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.

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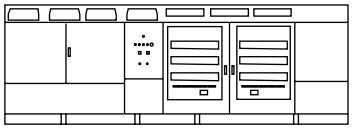

REFERENCES		FP5020MH2	FP5020MH4
AC	AC Output Power (kVA/kW) @30 °C [1]	5240	
	AC Output Power (kVA/kW) @35 °C [1]	5020	
	AC Output Power (kVA/kW) @40 °C [1]	4800	
	AC Output Power (kVA/kW) @50 °C [1]	4360	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60 Hz	
	Current Harmonic Distortion (THDi)	<3% per IEEE 519	
	Power Factor (CosPhi) [2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
	Overload Capability	166% - 100 ms / 150% - 5 s / 120% - 8 s / 110% - 15 s	
DC	DC Voltage Range Full Power [3]	976 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	<3%	
	Max. DC Continuous Current (A)	2740	1370
	Max. DC Short Circuit Current per Input (kA)	500 kA with a time constant of 1 ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separated DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	98.00% including MV transformer	
	CEC (η)	97.53% including MV transformer	
CABINET	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	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	IP55	IP55
	Operating Temperature Range [4]	From -25 °C to +60 °C, >30 °C power derating	
	Operating Relative Humidity Range	From 4% to 100% non-condensing	
	Storage Temperature Range	From -40 °C to +60 °C	
	Max. Altitude (above sea level) [5]	2000 m	
CONTROL INTERFACE	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)	36 kV MV switchgear (2L+V)
	General DC Protection & Disconnection	High-speed fuses, Motorized DC disconnect switches [6]	
	Overvoltage Protection	Type 2 for AC and Type 1+2 for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 62477-2	
	Utility Interconnect [7]	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 and overload capability in grid forming mode.
[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] Optional available for temperatures below to -25 °C.
[5] Consult Power Electronics for altitudes above 1000 m.
[6] Battery short circuit disconnection must be done on the battery side.
[7] Consult Power Electronics for other applicable standards / grid codes.

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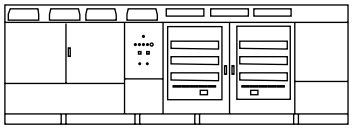

REFERENCES		FP5021MH2	FP5021MH4
AC	AC Output Power (kVA/kW) @30 °C [1]	5240	
	AC Output Power (kVA/kW) @35 °C [1]	5020	
	AC Output Power (kVA/kW) @40 °C [1]	4800	
	AC Output Power (kVA/kW) @50 °C [1]	4360	
	Operating Grid Voltage (kV)	33 kV ±10%	
	Operating Grid Frequency (Hz)	50 Hz	
	Current Harmonic Distortion (THDi)	<3% per IEEE 519	
	Power Factor (CosPhi) [2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
	Overload Capability	166% - 100 ms / 150% - 5 s / 120% - 8 s / 110% - 15 s	
DC	DC Voltage Range Full Power [3]	976 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	<3%	
	Max. DC Continuous Current (A)	2740	1370
	Max. DC Short Circuit Current per Input (kA)	500 kA with a time constant of 1 ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separated DC Inputs	2	4
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	CEC (η)	97.53% including MV transformer	
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	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.3	
	Weight (lbs)	30865	
	Weight (kg)	14000	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	IP55	
	Operating Temperature Range [4]	From -25 °C to +60 °C, >30 °C power derating	
	Operating Relative Humidity Range	From 4% to 100% non-condensing	
	Storage Temperature Range	From -40 °C to +60 °C	
	Max. Altitude (above sea level) [5]	1000 m	
CONTROL INTERFACE	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 [6]	
	Overvoltage Protection	Type 2 for AC and Type 1+2 for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 62477-2	
	Utility Interconnect [7]	IEC 62116 / / G99 / VDE 4110-4120-4130 / CEI 0-16 / NTS 2.1 / EN 50549	

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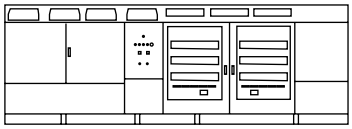

REFERENCES		FP5022MH2	FP5022MH4
AC	AC Output Power (kVA/kW) @30 °C [1]	5240	
	AC Output Power (kVA/kW) @35 °C [1]	5020	
	AC Output Power (kVA/kW) @40 °C [1]	4800	
	AC Output Power (kVA/kW) @50 °C [1]	4360	
	Operating Grid Voltage (kV)	30 kV ±10%	
	Operating Grid Frequency (Hz)	50 Hz	
	Current Harmonic Distortion (THDi)	<3% per IEEE 519	
	Power Factor (CosPhi) [2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
	Overload Capability	166% - 100 ms / 150% - 5 s / 120% - 8 s / 110% - 15 s	
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	Power Plant Controller	Optional	
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