WR SERIES INVERTER

The WR-Series combines an innovative design with the most up to date technology. All the relevant information from the photovoltaic system can be retrieved by the user friendly integrated display. The integrated display enables you to decide which information you want to access. Moreover the innovative WR series inverters contain the novel equipment concept where the connection section is completly separated from the power section.

The novel Plug & Play plug-in card system enables different cards for data transfer to be easily installed. Furthermore this system enables a trouble free reinstallation and extension. The light weight inverter and mounting system allows a simple on-site installation.

TECHNOLOGY

WR represents the most up to date inverter technology generation. This inverter technolgy optimizes the effectiveness of the photovoltaic system. Even during periods of low solar radiation the WR-Inverter maximises the efficiency and maintains a high efficiency level until maximum power. The HF-technology, the new employed phase- shift- procedure and a high performance processor ensures the management of higher current, reduces switching power losses and guarantees rapid routine operations

By means of the master-slave-procedure the inverter operates with two or more power elements, thereby ensuring an improved efficiency. The galvanised separation provide comprehensive protection in all WR inverters.

RANGE OF APPLICATION

The WR series inverters are specially designed as custom made inverters. The power elements can be combined to fulfill the requirements of every photovoltaic system, regardless of what modul is used or how much power is been converted. A further input voltage range from 150-500V for all WR- Inverters enable a flexible system dimensioning. The WR Inverters can also be fitted with optional MC® connection boxes and AC-Connectors.

The possibility to link the data recorder and the data transfer components to a modem via a SMS-transmission is a feature that make the WR- Series the inverters of the future.

WR SERIES INVERTER

		WR 1700	WR 2300	WR 3300	WR 4600	WR 5900 (E*)
DC input data						
MPP- voltage range	U_{MPP}	150 V - 400 V	150 V - 400 V	150 V - 400 V	150 V - 400 V	150 V - 400 V
Maximum input voltage	U_{DCmax}	500 V	500 V	500 V	500 V	500 (530*) V
Maximum DC-output power	P_{DC}	1630 W	2170 W	2880 W	4460 W	5430 W
Recommended PV-array output power	P_{PV}	2000 Wp	2700 Wp	3600 Wp	5500 Wp	6700 Wp
AC output data						
Mains voltage	$U_{AC, nom}$	230 V	230 V	230 V	230 V	230 V
Frequency	f	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Output power nominal/maximum	P_{AC}	1300/1500 W	1800/2000 W	2500/2650 W	3500/4100 W	4600/5000 W
Distortion factor	k	< 3.5 %	< 3.5 %	< 3.5 %	< 3.5 %	< 3.5 %
General data						
Maximum efficiency	$\eta_{max.}$	94.2 %	94.3 %	94.3 %	94.3 %	94.3 %
Cooling		regulated forced ventilation	regulated forced ventilation	regulated forced ventilation	regulated forced ventilation	regulated forced ventilation
Temperure range		-20 to 50 °C	-20 to 50 °C	-20 to 50 °C	-20 to 50 °C	-20 to 50 °C
Protection class		IP 21*	IP 21*	IP 21*	IP 21*	IP 21*
Protection						
DC isolation measurement			warning at R_{iso}< 500k Ohm			
DC-overload protection			integrated			
Reverse polarity protection			integrated			
Reaction to DC- over			Operation points displacement			
Dimensions						
Height		366 mm	366 mm	366 mm	610 mm	610 mm
Width		344 mm	344 mm	344 mm	344 mm	344 mm
Depth		220 mm	220 mm	220 mm	220 mm	220 mm
Weight (approximately)		9 kg	9 kg	9 kg	16 kg	16 kg

(*) from approx. 03/2005

Valid for WR Series:

The WR Series inverters fulfill the "Guidelines for the Photovoltaic Electricity Generation System with the low voltage mains" of the VDEW as well as the "Technical guidelines for the parallel operation of photovoltaic generated electricity with the low voltage mains of the distribution system operators" of VEÖ

Furthermore the required electricity and safety norms comply with the respective EU guidelines and has been give the the CE mark.

The WR-Series inverters conforms to the professional organisation of procision engineering and electrical engineering, DIN VDE 0126 standard for off-grid operation according to the permitted switching for the prevention of off-grid operation, that is based on the impendance measurement (ENS).

As a result the authorisation of the WR -Series inverters is guaranteed to be trouble free and unburocratic through the distribution system operator and electricity supply company.

Available from: