

# HE PLUS 400VAC

## TECHNICAL CHARACTERISTICS

		400VAC - MPPT Window 566V-900V					
		FRAME 2		FRAME 3		FRAME 4	
NUMBER OF MODULES		5	6	7	8	9	10
REFERENCE		FS1003IH	FS1201IH	FS1401IH	FS1600IH	FS1800IH	FS2000IH
OUTPUT	AC Output Power(kVA/kW) @50°C <sup>[1]</sup>	1000	1200	1400	1600	1800	2000
	AC Output Power(kVA/kW) @25°C <sup>[1]</sup>	1110	1330	1550	1770	2000	2220
	Max. AC Output Current (A) @25°C	1600	1920	2240	2560	2880	3200
	Operating Grid Voltage(VAC)	400Vac					
	Operating Range, Grid Frequency	50Hz/60Hz					
	Current Harmonic Distortion (THDi)	< 3% at any load condition					
	Power Factor (cosine phi) <sup>[2]</sup>	0.00 leading ... 0.00 lagging adjustable/ Reactive Power injection at night (optional)					
Power Curtailment (kVA)	0..100%/0.1% Steps						
INPUT	MPPT Voltage Window (VDC) <sup>[1]</sup>	566V-900V					
	MPPT window @full power (VDC) <sup>[1]</sup>	584V-820V @50°C / 648V-820V @25°C					
	Maximum DC and Starting voltage	1000V					
	Max. DC continuous current (A)	1750	2100	2450	2800	3150	3500
EFFICIENCY & AUXILIARY SUPPLY	Max. DC short circuit current (A)	2275	2730	3185	3640	4095	4550
	Max. Efficiency PAC, nom (η)	98.6%		98.6%		98.6%	
	Euroeta (η)	98.3%		98.4%		98.4%	
	Max. Standby Consumption (Pnight)	< approx. 40W/per module					
	Max. Power Consumption (W)	2300W	2760W	3220W	3680W	4140W	4600W
	Max. Apparent Power (VA)	4800VA	5600VA	6500VA	7300VA	8200VA	9000VA
CABINET	Dimensions [WxDxH] [mm]	3370x1020x2080		4400x1020x2080		5260x1020x2080	
	Weight (kg) <sup>[3]</sup>	2500	2900	3300	3700	4100	4500
	Air Flow	Intake through rear lower part blown out through upper side					
ENVIRONMENT	Type of ventilation	VSD Forced air cooling					
	Degree of protection	Indoor IP21					
	Permissible Ambient Temperature	-20°C to +60°C					
	Relative Humidity	10% to 95% Non condensing					
	Max. Altitude (above sea level)	4000m; >1000m power derating					
CONTROL INTERFACE	Noise level <sup>[4]</sup>	< 79 dBA					
	Interface	Alphanumeric Display / Optional Freesun App display or Web display					
	Communication	RS232 / RS485 / USB / Ethernet, (Modbus RTU Protocol, Modbus TCP/IP)					
	Analogue Inputs	1 programmable and differential inputs; (0-20mA or ± 10mV to ± 10V) and PT100					
	String Supervisor Communication	RS485 / Modbus RTU					
	Plant Controller Communication	Ethernet / Modbus TCP/IP					
PROTECTIONS	Digital Outputs	1 electrically-isolated programmable switched relays (250VAC, 8A or 30VDC, 8A)					
	Ground Fault Protection	Floating PV array: Isolation Monitoring per MPP Grounded PV array (Positive pole and negative pole): GFDI protection PV Array transfer kit: GFDI and Isolation Monitoring Device (requires 1 Digital Output)					
	Humidity control	Active Heating					
	ON/OFF Pushbutton	Standard					
	General AC Protection & Disconn.	Circuit Breaker					
	General DC Protection & Disconn.	Optional External Wall mounted cabinets					
	Module AC Protection & Disconn.	AC contactor & fuses					
	Module DC Protection & Disconn.	DC contactor & DC fuses					
	Overvoltage Protection	AC, DC Inverter and auxiliary supply type 2 - Internal Standard					
	DC Lightning Protections	Optional (Integrated in the inverter)					

NOTES [1] Values at 1.00•Vac nom and cos Φ= 1. Consult Power Electronics for derating curves.  
 [2] Consult P-Q charts available:  $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$   
 [3] Preliminary, consult Power Electronics.  
 [4] Sound pressure level at a distance of 1m from the rear part.