

## TECHNICAL CHARACTERISTICS

## HEC V1500 - 630V

	FRAME 1	FRAME 2	FRAME 3	FRAME 4	FRAME 5
<b>NUMBER OF MODULES</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>REFERENCE</b>	<b>FS1270CH15</b>	<b>FS1695CH15</b>	<b>FS2120CH15</b>	<b>FS2540CH15</b>	<b>FS3001CH15</b>
<b>OUTPUT</b>					
AC Output Power (kVA/kW) @50°C [1]	1180	1570	1965	2360	2750
AC Output Power (kVA/kW) @40°C [1]	1270	1695	2120	2540	3000
AC Output Power (kVA/kW) @25°C [1]	1400	1870	2340	2800	3275
Max. AC Output Current (A) @50°C	1080	1440	1800	2160	2520
Max. AC Output Current (A) @40°C	1165	1550	1940	2330	2715
Max. AC Output Current (A) @25°C	1285	1710	2140	2570	3000
Operating Grid Voltage (VAC)	630V ±10%				
Operating Grid Frequency (Hz)	50Hz/60Hz				
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				
<b>INPUT</b>					
MPPT @full power (VDC)	@50°C 891V-1310V / @40°C 891V-1285V / @25°C 891V-1250V				
Maximum DC voltage	1500V				
Max. DC continuous current (A)	1600	2140	2675	3210	3745
Max. DC short circuit current (A)	2320	3100	3880	4650	5450
<b>EFFICIENCY &amp; AUXILIARY SUPPLY</b>					
Efficiency (Max) (η) Preliminary	98.6%				
Euroeta (η) Preliminary	98.6%				
Max. Standby Consumption (Pnight)	< approx. 50W/per module				
Control Power Supply	400V / 230VAC-6kVA power supply available for external equipment (optional)				
<b>CABINET</b>					
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				
<b>ENVIRONMENT</b>					
Degree of protection	IP54				
Permissible Ambient Temperature	-35°C[3] to +60°C / Power derating >40°C				
Relative Humidity	0% to 100% non condensing				
Max. Altitude (above sea level)	2000m / >2000m power derating (Max. 4000m)				
Noise level [4]	< 79 dBA				
<b>CONTROL INTERFACE</b>					
Interface	Graphic Display (inside cabinet) / Optional Freesun App				
Communication protocol	Modbus TCP				
Power Plant Controller	Optional				
Keyed ON/OFF switch	Standard				
Digital I/O	User configurable				
Analog I/O	User configurable				
<b>PROTECTIONS</b>					
Ground Fault Protection	Floating PV array: Isolation Monitoring per MPP Grounded PV Array: 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)				
<b>CERTIFICATIONS</b>	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:  $Q(\text{kVar}) = \sqrt{S(\text{kVA})^2 - P(\text{kW})^2}$ .

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

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