

TECHNICAL CHARACTERISTICS

HEC-US V1500 - 630V

NORTH AMERICA

	FRAME 1	FRAME 2	FRAME 3	FRAME 4	FRAME 5
NUMBER OF MODULES	3	4	5	6	7
REFERENCE	FS1270CU15	FS1695CU15	FS2120CU15	FS2540CU15	FS3001CU15
OUTPUT					
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)	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				
INPUT					
MPPT @full power (VDC)	@50°C 891V-1310V / @40°C 891V-1285V / @25°C 891V-1250V				
Maximum DC voltage	1500V				
Minimum Start Voltage	1050V - User configurable				
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%				
CEC (η) Preliminary	98.5%				
Max. Standby Consumption (Pnight)	< approx. 50W/per module				
Control Power Supply	120V / 208VAC–6kVA power supply available for external equipment (optional)				
CABINET					
Dimensions [WxDxH] [inches]	119.6"x37.2"x86.5"	147.6"x37.2"x86.5"	175.7"x37.2"x86.5"	203.8"x37.2"x86.5"	231.9"x37.2"x86.5"
Dimensions [WxDxH] [mm]	3038x945x2198	3751x945x2198	4464x945x2198	5177x945x2198	5890x945x2198
Weight (kg)	2635	3290	3945	4600	5255
Weight (lbs)	5809	7253	8697	10141	11585
Air Flow	Bottom intake. Exhaust top rear vent.				
Type of ventilation	Forced air cooling				
ENVIRONMENT					
Degree of protection	NEMA 3R				
Permissible Ambient Temperature	-31°F to +140°F, -35°C ^[3] to +60°C / Power derating >40°C/104°F				
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				
Power Plant Controller	Compatible with third party SCADA controls				
Keyed ON/OFF switch	Standard				
Digital I/O	User configurable				
Analog I/O	User configurable				
PROTECTIONS					
Ground Fault Protection	Floating PV array: Isolation Monitoring per MPP NEC2014 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				
Oversvoltage Protection	AC and DC protection (type 2)				
CERTIFICATIONS					
Safety	UL 1741, CSA 22.2 No.107.1-01, UL62109-1				
Utility interconnect	UL 1741SA-Sept. 2016 / IEEE 1547.1-2005				

[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.