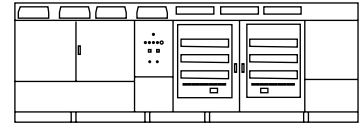


# HEM

IEC

- 
- Easy maintenance.
  - Advanced grid support.
  - Integrated MV solution in the same enclosure.
  - Econ Mode. Remove no-load losses.
  - Bus Plus. Combines Solar and Storage.





**COMMON FEATURES**

AC	Current Harmonic Distortion (THDi)	<3% per IEEE 519		
	Power Factor (CosPhi) [2]	0.5 leading ... 0.5 lagging adjustable / Reactive power injection at night		
DC	Maximum DC Voltage	1500 V		
	Number of Inputs	Up to 40		
EFFICIENCY	Number of Freemaq DC/DC [4]	Up to 4		
	Efficiency (Max) (η)	98.00% including MV transformer		
CABINET	CEC (η)	97.53% including MV transformer		
	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.5		
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.3		
	Weight (lbs)	30865		
	Weight (kg)	14000		
ENVIRONMENT	Type of Ventilation	Forced air cooling		
	Operating Temperature Range [5]	From -25 °C to +60 °C, >30 °C power derating		
	Operating Relative Humidity Range	From 4% to 100% non-condensing		
CONTROL INTERFACE	Storage Temperature Range	From -40 °C to +60 °C		
	Communication Protocol	Modbus TCP		
	Power Plant Controller	Optional		
PROTECTIONS	Keyed ON/OFF Switch	Standard		
	Ground Fault Protection	GFDI and isolation monitoring device		
	Humidity Control	Active heating		
	General DC Protection & Disconnection	Fuses, Motorized DC disconnect switches		
CERTIFICATIONS & STANDARDS	Overvoltage Protection	Type 2 protection for AC and DC		
	Safety	IEC 62109-1 / IEC 62109-2		
	Utility Interconnect [7]	IEC 62116 / / G99 / VDE 4110-4120-4130 / CEI 0-16 / NTS 2.1 / EN 50549		

REFERENCES		FS5000MH	FS5001MH	FS5002MH
AC	AC Output Power (kVA/kW) @30 °C [1]	5030		
	AC Output Power (kVA/kW) @35 °C [1]	5000		
	AC Output Power (kVA/kW) @40 °C [1]	4780		
	AC Output Power (kVA/kW) @50 °C [1]	4345		
	Operating Grid Voltage (kV)	34.5 kV ±10%	33 kV ±10%	30 kV ±10%
	Operating Grid Frequency (Hz)	60 Hz	50 Hz	50 Hz
DC	DC Voltage Range Full Power [3]	934 V – 1300 V		
	Max. DC Continuous Current (A) [4]	5495		
	Max. DC Short Circuit Current (A) [4]	8000		
ENVIRONMENT	Degree of Protection	IP55		
	Max. Altitude (above sea level) [6]	2000 m	1000 m	
PROTECTIONS	General AC Protection & Disconnection	36 kV MV switchgear (2L+V)		
REFERENCES		FS5075MH	FS5076MH	FS5077MH
AC	AC Output Power (kVA/kW) @30 °C [1]	5260		
	AC Output Power (kVA/kW) @35 °C [1]	5075		
	AC Output Power (kVA/kW) @40 °C [1]	4860		
	AC Output Power (kVA/kW) @50 °C [1]	4430		
	Operating Grid Voltage (kV)	34.5 kV ±10%	33 kV ±10%	30 kV ±10%
	Operating Grid Frequency (Hz)	60 Hz	50 Hz	50 Hz
DC	DC Voltage Range Full Power [3]	976 V – 1300 V		
	Max. DC Continuous Current (A) [4]	5498		
	Max. DC Short Circuit Current (A) [4]	8000		
ENVIRONMENT	Degree of Protection	IP55		
	Max. Altitude (above sea level) [6]	2000 m	1000 m	
PROTECTIONS	General AC Protection & Disconnection	36 kV MV switchgear (2L+V)		

NOTES

- [1] Values at 1.00·Vac nom and CosPhi=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 derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.
- [4] Consult Power Electronics for Freemaq DC/DC connection configurations.
- [5] Optional available for temperatures below to -25 °C.
- [6] Consult Power Electronics for altitudes above 1000 m.
- [7] Consult Power Electronics for other applicable standards / grid codes.