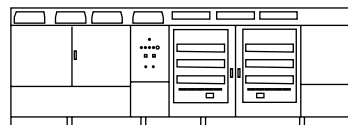

Easy maintenance.
Advanced grid support.
Integrated MV solution in the same enclosure.
Econ Mode. Remove no-load losses.
Bus Plus. Combines Solar and Storage.

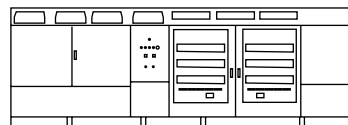




REFERENCES		FS4105M	FS4010M
AC	AC Output Power (kVA/kW) @40 °C ^[6]	4105	4010
	AC Output Power (kVA/kW) @50 °C ^[6]	3810	3720
	Operating Grid Voltage (kV) ^[7]	34.5 kV ±10%	
DC	DC Voltage Range ^[8]	913 V - 1500 V	891 V - 1500 V
EFFICIENCY	Efficiency (Max) (η)	97.93% including MV transformer	97.91% including MV transformer
	CEC (η)	97.50% including MV transformer	97.49% including MV transformer
COMMON FEATURES			
AC	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[1]	0.5 leading ... 0.5 lagging adjustable / Reactive power injection at night	
DC	Maximum DC Voltage	1500 V	
	Number of Inputs	Up to 40	
	Max. DC Continuous Current (A) ^[2]	4590	
	Max. DC Short Circuit Current (A) ^[2]	6940	
	Number of Freemaq DC/DC ^[2]	Up to 4	
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	
	Operating Temperature Range ^[3]	From -40 °C to +60 °C, >40 °C power derating	
	Operating Relative Humidity Range	From 4% to 100%	
	Storage Temperature Range	From -40 °C to +60 °C	
	Max. Altitude (above sea level) ^[4]	2000 m	
CONTROL	Communication Protocol	Modbus TCP	
	Power Plant Controller	Optional	
	Keyed ON/OFF Switch	Standard	
PROTECTIONS	Ground Fault Protection	GFDI and insulation monitoring device	
	Humidity Control	Active heating	
	General AC Protection & Disconn.	38 kV MV switchgear (V)	
	General DC Protection & Disconn.	Fuses, Motorized DC disconnect switches	
	Overvoltage Protection	Type II protection for AC and DC	
STANDARDS	Safety	UL 1741 / CSA 22.2 No.107.1-16	
	Installation	NEC 2023	
	Utility Interconnect ^[5]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

NOTES

- [1] Consult P-Q charts available: $Q(kVAr) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [2] Consult Power Electronics for Freemaq DC/DC connection configurations.
 [3] Optional available for temperatures below -25 °C.
 [4] Consult Power Electronics for altitudes above 1000 m.
 [5] Consult Power Electronics for other applicable standards / grid codes.
 [6] Values at 1.00-Vac nom and CosPhi=1. Consult Power Electronics for derating curves.
 [7] Consult Power Electronics for other configurations.
 [8] 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.



REFERENCES	FS4200M	FS4201M	FS4204M
AC	AC Output Power (kVA/kW) @40 °C ^[6]	4200	
	AC Output Power (kVA/kW) @50 °C ^[6]	3900	
	Operating Grid Voltage (kV) ^[7]	34.5 kV ±10%	13.8 kV ±10%
DC	DC Voltage Range ^[8]	934 V - 1500 V	
EFFICIENCY	Efficiency (Max) (η)	98.00% including MV transformer	
	CEC (η)	97.53% including MV transformer	
COMMON FEATURES			
AC	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[1]	0.5 leading ... 0.5 lagging adjustable / Reactive power injection at night	
DC	Maximum DC Voltage	1500 V	
	Number of Inputs	Up to 40	
	Max. DC Continuous Current (A) ^[2]	4590	
	Max. DC Short Circuit Current (A) ^[2]	6940	
	Number of Freemaq DC/DC ^[2]	Up to 4	
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	
	Operating Temperature Range ^[3]	From -40 °C to +60 °C, >40 °C power derating	
	Operating Relative Humidity Range	From 4% to 100%	
	Storage Temperature Range	From -40 °C to +60 °C	
	Max. Altitude (above sea level) ^[4]	2000 m	
CONTROL	Communication Protocol	Modbus TCP	
	Power Plant Controller	Optional	
	Keyed ON/OFF Switch	Standard	
PROTECTIONS	Ground Fault Protection	GFDI and insulation monitoring device	
	Humidity Control	Active heating	
	General AC Protection & Disconn.	38 kV MV switchgear (V)	15.5 kV SF6 Free MV switchgear (V)
	General DC Protection & Disconn.	Fuses, Motorized DC disconnect switches	
	Overvoltage Protection	Type II protection for AC and DC	
STANDARDS	Safety	UL 1741 / CSA 22.2 No.107.1-16	
	Installation	NEC 2023	
	Utility Interconnect ^[5]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

NOTES

- [1] Consult P-Q charts available: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [2] Consult Power Electronics for Freemaq DC/DC connection configurations.
 [3] Optional available for temperatures below -25 °C.
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 [5] Consult Power Electronics for other applicable standards / grid codes.
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 [7] Consult Power Electronics for other configurations.
 [8] 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.