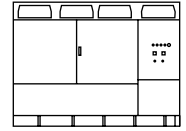

Modularity.
Easy maintenance.
Advanced grid support.
Compatible with all battery technologies.



Freemaq PCSK



COMMON FEATURES PCSK		FRAME 2	FRAME 3	FRAME 4
AC	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (cosine phi) ^[1]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Ripple	< 3%		
	Max. DC Continuous Current (A)	2295	3443	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms		
	Battery Technology	All type of batteries (BMS required)		
CABINET	Dimensions [WxDxH] (ft)	9.8 x 6.5 x 7.2		
	Dimensions [WxDxH] (m)	3.0 x 2.0 x 2.2		
	Weight (lbs)	11465	11795	12125
	Weight (kg)	5200	5350	5500
ENVIRONMENT	Type of Ventilation	Forced air cooling		
	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[2]	From -25°C to +60°C, >50°C power derating		
	Operating Relative Humidity Range	From 4% to 100% non-condensing		
	Storage Temperature Range	From -15°C to +40°C		
CONTROL INTERFACE	Max. Altitude (above sea level)	2000m / >2000m power derating (Max. 4000m)		
	Communication Protocol	Modbus TCP		
	Power Plant Controller	Optional. Third party SCADA systems supported.		
	Keyed ON/OFF Switch	Standard		
PROTECTIONS	Ground Fault Protection	Insulation monitoring device		
	Humidity Control	Active heating		
	General AC Protection & Disconn.	Circuit breaker		
	General DC Protection & Disconn.	DC switch-disconnectors ^[3]		
	Overvoltage Protection	Type II for AC and Type I+II for DC		
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.107.1-16 / IEC 62109-1 / IEC 62109-2		
	Installation	NEC 2020 / IEC		
	Utility Interconnect ^[4]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1 2020 / IEC 62116:2014		

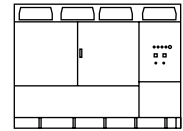
NOTES

[1] Consult P-Q charts available: $Q(kVar)=\sqrt{(S(kVA))^2-P(kW)^2}$.

[2] Optional available for temperatures down to -35°C.

[3] Battery short circuit disconnection has to be done on the battery side.

[4] Consult Power Electronics for other applicable standards/grid codes.

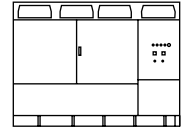


690 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP2195K	FP3290K	FP4390K
AC	AC Output Power (kVA/kW) @40°C [1]	2195	3290	4390
	AC Output Power (kVA/kW) @50°C [1]	2035	3055	4075
Operating Grid Voltage (VAC)			690V ±10%	
DC	DC Voltage Range [2]	976V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.84%	98.87%	98.93%
	Euroeta (η) (preliminary)	98.45%	98.48%	98.65%
660 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP2101K	FP3151K	FP4200K
AC	AC Output Power (kVA/kW) @40°C [1]	2100	3150	4200
	AC Output Power (kVA/kW) @50°C [1]	1950	2925	3900
Operating Grid Voltage (VAC)			660V ±10%	
DC	DC Voltage Range [2]	934V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.81%	98.84%	98.90%
	Euroeta (η) (preliminary)	98.45%	98.48%	98.65%
645 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP2055K	FP3080K	FP4105K
AC	AC Output Power (kVA/kW) @40°C [1]	2055	3080	4105
	AC Output Power (kVA/kW) @50°C [1]	1905	2855	3810
Operating Grid Voltage (VAC)			645V ±10%	
DC	DC Voltage Range [2]	913V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.78%	98.81%	98.87%
	Euroeta (η) (preliminary)	98.40%	98.43%	98.60%
630 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP2005K	FP3005K	FP4010K
AC	AC Output Power (kVA/kW) @40°C [1]	2005	3005	4010
	AC Output Power (kVA/kW) @50°C [1]	1860	2790	3720
Operating Grid Voltage (VAC)			630V ±10%	
DC	DC Voltage Range [2]	891V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.79%	98.85%
	Euroeta (η) (preliminary)	98.39%	98.42%	98.59%
615 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1955K	FP2935K	FP3915K
AC	AC Output Power (kVA/kW) @40°C [1]	1955	2935	3915
	AC Output Power (kVA/kW) @50°C [1]	1815	2725	3635
Operating Grid Voltage (VAC)			615V ±10%	
DC	DC Voltage Range [2]	870V - 1500V		
	Maximum DC Voltage	1500 V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.79%	98.84%
	Euroeta (η) (preliminary)	98.38%	98.41%	98.57%

NOTES

[1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for derating curves. The maximum AC output power must be limited to meet the P-Q capability requirement at the inverter level of some grid codes.
 [2] Consult Power Electronics for derating curves.

Freemaq PCSK



600 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1910K	FP2865K	FP3820K
AC	AC Output Power (kVA/kW) @40°C ^[1]	1910	2865	3820
	AC Output Power (kVA/kW) @50°C ^[1]	1775	2660	3545
Operating Grid Voltage (VAC)		600V ±10%		
DC	DC Voltage Range ^[2]	849V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.84%
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%
530 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1685K	FP2530K	FP3370K
AC	AC Output Power (kVA/kW) @40°C ^[1]	1685	2530	3370
	AC Output Power (kVA/kW) @50°C ^[1]	1565	2350	3130
Operating Grid Voltage (VAC)		530V ±10%		
DC	DC Voltage Range ^[2]	750V - 1300V		
	Maximum DC Voltage	1300V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.84%
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%
500 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1590K	FP2385K	FP3180K
AC	AC Output Power (kVA/kW) @40°C ^[1]	1590	2385	3180
	AC Output Power (kVA/kW) @50°C ^[1]	1475	2215	2955
Operating Grid Voltage (VAC)		500V ±10%		
DC	DC Voltage Range ^[2]	708V - 1250V		
	Maximum DC Voltage	1250V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.84%
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%
480 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1525K	FP2290K	FP3055K
AC	AC Output Power (kVA/kW) @40°C ^[1]	1525	2290	3055
	AC Output Power (kVA/kW) @50°C ^[1]	1415	2125	2840
Operating Grid Voltage (VAC)		480V ±10%		
DC	DC Voltage Range ^[2]	679V - 1200V		
	Maximum DC Voltage	1200V		
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.84%
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for derating curves.
 [2] Consult Power Electronics for derating curves.