

Multi PCSM

IEC | UL

Easy maintenance.

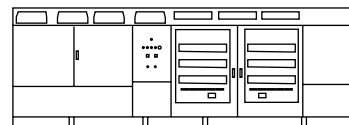
Integrated MV solution in the same enclosure.

Up to 4 independent DC inputs.

Advanced grid support.

Compatible with all battery technologies.



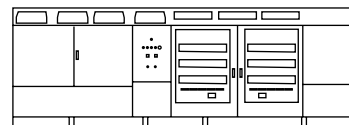


Preliminary

REFERENCES	FP5150MU2	FP5150MH2	FP5150MU4	FP5150MH4
AC	AC Output Power (kVA/kW) @35 °C ^[1]		5150	
	AC Output Power (kVA/kW) @40 °C ^[1]		4940	
	AC Output Power (kVA/kW) @50 °C ^[1]		4520	
	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	
DC	DC Voltage Range Full Power ^[3]		1019 V – 1500 V	
	Maximum DC Voltage		1500 V	
	DC Voltage Ripple		< 3%	
	Max. DC Continuous Current (A)	2579	1289	
	Max. DC Short Circuit Current (kA)		500 kA with a time constant of 1 ms	
	Battery Technology		All type of batteries (BMS required)	
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	NEMA 3R	IP55	NEMA 3R
	Operating Temperature Range ^[4]		From -25 °C to +60 °C, >35 °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	38 kV MV switchgear (V)	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	
	Safety		UL 1741 / CSA 22.2 No.1071-16 / IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 62477-2	
CERTIFICATIONS & STANDARDS	Installation		NEC 2023	
	Utility Interconnect ^[7]		UL 1741 SA & SB / IEEE 1547.1 / 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 down to -35 °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.

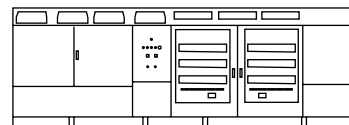


Preliminary

REFERENCES		FP5151MH2	FP5151MH4
AC	AC Output Power (kVA/kW) @35 °C ^[1]	5150	
	AC Output Power (kVA/kW) @40 °C ^[1]	4940	
	AC Output Power (kVA/kW) @50 °C ^[1]	4520	
	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	
DC	DC Voltage Range Full Power ^[3]	1019 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current (A)	2579	1289
	Max. DC Short Circuit Current (kA)	500 kA with a time constant of 1 ms	
	Battery Technology	All type of batteries (BMS required)	
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	
	Operating Temperature Range ^[4]	From -25 °C to +60 °C, >35 °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	
	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-1 / IEC 62477-2	
CERTIFICATIONS & STANDARDS	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 down to -35 °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.



Preliminary

REFERENCES		FP5152MH2	FP5152MH4
AC	AC Output Power (kVA/kW) @35 °C ^[1]	5150	
	AC Output Power (kVA/kW) @40 °C ^[1]	4940	
	AC Output Power (kVA/kW) @50 °C ^[1]	4520	
	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	
DC	DC Voltage Range Full Power ^[3]	1019 V – 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	<3%	
	Max. DC Continuous Current (A)	2579	1289
	Max. DC Short Circuit Current (kA)	500 kA with a time constant of 1 ms	
	Battery Technology	All type of batteries (BMS required)	
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	
	Operating Temperature Range ^[4]	From -25 °C to +60 °C, >35 °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	

NOTAS

- [1] Valores a 1.00-Vac nom y cosφ=1. Consultar con Power Electronics las curvas de reducción de potencia y la capacidad de sobrecarga en modo de formación de red (grid forming).
[2] Consultar los diagramas P-Q disponibles: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
[3] Consultar con Power Electronics las curvas de reducción de potencia. En caso de sobretensión en la red, la tensión mínima de entrada en corriente continua DC variará proporcionalmente con la tensión en AC.
[4] Opción disponible para temperaturas de hasta -35 °C.
[5] Consultar con Power Electronics para altitudes superiores a 1000 m.
[6] La desconexión por cortocircuito de la batería debe realizarse en el lado de la batería.
[7] Consultar con Power Electronics otras normativas / códigos de red aplicables.