CentroSolar

Inverters

Powerstocc® Excellent

Technical data sheet

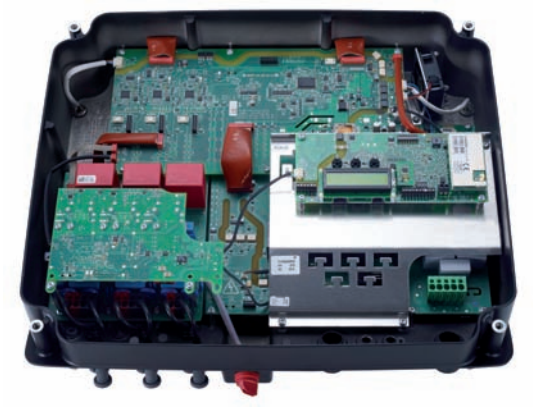


PS 3.0 Excellent
PS 3.6 Excellent
PS 4.2 Excellent
PS 5.5 Excellent
PS 8.3 Excellent
PS 10.1 Excellent

Innovative inverters by CENTROSOLAR

The most important criteria in the selection of a photovoltaic system are reliability, longevity, and the cost-benefit ratio. The inverter, the heart of the photovoltaic system, plays an important role in this regard, because it is the critical link between the installation and the power grid. With our Powerstocc Excellent inverter series, we offer you the perfect combination of performance and comfort in inverter sizes from 3 kW to 10 kW.





Powerful
The Powerstocc Excellent solar inverters are powerful, transformer-less string inverters. They convert the direct current generated by the photovoltaic modules into symmetrical three-phase (4.2/5.5/8.3/10.1) and single-phase (3.0/3.6) alternating current and feed it into the public power grid.

Sophisticated
Through the three-phase inverter technology, our inverters combine the stability and longevity of large central inverters with the flexibility and high efficiency of transformer-less string inverters.

Intelligent
To improve the efficiency, the multi-phase inverters use only one or two randomly selected phases for each current feed-in at lower input rate (less than 10 percent of the rated capacity).

Modern
The single-phase inverters use the modern and interference-proof phase-shifting method for monitoring the network.

Safe
Powerstocc inverters are equipped with an integrated DC circuit breaker. No external isolating switch is required. The solar modules are connected to the inverter via MC4 plug connectors.

Flexible
The inverters are available in different output sizes and offer you the utmost flexibility when configuring your solar system. This is achieved by a wide DC input voltage range and independent MPP regulators for each input, allowing the connection of solar modules in various configurations (orientation, inclination, number, type).

Informative
In order to conveniently display the yield and operating data of your PV system, the inverter has an integrated data logger and web server. The data logger saves all yield data in 15-minute intervals for 100 days or in 60-minute intervals for up to 400 days. It has both an Ethernet (RJ45) and an RS485 interface for communication and settings.

Inputs
The function of the Powerstocc Excellent is based on the string concept: a limited number of solar modules (depending on the desired output, taking into account the maximum input voltage) is connected in series into a string, which is connected to the inverter. The number of strings depends on the configuration of the solar system. In all models, the strings are connected to the inverter via MC4 plug connectors. Depending on the model, one or three separately adjustable inputs are available.

Individual MPP tracking
Each input of the Excellent Powerstocc inverters is equipped with an independent MPP tracker. These provide for the maximum output in each individual string. Strings can thus be connected with different parameters, for example:

- installations with partial shading
- east/west installations
- different number of modules per string
- different types of modules per string

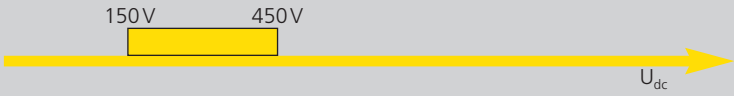
Maximum yields are guaranteed by reducing mismatching to a minimum.

Extra high DC input current
With the Excellent Powerstocc inverters (except 3.0 and 5.5), two inputs can be connected in parallel to allow a higher maximum input current. This allows for even more flexibility when planning an installation.

Extended MPP voltage range
To make even very low module voltages and partial outputs of PV generators usable, the Powerstocc Excellent inverters also have an extended MPP voltage range in addition to the nominal MPP voltage range. In this range, the MPP tracker can be operated with a maximum of 70 % of its nominal DC output. Thus, low-light periods and low voltages due to shading can be optimally utilised.

Input voltage range Powerstocc Excellent XX.X

- Standard inverter



- Inverter optimised for efficiency



- Powerstocc Excellent XX.X inverter



Configuration by country

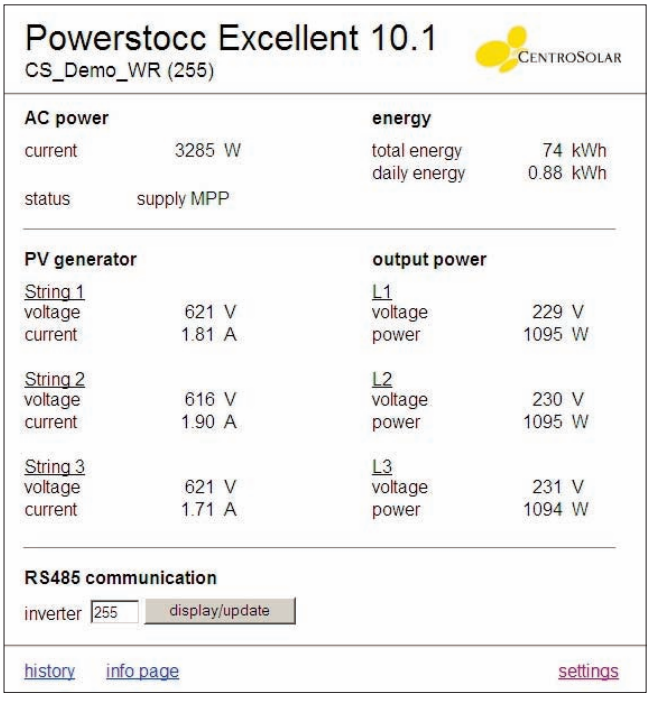
The Powerstocc Excellent inverter can be easily adapted to the different power systems and regulations in many European countries via DIP switches. The set-up has to be done only once. Your advantage: one inverter for many countries. The language of the display and web server can be set independently.

Intelligent software solutions

Perfected and reliable hardware in the power electronics of the Powerstocc Excellent are important functional properties. The intelligent software solutions by Centrosolar complement this inverter series perfectly. In the software package by Centrosolar, many useful PC programmes are available to workmen, planners and operators.

Powerstocc web server

Through the integrated data logger and web server, easy access is possible, and the visualisation of data using a standard Internet browser is conveniently available as an HTML page.



Powerstocc Master Control V2.0

Convenient graphical representation and analysis of the performance and yield data of your PV system. For this, the log data stored in the inverter is downloaded and evaluated.



Output reduction starting from 100 kW

For large installations with an output of 100 kW, the grid operator by law has the option to limit the power output. The grid operator provides ripple control signal receivers with four control outputs for this. The Powerstocc Excellent inverters provide for output regulation in four levels: 0 %, 30 %, 60 % and 100 %.

Warranty

The inverters of the Powerstocc Excellent series are quality products. Because we are convinced of the operability and quality of our inverters, Centrosolar AG gives you a replacement warranty for 5 years from the date of purchase. If you want even more safety, we offer you a warranty extension to 10 or 20 years on request within the first two years.

	PS 3.0	PS 3.6
Input Side (DC-Part)		
Max. output $P_{DC\ max}$	3200	3800
Nominal output $P_{DC\ nom}$	2950	3450
MPP-Voltage Range	380 - 850	340 - 850
Extended MPP-Voltage Range	180 - 380	180 - 340
Max. input voltage $U_{DC\ max}$		
Max. input current $I_{DC\ max}$	9	9
Number of MPP-Trackers	1	2
Output Side (AC-Part)		
Max. output $P_{AC\ max}$	3000	3600
Nominal ouput $P_{AC\ max}$	2800	3300
Nominal current per phase $I_{AC\ nom}$	12,2	14,4
Number of feed-in phases	1	
Cos phi		
Efficiency		
Max. efficiency	94,8	94,8
European efficiency	93,6	93,6
General Data		
Height x width x depth	350 x 420 x 311	
Weight	20	20
Ambient temperatur		
Installation location		
DC connections type		
Standyby consumption		
Night consumption		
Concept		
Safety		
Protection Type		
Protection Class		
VDEW-compliant		
Network Monitoring (procedure)	Frequency-Shifting	
Power monitoring curciut		
Insulation monitoring		
Enable point		
Pole protection		
Warranty		
Equipment		
Interfaces		
Data logger		
GSM-Modem / Analogue-Modem		

The Powerstocc® Excellent inverters at a glance.

PS 4.2	PS 5.5	PS 8.3	PS 10.1	Units
4400	5800	8700	11000	W
4000	5250	8000	9650	W
360 - 850		400 - 850	420 - 850	V
180 - 360		180 - 400	180 - 420	V
950				V
9	9	12,5	12,5	A
2	3	2	3	
4200	5500	8300	10100	W
3800	5000	7500	9200	W
5,5	7,3	11	13,3	A
3				
1				
96	95,3	96	96	%
94,7	94,2	95,3	95,4	%
350 x 420 x 311		350 x 520 x 230		mm
20,5	21,1	33	34	kg
-20 to +60				°C
inside and outside				
MC 4				
< 1				W
< 1				W
transformerless / self-commutated				
IP 55				
SKL I				
yes				
3-phase-monitoring				
yes				
yes				
electronic circuit breaker integrated				
short circuit diodes integrated				
5 years, extendable to 10 years				
Ethernet (RJ45) / RS485				
integrated				
optional / optional				

All information without guarantee. Date 03/2011.

The general terms and conditions and technical introductory remarks of CENTROSOLAR AG available under www.centrosolar.com apply. Errors and omissions excepted.
We reserve the right to make changes.

Sunshine is our business.

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