

HSIB200

HIGH EFFICIENCY 200 KW CENTRAL INVERTER

The photovoltaic central inverter HSIB200 is a special transformerless development for IT-grids and for the operation with the String Booster Box SBB16-10. The inverter was designed using the newest efficiency-optimized technology in order to get higher returns from the solar installation. Right from the start, all devices to be installed were chosen with respect to loss reduction:

- The power part was realized using Trench-IGBTs of the newest generation and intentionally oversized to increase efficiency.
- The filter inductor was optimized to reduce power losses under partial as well as full load condition.
- Large heat sinks allow the use of small fans with low power consumption.
- Motor driven DC-breakers are used.

The sum of these measures leads to a maximum efficiency of 98,7 %. Even under partial load of only 10 % an efficiency of 98,8 % is achieved. The EU efficiency reaches outstanding 98,6 %. This high efficiency is unique for inverters of this technology and offers multiple advantages to the user:

- More energy from the photovoltaic array is fed to the grid, therefore a higher rate of return is obtained.
- Less waste heat has to be dissipated out of the already warm operating room.
- The reduction of losses increases the lifetime of the internal components.

The system is designed for low maintenance and long lifetime. Within the development process of the HSIB200, a major design criterion was the simpleness and safety of the operating system for the inverter. This was achieved by a touch screen with a menu-based graphic user interface. Up to one year, the inverter stores all relevant measured values. These values as well as current operating data can be monitored online or downloaded via the Ethernet interface. In the un-likely case of an inverter fault, the control software automatically sends a message with a failure report. The inverter operates completely stand-alone and the first start-up requires no adjustments of the system. Each string box can be connected and disconnected by a Scada system.



HSIB200

Technical Data Version 1.3



Technical Data HSIB200

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	Rated PV-power within ±10 % of rated grid voltage	203 kW
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General DataAmbient temperature (Others on request)0 °C to 50 °CRelative humidity non-condensing<95 %	Maximum auxiliary power	< 2000 W
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Options Earthing of solar array Only negative pole	Surge arresters	With monitoring on AC- and DC-side
Earthing of solar array Only negative pole	Options	
	Earthing of solar array	Only negative pole
Separately secured DC-inputs Heating incl. thermostat	Separately secured DC-inputs	Heating incl. thermostat
Measuring and monitoring of single input currents	Measuring and monitoring of single input currents	
Sensor (interface for radiation sensor => features)	Sensor (interface for radiation sensor => features)	
Cabinet heating incl. thermostat	Cabinet heating incl. thermostat	
Display in control cabinet for status display Touch screen with numerical and graphical display	Display in control cabinet for status display	Touch screen with numerical and graphical display
Communication Cabinet Standard PC and monitor	Communication Cabinet Standard	PC and monitor