

TECHNICAL CHARACTERISTICS

HEC V1000 - 480V

	FRAME 1	FRAME 2	FRAME 3	FRAME 4	FRAME 5
NUMBER OF MODULES	3	4	5	6	7
REFERENCE	FS900CH10	FS1195CH10	FS1495CH10	FS1795CH10	FS2095CH10
OUTPUT					
AC Output Power (kVA/kW) @50°C ^[1]	900	1195	1495	1795	2095
AC Output Power (kVA/kW) @25°C ^[1]	1070	1425	1785	2140	2495
Max. AC Output Current (A) @25°C	1285	1710	2140	2570	3000
Operating Grid Voltage (VAC)	480V ±10%				
Operating Grid Frequency (Hz)	50Hz				
Current Harmonic Distortion (THDi)	< 3% per IEEE519				
Power Factor (cosine phi) ^[2]	0.0 leading ... 0.0 lagging / Reactive Power injection at night				
Power Curtailment	0...100% / 0.1% Steps				
INPUT					
MPPt @full power (VDC) ^[1]	679V - 1100V				
Maximum DC voltage	1100V				
Max. DC continuous current (A)	1600	2140	2675	3210	3745
Max. DC short circuit current (A)	2320	3100	3880	4650	5450
EFFICIENCY & AUXILIARY SUPPLY					
Efficiency (Max) (η) (preliminary)	98.5%				
Euroeta (η) (preliminary)	98.5%				
Max. Standby Consumption (Pnight)	< approx. 50W/per module				
Control Power Supply	400V / 230VAC-6kVA power supply available for external equipment (optional)				
CABINET					
Dimensions [WxDxH] [mm]	3038x945x2198	3751x945x2198	4464x945x2198	5177x945x2198	5890x945x2198
Weight (kg)	2635	3290	3945	4600	5255
Air Flow	Bottom intake. Exhaust top rear vent.				
Type of ventilation	Forced air cooling				
ENVIRONMENT					
Degree of protection	IP54				
Permissible Ambient Temperature	-35°C ^[3] to 60°C / Active Power derating >50°C				
Relative Humidity	0% to 100% non condensing				
Max. Altitude (above sea level)	2000m / >2000m power derating (Max. 4000m)				
Noise level ^[4]	< 79 dBA				
CONTROL INTERFACE					
Interface	Graphic Display (inside cabinet) / Optional Freesun App				
Communication protocol	Modbus TCP/IP				
Power Plant Controller	Optional				
Keyed ON/OFF switch	Standard				
Digital I/O	Optional (User configurable)				
Analog I/O	Optional (User configurable)				
PROTECTIONS					
Ground Fault Protection	Floating PV array: Isolation Monitoring per MPP Grounded PV Array (Positive pole and negative pole): GFDI protection Optional PV Array transfer kit: GFDI and Isolation monitoring device				
Humidity control	Active Heating				
General AC Protection & Disconn.	Circuit Breaker				
General DC Protection & Disconn.	External Disconnecting Unit Cabinet				
Module AC Protection & Disconn.	AC contactor & fuses				
Module DC Protection	DC fuses				
Overvoltage Protection	AC and DC protection (type 2)				
CERTIFICATIONS					
Safety	IEC62109-1, IEC62109-2				

[1] Values at 1.00·Vac nom and cos Φ= 1.
Consult Power Electronics for derating curves.

[2] Consult P-Q charts available: $Q(kVAR) = \sqrt{S(kVA)^2 - P(kW)^2}$.

[3] Heating resistors kit option below -20°C.

[4] Readings taken 1 meter from the back of the unit.