

TECHNICAL CHARACTERISTICS

HEM

REFERENCE	FS3190M	
OUTPUT	AC Output Power (kVA/kW) @50°C ^[1]	3190
	AC Output Power (kVA/kW) @40°C ^[1]	3300
	Operating Grid Voltage (VAC) ^[2]	34.5kV ±10%
	Operating Grid Frequency (Hz)	50Hz/60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[3]	0.5 leading ... 0.5 lagging adjustable / Reactive Power injection at night
INPUT	MPPt @full power (VDC)	849V-1310V
	Maximum DC voltage	1500V
	Number of PV inputs ^[2]	Up to 36
	Number of Freemaq DC/DC inputs ^[4]	Up to 6
	Max. DC continuous current (A) ^[4]	3970
	Max. DC short circuit current (A) ^[4]	6000
EFFICIENCY & AUXILIARY SUPPLY	Efficiency (Max) (η)	98% including MV transformer (preliminary)
	CEC (η)	98% including MV transformer (preliminary)
	Max. Power Consumption (KVA)	20
CABINET	Dimensions [WxDxH] (ft)	21.7 x 7 x 7
	Dimensions [WxDxH] (m)	6.6 x 2.2 x 2.2
	Weight (lb)	30865
	Weight (kg)	14000
	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) ^[5]	2000m
	Noise level ^[6]	< 79 dBA
CONTROL INTERFACE	Interface	Graphic Display
	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	AC, DC Inverter and auxiliary supply type 2
CERTIFICATIONS	Safety	UL 1741, CSA 22.2 No.107.1-16, UL 62109-1, IEC 62109-1, IEC 62109-2
	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 Power Electronics for other configurations.

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

[4] Consult Power Electronics for Freemaq DC/DC connection configurations.

[5] Consult Power Electronics for altitudes above 1000m.

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