC circuit breaker, installation work is made easier, and the installation time is reduced. It is not necessary to open the StecaGrid 10 000 3ph during installation.

Product features

- High efficiency
- UniString concept
- Wide input voltage range
- Three-phase, symmetrical grid feeding
- Low DC discharge currents due to special switching concept
- Integrated DC circuit breaker
- Robust metal casing
- Suitable for outdoor installation
- Wall-mounting with steel wall bracket for very easy installation



Electronic protection functions

- Integrated temperature monitoring with output derating

Displays

- Multi-coloured LED shows operating states

Options

- Can be connected to the StecaGrid Vision display unit
- System monitoring with WEB'log data loggers





StecaGrid 10 000 3ph			
DC input side (PV-generator)		Characterisation of the operating performance	
Maximum start voltage	845 V	Maximum efficiency	96.3 %
Maximum input voltage	845 V	European efficiency	95.4 %
Minimum input voltage	350 V	MPP efficiency	> 99 %
Minimum input voltage for rated output	350 V	Power derating at full power	from 50 °C (T _{amb})
MPP voltage	350 V ... 700 V	Switch-on power	20 W
Maximum input current	32 A	Standby power	9 W
Maximum input power	10,800 W	Safety	
Maximum recommended PV power	12,500 Wp	Isolation principle	no galvanic isolation, transformerless
Derating / limiting	automatic when - input power is higher - the device is not cooled sufficiently - input currents > 32A (higher currents are limited by the equipment and therefore will not damage the inverter)	Grid monitoring	MSD compliant with DIN VDE 0126-1-1
		Operating conditions	
AC output side (Grid connection)		Area of application	indoor rooms with or without air conditioning, outdoors with protection
Grid voltage	320 V ... 480 V [depending on the regional settings]	Ambient temperature	-20 °C ... +60 °C
Rated grid voltage	400 V	Relative humidity	0 % ... 95 %
Maximum output current	17.7 A	Noise emission	< 60 dBA
Maximum output power	10,300 W	Fitting and construction	
Rated power	9,500 W	Degree of protection	IP 54
Rated frequency	50 Hz	DC Input side connection	MultiContact MC4 (5 pairs)
Frequency	47.5 Hz ... 52 Hz [depending on regional settings]	AC output side connection	Wieland RST25i5 plug
Night-time power loss	< 1 W	Dimensions (X x Y x Z)	400 x 847 x 225 mm
Feeding phases	three-phase	Weight	42 kg
Distortion factor	< 5 % (max. power)	Communication interface	RS485, USB
		DC circuit breaker	yes
		Cooling principle	temperature-controlled fan
		Test certificate	CE mark

Advantage of three-phase feeding

Power curve P shows the power fed in to the public electricity grid. The grey shaded area shows the energy to be stored in the inverter. The advantage of three-phase feeding is plain to see.

