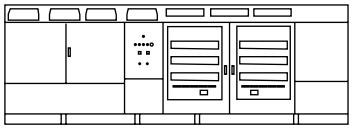
Multi PCSM

IEC

Easy maintenance.
Integrated MV solution in the same enclosure.
Up to 4 independent DC inputs.
Advanced grid support.
Compatible with all battery technologies.



Freemaq Multi PCSM
IEC



Preliminary

REFERENCES		FP5231MH2	FP5231MH4
AC	AC Output Power @40°C [1]	5230 kVA / kW	
	AC Output Power @50°C [1]	4790 kVA / kW	
	Operating Grid Voltage	33 kV ±10%	
	Operating Grid Frequency	50 Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE 519	
	Power Factor (CosPhi) [2]	0.5 leading ... 0.5 lagging	
	Overload Capability	166% - 100 ms / 150% - 5 s / 120% - 8 s / 110% - 15 s	
DC	DC Voltage Range [3]	976 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current	2734 A	1367 A
	Max. DC Short Circuit Current	500 kA with a time constant of 1 ms	
	Battery Technology	All types of batteries (BMS required)	
	Number of Separated DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	98.00% including MV transformer	
	Euroeta (η)	97.53% including MV transformer	
CABINET	Dimensions [WxDxH]	23.5 x 6.5 x 7.2 ft	
	Dimensions [WxDxH]	7.15 x 2.0 x 2.2 m	
	Weight	32628 lbs	
	Weight	14800 kg	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	IP55	
	Operating Temperature Range	From -40 °C to +60 °C, >40 °C power derating (optional below -25 °C)	
	Operating Relative Humidity Range	From 4% to 100%	
	Storage Temperature Range	From -40 °C to +60 °C	
	Max. Altitude (above sea level)	1000 m	
CONTROL	Communication Protocol	Modbus TCP	
	Power Plant Controller	Optional	
	Keyed ON/OFF Switch	Standard	
PROTECTIONS	Ground Fault Protection	Insulation monitoring device	
	Humidity Control	Active heating	
	General AC Protection & Disconnection	36 kV MV switchgear (2L+V)	
	General DC Protection & Disconnection	High-speed fuses, Motorized DC disconnect switches [4]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 62477-2	
	Utility Interconnect [5]	IEC 62116 / G99 / VDE 4110-4120-4130 / CEI 0-16 / NTS 2.1 / EN 50549	

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)=√(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] Battery short circuit disconnection must be done on the battery side.
[5] Consult Power Electronics for other applicable standards / grid codes.

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