



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

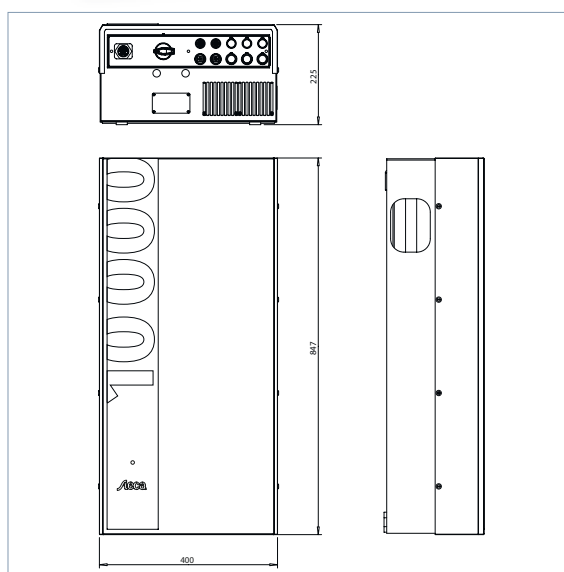
Due to the wide input voltage range of 350 V to 845 V, and a maximum input current of 32 A, all commonly available crystalline solar modules can be connected to the StecaGrid 10 000 3ph in various configurations. Beyond this, the system is also approved for use with CdTe and CIS / CIGS thin-film modules. 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 Solar-Log and WEB'log data loggers





StecaGrid 10 000 3ph	
DC input side (PV-generator)	
Maximum start voltage	845 V
Maximum input voltage	845 V
Minimum input voltage	350 V
Minimum input voltage for rated output	350 V
MPP voltage	350 V ... 700 V
Maximum input current	32 A
Maximum input power	10,800 W
Maximum recommended PV power	12,500 Wp
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)
AC output side (Grid connection)	
Grid voltage	320 V ... 480 V [depending on the regional settings]
Rated grid voltage	400 V
Maximum output current	15 A
Maximum output power	10,300 W [10,000 if Belgium is selected]
Rated power	9,500 W
Rated frequency	50 Hz
Frequency	47.5 Hz ... 52 Hz [depending on regional settings]
Night-time power loss	< 1 W
Feeding phases	three-phase
Distortion factor	< 4 % (max. power)
Characterisation of the operating performance	
Maximum efficiency	96.3 %
European efficiency	95.4 %
MPP efficiency	> 99 %
Power derating at full power	from 50 °C (T _{amb})
Switch-on power	20 W
Standby power	9 W
Safety	
Isolation principle	no galvanic isolation, transformerless
Grid monitoring	MSD compliant with DIN VDE 0126-1-1
Operating conditions	
Area of application	indoor rooms with or without air conditioning, outdoors with protection
Corrosion categories	C3 (urban and industrial atmosphere, coastal areas with low salt concentration)
Ambient temperature	-20 °C ... +60 °C
Relative humidity	0 % ... 95 %
Noise emission	< 60 dBA
Fitting and construction	
Degree of protection	IP 54
DC Input side connection	MultiContact MC4 (5 pairs), rated current 22 A per input
AC output side connection	Wieland RST25i5 plug, mating connector included
Dimensions (X x Y x Z)	400 x 847 x 225 mm
Weight	42 kg
Communication interface	RS485 plug-in card (included in delivery), 2 x RJ45 sockets, connectable to StecaGrid Vision, Meteocontrol WEB'log or Solar-Log
Integrated DC circuit breaker	yes
Cooling principle	temperature-controlled fan (variable speed)
Test certificate	certificate of compliance, CE mark, DK 5940

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.

