

TECHNICAL CHARACTERISTICS

HEM HYBRID

REFERENCE	FS3430M2	FS3430M4	FS3430M6	
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]	3430		
	AC Output Power (kVA/kW) @40°C ^[1]	3550		
	Operating Grid Voltage	34.5 kV ±10 %		
	Operating Grid Frequency	60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE 519		
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night		
INPUT	MPPT @full power	913V - 1310V		
	Maximum DC voltage	1500V		
	Number of PV inputs ^[3]	Up to 36		
	Number of Freemaq DC/DC	2	4	6
	Freemaq DC/DC Power (kW) @50°C	1000	2000	3000
	DC ESS Voltage range ^[4]	700V - 1500V		
	Max. DC continuous current (A) ^[5]	6200		
	Max. DC short circuit current (A) ^[5]	12000		
EFFICIENCY & AUXILIARY SUPPLY	Max. PV Inverter Efficiency PAC, nom (η)	97.76% including MV transformer (preliminary)		
	CEC PV Inverter Efficiency (η)	97.50% including MV transformer (preliminary)		
	Max. Power Consumption (kVA)	30		
CABINET	Dimensions [WxDxH] (ft)	30.38 x 7 x 7 (preliminary)		
	Dimensions [WxDxH] (m)	9.26 x 2.2 x 2.2 (preliminary)		
	Weight (lb)	< 41888		
	Weight (kg)	< 19000		
	Type of ventilation	Forced air cooling		
ENVIRONMENT	Degree of protection	NEMA 3R		
	Permissible Ambient Temperature	-35°C to +60°C / > 50°C Active Power derating		
	Relative Humidity	4 % to 100 % non condensing		
	Max. Altitude (above sea level) ^[6]	2000 m		
	Noise level ^[7]	< 79 dBA		
CONTROL INTERFACE	Communication protocol	Modbus TCP		
	Plant Controller Communication	Optional		
	Keyed ON/OFF switch	Standard		
PROTECTIONS	Ground Fault Protection	GFDI and isolation monitoring device		
	General AC Protection	MV switchgear (configurable)		
	General DC Protection	Fuses		
	Overvoltage Protection	Type 2		
CERTIFICATIONS	Safety	UL 1741, CSA 22.2 No.107.1-16		
	Compliance	NEC 2017		
	Utility interconnect	IEEE 1547.1-2005 / UL 1741 SA - Feb. 2018		

[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] Consult Power Electronics for other configurations.

[4] Consult Power Electronics for derating curves.

[5] Consult Power Electronics for higher currents.

[6] Consult Power Electronics for other altitudes.

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