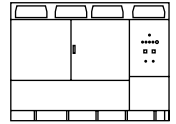


Multi PCSK

Modularity.
Easy maintenance.
Up to 4 independent DC inputs.
Advanced grid support.
Compatible with all battery technologies.



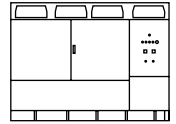
Freemaq Multi PCSK



COMMON FEATURES MULTI PCSK		FRAME 2	FRAME 3	FRAME 4	
AC	Max. AC Output Current (A) @40 °C	1837	2756	3674	
	Operating Grid Frequency (Hz)	50/60 Hz			
	Current Harmonic Distortion (THDi)	<3% per IEEE519			
	Power Factor (CosPhi) ^[1]	0.5 leading... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Ripple	<3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	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 Separate DC Inputs	2	3	2	4
CABINET	Dimensions [WxDxH] (ft)	9.8 x 6.5 x 7.5			
	Dimensions [WxDxH] (m)	3.0 x 2.0 x 2.3			
	Weight (lbs)	8600	9700	10365	
	Weight (kg)	3900	4400	4700	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[2]	From -25 °C to +60 °C, >40 °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)	2000m / >2000m power derating (Max. 4000m)			
CONTROL INTERFACE	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. ^[3]	High-speed fuses, Motorized DC disconnect switches			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16 / IEC 62109-1 / IEC 62109-2 / IEC 62477-1			
	Installation	NEC 2023			
	Utility Interconnect ^[4]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

NOTES

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

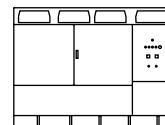


690 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2195K2	FP3290K3	FP4390K2	FP4390K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	2195	3290	4390	
	AC Output Power (kVA/kW) @50°C ^[1]	2035	3055	4075	
	Operating Grid Voltage (VAC)	690V ±10%			
DC	DC Voltage Range ^[2]	976V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.84%	98.87%	98.94%	
	Euroeta (η)	98.34%	98.49%	98.51%	
660 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2101K2	FP3151K3	FP4200K2	FP4200K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.86%	98.89%	98.95%	
	Euroeta (η)	98.36%	98.51%	98.53%	
645 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2055K2	FP3080K3	FP4105K2	FP4105K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.85%	98.88%	98.81%	
	Euroeta (η)	98.24%	98.39%	98.41%	
630 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2005K2	FP3005K3	FP4010K2	FP4010K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.79%	98.82%	98.88%	
	Euroeta (η)	98.28%	98.43%	98.45%	
615 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1955K2	FP2935K3	FP3915K2	FP3915K4
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	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.75%	98.78%	98.77%	
	Euroeta (η)	98.20%	98.35%	98.37%	

NOTES

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

[2] 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.



600 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1910K2	FP2865K3	FP3820K2	FP3820K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η)	98.82%	98.85%	98.78%	
	Euroeta (η)	98.18%	98.33%	98.35%	
530 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1685K2	FP2530K3	FP3370K2	FP3370K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.78%			
	Euroeta (η) (preliminary)	98.35%			
500 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1590K2	FP2385K3	FP3180K2	FP3180K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.78%			
	Euroeta (η) (preliminary)	98.35%			
480 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1525K2	FP2290K3	FP3055K2	FP3055K4
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			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.78%			
	Euroeta (η) (preliminary)	98.35%			

NOTES

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

[2] 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.