

Storage

Battery inverters

Unlimited Energy



Looks clever.
Because it is.

Imagine all
the storage
powering
the world

We handle
everything
in-house: from
design and
manufacture
to testing.

+20 International
subsidiaries

120_{GW}

COMMISSIONED AC POWER

#1

WORLD STORAGE LEADER

Our vertical integration gives us the flexibility and specialization to adapt our products according to market and customer requirements while still ensuring short delivery times.

Store

Store energy during low demand periods, supplying it later during periods of high demand. This optimization of energy usage reduces costs associated with electricity consumption by taking advantage of fluctuations in prices or energy availability at different periods.

Control

Our products can monitor the point of interconnection to the grid, using different control strategies based on the available energy to ensure grid stability.

Reduce

Our storage products reduce the burden on the distribution grid and increase significantly its efficiency. The result is a more flattened demand curve avoiding switching on more expensive and polluting generators.

Support

Our storage inverters provide advanced grid support, capable of controlling the voltage and frequency of the grid by managing reactive and active power.

PCSM
& Multi PCSM

12

PCSK
& Multi PCSK

18

DC/DC

26

MV Skid
& Twin Skid

36

Statcom

44

PPC PRO

50

Datasheets

58

Power On
Support

96

Contact

100

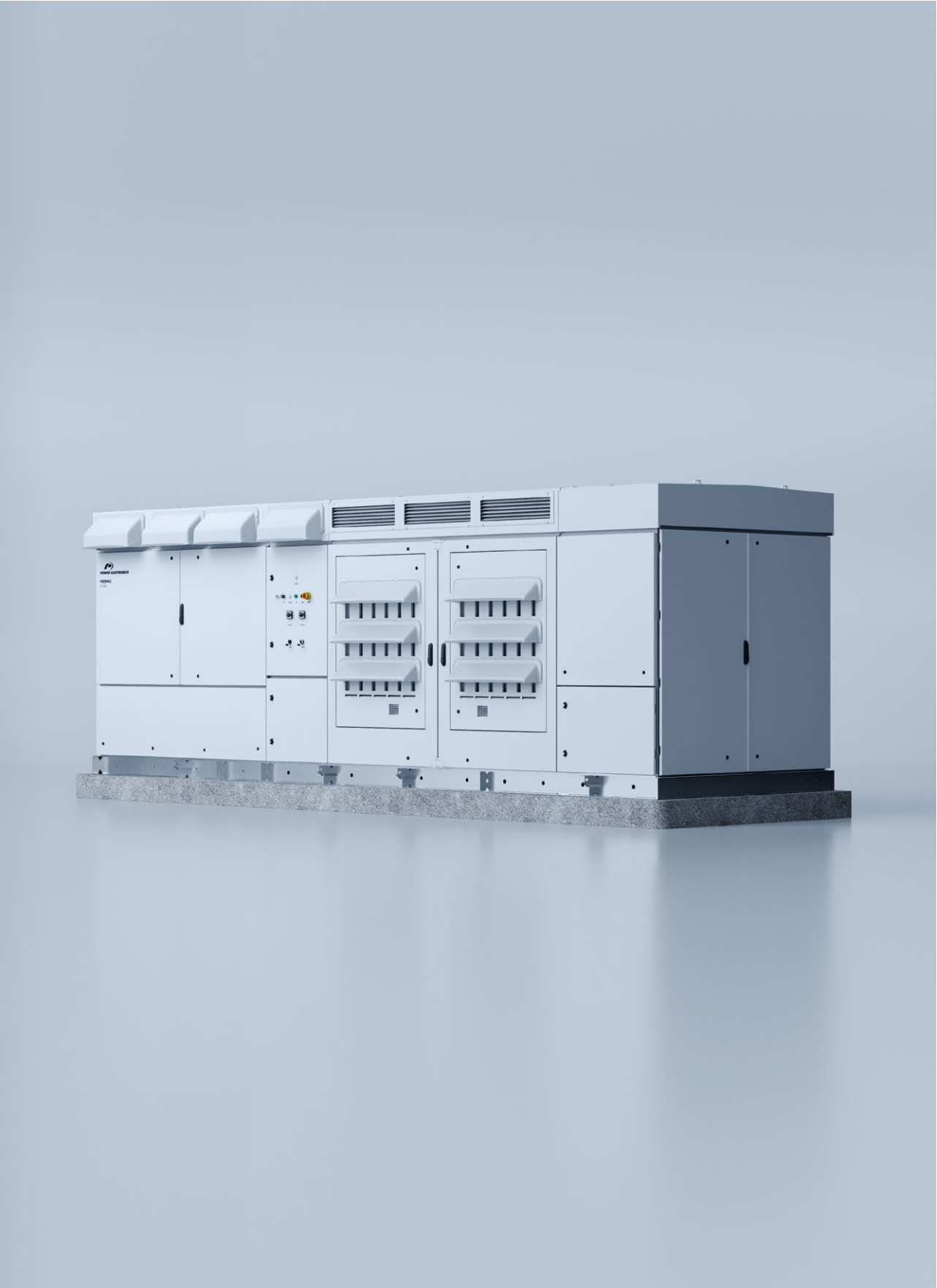
PCSM & Multi PCSM

Our biggest utility-scale MV battery inverter. Designed to last in all types of environments and compatible with all battery technologies.

PCSM & Multi PCSM

Just all-in-one

- Integrated MV solution in the same enclosure.** The storage turn-key solution that simplifies the installation design.
- Modularity, synonymous with availability.** It allows the DC power redistribution when one module fails. Lower energy losses = higher availability and efficiency.
- Easy maintenance.** Designed to be easily replaceable on the field with a safe, reliable and fast Plug&Play assembly system. Includes 4 FRUs (Field Replaceable Units).
- iCOOL 4, the most innovative cooling system.** Our own air ventilation system provides a constant flow of clean air inside the equipment, without the need of liquid cooling.
- Three-level topology.** The three-level IGBT topology reduces power stage losses, increases inverter efficiency, and minimizes total harmonic distortion. High efficiency to deliver the lowest levelized cost of energy (LCOE).
- Advanced grid support.** Capable of operating on any power system. Different operation modes available depending on the application: grid forming or grid following.
- Adaptative capacity.** Choose your model depending on your requirements.



Easy replaceable power modules

Up to 4200 kVA

Three different DC voltage windows

Maximum power up to 40°C

Full grid support capability

*Up to four independent BESS

*Only Multi PCSM



PCSK & Multi PCSK

The utility-scale battery inverters.
From one independent BESS with
PCSK, up to four independent
BESS with Multi PCSK.

PCSK & Multi PCSK

Powerful and flexible

- Easy maintenance.** Designed to be easily replaceable on the field with a safe, reliable, and fast Plug&Play assembly system. Includes up to four FRUs (Field Replaceable Units).
- Modularity, synonymous with availability.** It allows the DC power redistribution when one module fails. Lower energy losses = higher availability and efficiency.
- Advanced grid support.** Capable of operating on any power system. Different operation modes available depending on the application: grid forming or grid following.
- Three-level topology.** The three-level level IGBT topology reduces power stage losses, increases inverter efficiency, and minimizes total harmonic distortion. High efficiency to deliver the lowest levelized cost of energy (LCOE).
- Adaptive capacity.** Choose your model depending on your requirements.



Maximum power up
to 1500 Vdc

Up to 4390 kVA

Nine different voltage
DC windows

Maximum power up to 40°C

Full grid support capability

*Up to four independent
BESS

*Only Multi PCSK



Higher battery capacity due to the short-circuit withstand capability of each DC input.

Up to four more times than a single input.

Multiple power references allowing independent BESS control.

Higher availability since a battery fault will only remove the affected power modules from the system.

Only Multi PCSK



DC/DC

Increase capacity in storage plants with our DC/DC converter. Easy to fit in any place and compatible with all battery technologies.

Freemaq DC/DC

Extend storage plant lifespan

Expand the battery capacity with our DC/DC converters, optimizing existing resources of the storage plant and ensuring long-term sustainable performance.

Freemaq DC/DC converters provide an efficient solution for replacing degraded batteries and extending the lifespan of energy storage plants.

Its unique modular design provides the necessary flexibility to adapt to the requested power.





**The most efficient bidirectional
DC/DC converter.**

Modular Outdoor Solution

Nominal power of 1200 kW

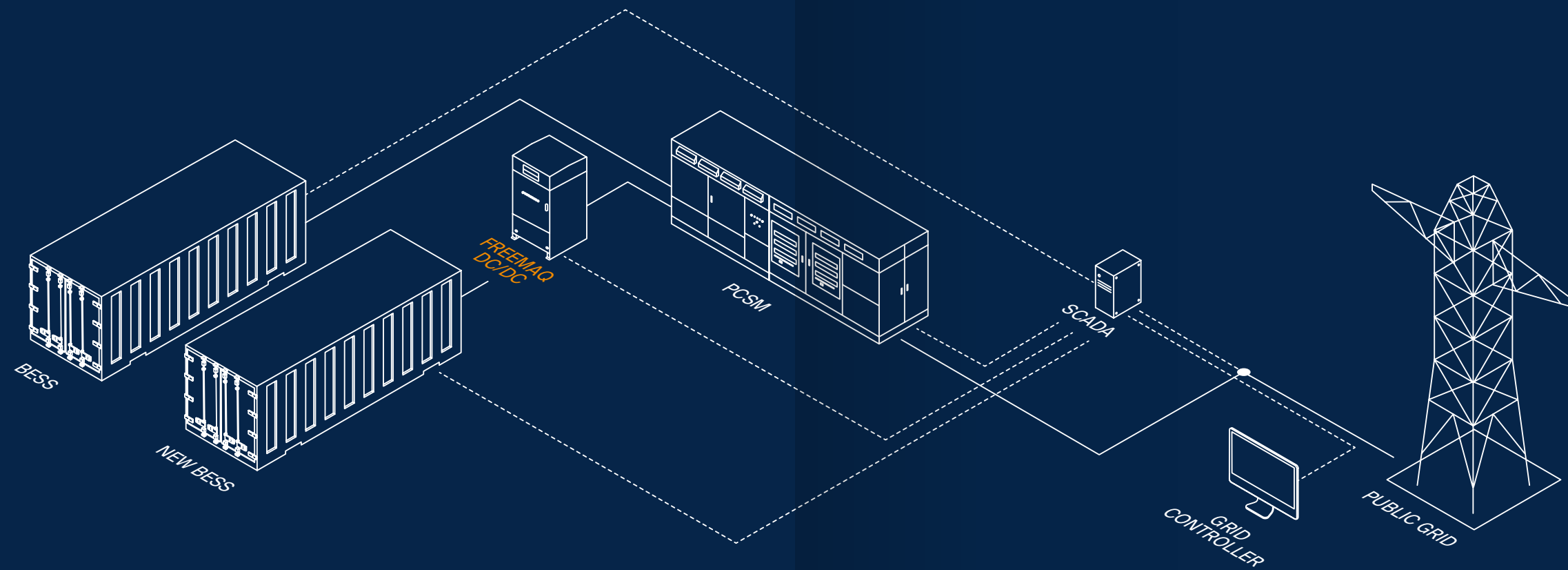
Up to 1500 Vdc



Avoid excess
over-sizing of storage
capacity with our
Freemaq DC/DC.
How?

1 It is possible to install batteries in different phases, using DC/DC converters to balance the voltage with the existing batteries.

2 Strategically planning installation in stages optimizes the initial investment, preventing over-sizing to ensure the lifespan of the plant.



Easy to integrate

MV Skid & Twin Skid

Our MV solutions are designed to combine with the PCSK and Multi PCSK in order to simplify your commissioning.

MV Skid Compact & Twin Skid Compact

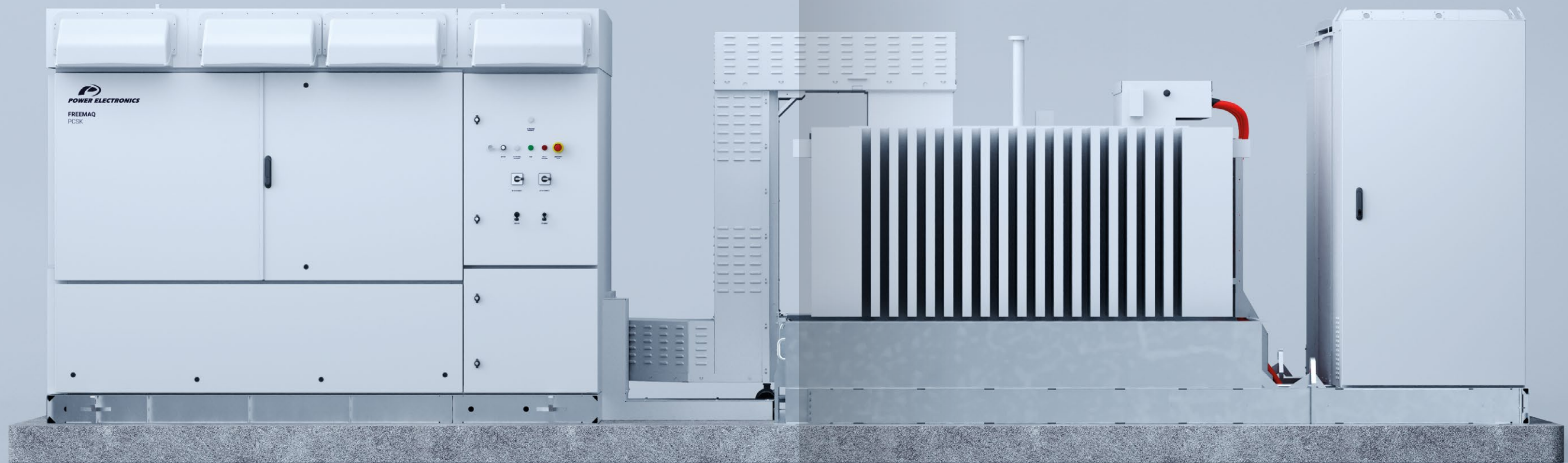
Combine the Freemaq PCSK & Multi PCSK with our MV solutions.

Turn-key solution. Our medium voltage solutions facilitate the project design and reduces the installation costs.	The fastest connection with any PCSK.	Simplify your commissioning. All the medium voltage equipment is already integrated.
--	--	---



Easy and fast connection

MV Skid Compact



From 6.6 kV to 34.5 kV in the high voltage range

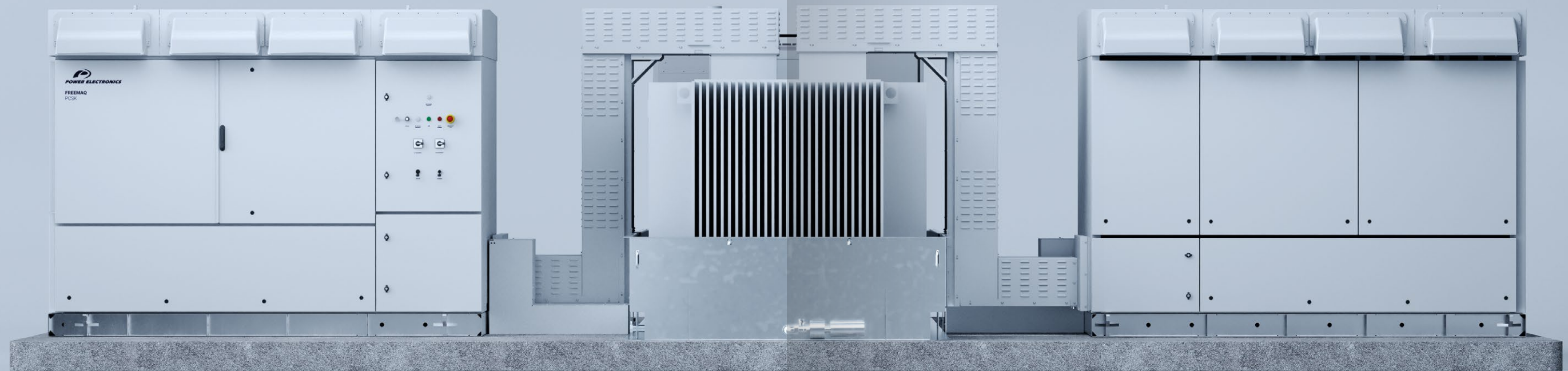
Power outputs from 1525 kVA to 4390 kVA

From 480 V to 690 V in the low voltage range

Choose the distribution that fits better on your storage plant for one PCSK

For the largest storage plants

Twin Skid Compact



From 11 kV to 34.5 kV in the high voltage range

Power outputs from 3050 kVA to 8780 kVA

From 480 V to 690 V in the low voltage range

For two PCSK

Statcom

The Freemaq Statcom is a utility-scale static compensator. Conceived to support the most demanding grid codes.

Freemaq Statcom

The Freemaq Statcom dynamically injects the required amount of reactive power into the grid. Perfect solution for installations with the most demanding reactive capability requirements.





Easy maintenance. Designed to be easily replaceable on the field with a safe, reliable and fast Plug&Play assembly system. Includes up to 4 FRUs (Field Replaceable Units).

Modularity, synonymous of availability. It allows the power block to keep running even when one module fails. Lower energy losses = higher availability and efficiency.

Three-level topology. The three-level IGBT topology reduces power stage losses, increases efficiency, and minimizes total harmonic distortion.

Three different frames ranging from 1900 kVAr to 3800 kVAr

PPC PRO

Flexible control technology:
real-time control and monitoring
for advanced utility-scale
applications.

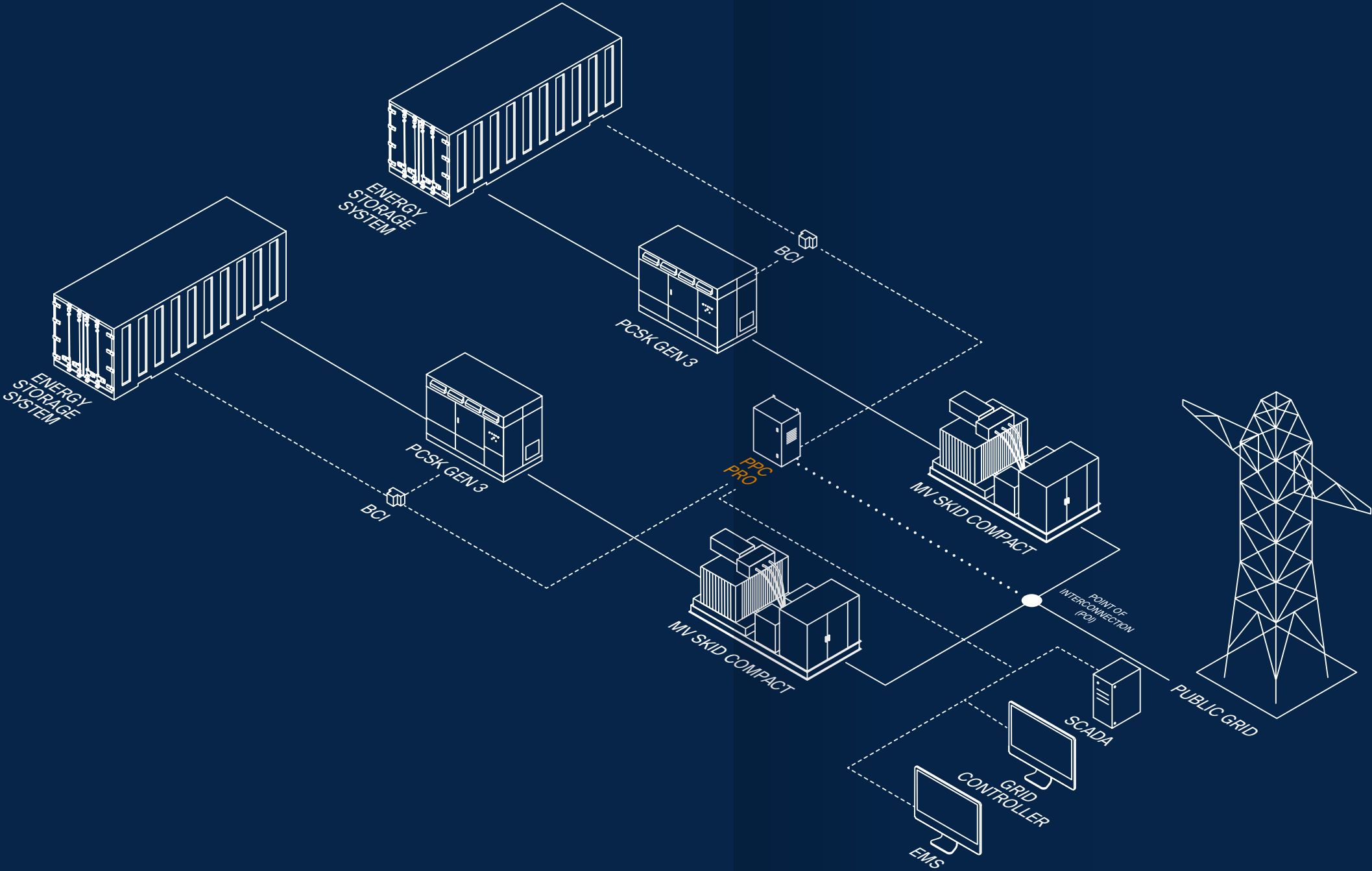
PPC PRO

Regardless of where you are

PPC PRO ensures full coordination between the storage plant devices, adapting control strategies depending on the status of the batteries. Main governor of the most complex power plants by monitoring the point of interconnection (POI) and controlling the power generation. Equipped with the latest PLC technology and implementing sophisticated communication system and regulation algorithms to comply with the most demanding grid codes.

Maximize the efficiency of the power block (inverter + batteries) including the Battery Control Interface (BCI) in Storage and Hybrid Plants: Power block interface for the PPC or SCADA system. Easy to handle, requiring only basic external commands. Easy integration of any battery system. Advanced functionalities considering the status of batteries and inverters (SoC balancing, tapering charging, active power distribution, augmentation capability).



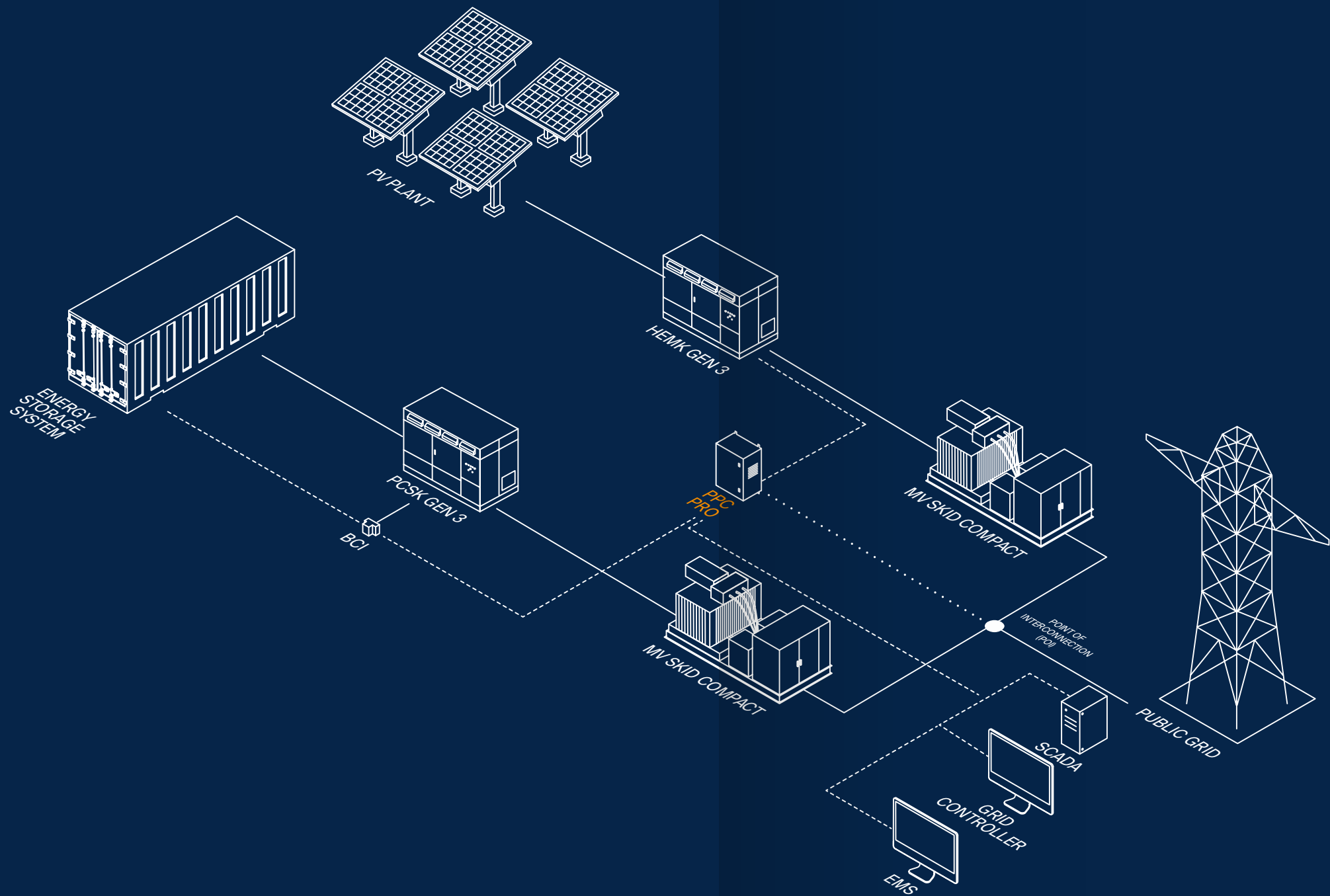


Storage plant

Advanced and reliable functionalities. PPC PRO is a device used to manage power plants in order to comply with all the utility and customer requirements, thanks to its fast and flexible control algorithms.

SoC Balancing. This algorithm allows to distribute active power between the different BESS proportionally to the SoC difference. In this way, the SoC balancing control minimizes the time it takes for each BESS to end a charge / discharge cycle.

 **O&M diagnosis functions.** Reports warning / fault messages and enables user management, real-time data monitoring, etc



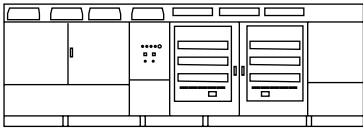
Hybrid plant

Datasheets

Find all the specifications of our products just here.



Freemaq PCSM
UL



REFERENCES		FP4200M	FP4201M
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200	
	AC Output Power (kVA/kW) @50°C ^[1]	3900	
	Operating Grid Voltage (kV)	34.5 kV ±10%	13.8 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	934 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current (A)	4590	
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms	
	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 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	Weight (lbs)	30865	
	Weight (kg)	14000	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	NEMA 3R	
	Operating Temperature Range ^[4]	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) ^[5]	2000m	
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.	38 kV MV switchgear (20 or 25 kA)	
	General DC Protection & Disconn. ^[6]	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.107.1-16	
	Installation	NEC 2023	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

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.

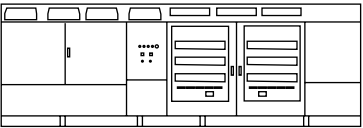
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq PCSM
IEC



REFERENCES		FP4200MH	FP4203MH
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200	
	AC Output Power (kVA/kW) @50°C ^[1]	3900	
	Operating Grid Voltage (kV)	34.5 kV ±10%	33 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	50Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	934 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current (A)	4590	
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms	
	Battery Technology	All type of batteries (BMS required)	
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η) (preliminary)	97.80% including MV transformer	
	Euroeta (η) (preliminary)	97.51% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	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, >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) ^[5]	2000m	
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.	MV switchgear (2L+V)	
	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-2	

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: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

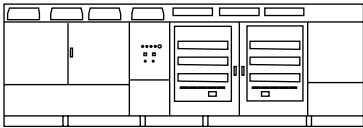
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq PCSM
UL



REFERENCES		FP4105M
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105
	AC Output Power (kVA/kW) @50°C ^[1]	3810
	Operating Grid Voltage (kV)	34.5 kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	913 V - 1500 V
	Maximum DC Voltage	1500 V
	DC Voltage Ripple	< 3%
	Max. DC Continuous Current (A)	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms
EFFICIENCY & AUX. SUPPLY	Battery Technology	All type of batteries (BMS required)
	Efficiency (Max) (η)	97.93% including MV transformer
	CEC (η)	97.50% including MV transformer
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	Weight (lbs)	30865
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
ENVIRONMENT	Degree of Protection	NEMA 3R
	Operating Temperature Range ^[4]	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) ^[5]	2000m
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.	38 kV MV switchgear (20 or 25 kA)
	General DC Protection & Disconn. ^[6]	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.107.1-16
	Installation	NEC 2023
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020

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.

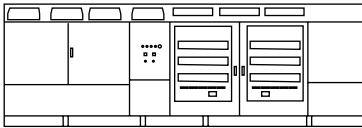
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq PCSM
IEC



REFERENCES		FP4105MH
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105
	AC Output Power (kVA/kW) @50°C ^[1]	3810
	Operating Grid Voltage (kV)	34.5 kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	913 V - 1500 V
	Maximum DC Voltage	1500 V
	DC Voltage Ripple	< 3%
	Max. DC Continuous Current (A)	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms
EFFICIENCY & AUX. SUPPLY	Battery Technology	All type of batteries (BMS required)
	Efficiency (Max) (η) (preliminary)	97.76% including MV transformer
	Euroeta (η) (preliminary)	97.50% including MV transformer
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	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, >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) ^[5]	2000m
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.	MV switchgear (2L+V)
	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches
	Overvoltage Protection	Type II for AC and Type I+II for DC
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-2

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: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

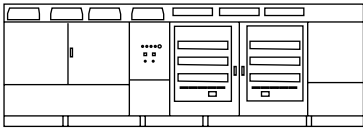
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq PCSM
UL



REFERENCES		FP4010M
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010
	AC Output Power (kVA/kW) @50°C ^[1]	3720
	Operating Grid Voltage (kV)	34.5 kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	891 V - 1500 V
	Maximum DC Voltage	1500 V
	DC Voltage Ripple	< 3%
	Max. DC Continuous Current (A)	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms
EFFICIENCY & AUX. SUPPLY	Battery Technology	All type of batteries (BMS required)
	Efficiency (Max) (η)	97.91% including MV transformer
	CEC (η)	97.49% including MV transformer
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	Weight (lbs)	30865
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
ENVIRONMENT	Degree of Protection	NEMA 3R
	Operating Temperature Range ^[4]	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) ^[5]	2000m
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.	38 kV MV switchgear (20 or 25 kA)
	General DC Protection & Disconn. ^[6]	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.107.1-16
	Installation	NEC 2023
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020

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.

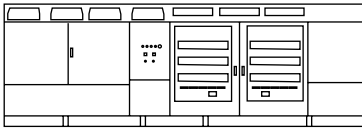
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq PCSM
IEC



REFERENCES		FP4010MH
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010
	AC Output Power (kVA/kW) @50°C ^[1]	3720
	Operating Grid Voltage (kV)	34.5 kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	891 V - 1500 V
	Maximum DC Voltage	1500 V
	DC Voltage Ripple	< 3%
	Max. DC Continuous Current (A)	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms
EFFICIENCY & AUX. SUPPLY	Battery Technology	All type of batteries (BMS required)
	Efficiency (Max) (η) (preliminary)	97.75% including MV transformer
	Euroeta (η) (preliminary)	97.48% including MV transformer
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	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, >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) ^[5]	2000m
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.	MV switchgear (2L+V)
	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches
	Overvoltage Protection	Type II for AC and Type I+II for DC
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-2

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: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

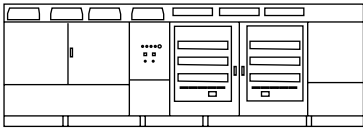
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq Multi PCSM
UL



REFERENCES		FP4200M2	FP4201M2	FP4200M4	FP4201M4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200			
	AC Output Power (kVA/kW) @50°C ^[1]	3900			
	Operating Grid Voltage (kV)	34.5 kV ±10%	13.8 kV ±10%	34.5 kV ±10%	13.8 kV ±10%
	Operating Grid Frequency (Hz)	60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	934 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	2295		1148	
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
EFFICIENCY & AUX. SUPPLY	Number of Separate DC Inputs	2		4	
CABINET	Efficiency (Max) (η)	98.00% including MV transformer			
	CEC (η)	97.53% including MV transformer			
	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2			
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2			
	Weight (lbs)	30865			
ENVIRONMENT	Weight (kg)	14000			
	Type of Ventilation	Forced air cooling			
	Degree of Protection	NEMA 3R			
	Operating Temperature Range ^[4]	From -25°C to +60°C, >40°C power derating			
	Operating Relative Humidity Range	From 4% to 100% non-condensing			
CONTROL INTERFACE	Storage Temperature Range	From -40°C to +60°C			
	Max. Altitude (above sea level) ^[5]	2000m			
	Communication Protocol	Modbus TCP			
PROTECTIONS	Power Plant Controller	Optional. Third party SCADA systems supported.			
	Keyed ON/OFF Switch	Standard			
	Ground Fault Protection	Insulation monitoring device			
	Humidity Control	Active heating			
	General AC Protection & Disconn.	38 kV MV switchgear (20 or 25 kA)			
CERTIFICATIONS & STANDARDS	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
	Safety	UL 1741 / CSA 22.2 No.107.1-16			
	Installation	NEC 2023			
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020			

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)=√(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.

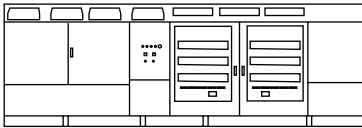
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSM
IEC



REFERENCES		FP4200MH2	FP4203MH2	FP4200MH4	FP4203MH4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200			
	AC Output Power (kVA/kW) @50°C ^[1]	3900			
	Operating Grid Voltage (kV)	34.5 kV ±10%	33 kV ±10%	34.5 kV ±10%	33 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	50Hz	60Hz	50Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	934 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	2295		1148	
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
EFFICIENCY & AUX. SUPPLY	Number of Separate DC Inputs	2		4	
CABINET	Efficiency (Max) (η)	97.80% including MV transformer			
	Euroeta (η)	97.51% including MV transformer			
	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2			
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2			
	Weight (lbs)	30865			
ENVIRONMENT	Weight (kg)	14000			
	Type of Ventilation	Forced air cooling			
	Degree of Protection	IP55			
	Operating Temperature Range ^[4]	From -25°C to +60°C, >40°C power derating			
	Operating Relative Humidity Range	From 4% to 100% non-condensing			
CONTROL INTERFACE	Storage Temperature Range	From -40°C to +60°C			
	Max. Altitude (above sea level) ^[5]	2000m			
	Communication Protocol	Modbus TCP			
PROTECTIONS	Power Plant Controller	Optional. Third party SCADA systems supported.			
	Keyed ON/OFF Switch	Standard			
	Ground Fault Protection	Insulation monitoring device			
	Humidity Control	Active heating			
	General AC Protection & Disconn.	MV switchgear (2L+V)			
CERTIFICATIONS & STANDARDS	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
		Safety			
		IEC 62109-1 / IEC 62109-2 / IEC 62477-2			

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)=√(S(kVA)²-P(kW)²).

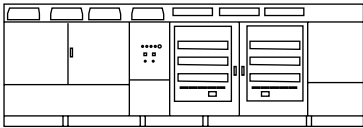
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq Multi PCSM
UL



REFERENCES		FP4105M2	FP4105M4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105	
	AC Output Power (kVA/kW) @50°C ^[1]	3810	
	Operating Grid Voltage (kV)	34.5 kV ±10%	34.5 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	913 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms	
	Battery Technology	All type of batteries (BMS required)	
EFFICIENCY & AUX. SUPPLY	Number of Separate DC Inputs	2	4
	Efficiency (Max) (η)	97.93% including MV transformer	
	CEC (η)	97.50% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	Weight (lbs)	30865	
	Weight (kg)	14000	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	NEMA 3R	
	Operating Temperature Range ^[4]	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) ^[5]	2000m	
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.	38 kV MV switchgear (20 or 25 kA)	
	General DC Protection & Disconn. ^[6]	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.107.1-16	
	Installation	NEC 2023	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

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.

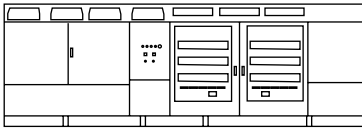
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSM
IEC



REFERENCES		FP4105MH2	FP4105MH4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105	
	AC Output Power (kVA/kW) @50°C ^[1]	3810	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	913 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms	
	Battery Technology	All type of batteries (BMS required)	
EFFICIENCY & AUX. SUPPLY	Number of Separate DC Inputs	2	4
	Efficiency (Max) (η)	97.76% including MV transformer	
	Euroeta (η)	97.50% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	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, >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) ^[5]	2000m	
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.	MV switchgear (2L+V)	
	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-2	

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: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

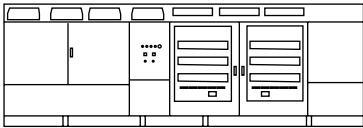
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq Multi PCSM
UL



REFERENCES		FP4010M2	FP4010M4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010	
	AC Output Power (kVA/kW) @50°C ^[1]	3720	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	891 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separate DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	97.91% including MV transformer	
	CEC (η)	97.49% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	Weight (lbs)	30865	
	Weight (kg)	14000	
	Type of Ventilation	Forced air cooling	
ENVIRONMENT	Degree of Protection	NEMA 3R	
	Operating Temperature Range ^[4]	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) ^[5]	2000m	
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.	38 kV MV switchgear (20 or 25 kA)	
	General DC Protection & Disconn. ^[6]	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.107.1-16	
	Installation	NEC 2023	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

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.

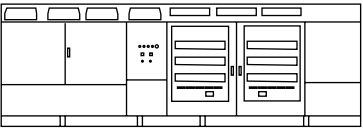
[4] Optional available for temperatures down to -35°C.

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSM
IEC



REFERENCES		FP4010MH2	FP4010MH4
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010	
	AC Output Power (kVA/kW) @50°C ^[1]	3720	
	Operating Grid Voltage (kV)	34.5 kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	891 V - 1500 V	
	Maximum DC Voltage	1500 V	
	DC Voltage Ripple	< 3%	
	Max. DC Continuous Current per Input (A)	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms	
	Battery Technology	All type of batteries (BMS required)	
	Number of Separate DC Inputs	2	4
EFFICIENCY & AUX. SUPPLY	Efficiency (Max) (η)	97.75% including MV transformer	
	Euroeta (η)	97.48% including MV transformer	
CABINET	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2	
	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2	
	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, >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) ^[5]	2000m	
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.	MV switchgear (2L+V)	
	General DC Protection & Disconn. ^[6]	High-speed fuses, Motorized DC disconnect switches	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62109-1 / IEC 62109-2 / IEC 62477-2	

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: $Q(kVar)=\sqrt{(S(kVA)^2-P(kW)^2)}$.

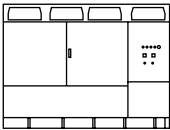
[3] Consult Power Electronics for derating curves. In the event of overvoltage in the grid, the minimum DC voltage will vary proportionally with the AC voltage.

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

[5] Consult Power Electronics for altitudes above 1000m.

[6] Battery short circuit disconnection must be done on the battery side.

Freemaq PCSK
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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	690 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	976 V - 1500 V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.94%		
	Euroeta (η) ^[4]	98.51%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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.

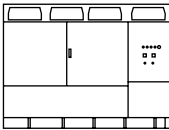
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq PCSK
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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	660 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	934 V - 1500 V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.95%		
	Euroeta (η) ^[4]	98.53%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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.

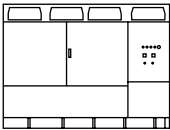
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

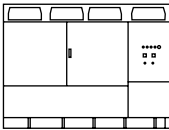
Freemaq PCSK
645 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	645 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	913 V - 1500 V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.81%		
	Euroeta (η) ^[4]	98.41%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

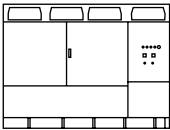
Freemaq PCSK
630 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	630 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	891 V - 1500 V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.88%		
	Euroeta (η) ^[4]	98.45%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

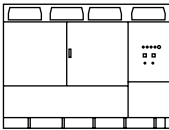
Freemaq PCSK
615 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	615 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	870 V - 1500 V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.77%		
	Euroeta (η) ^[4]	98.37%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

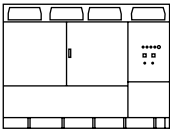
Freemaq PCSK
600 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	600 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	849 V - 1500V		
	Maximum DC Voltage	1500 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%		
	Euroeta (η) ^[4]	98.35%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

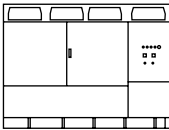
Freemaq PCSK
530 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	530 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	750 V - 1300 V		
	Maximum DC Voltage	1300 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%		
	Euroeta (η) ^[4]	98.35%		
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
	Type of Ventilation	Forced air cooling		
	Degree of Protection	NEMA 3R / IP55		
ENVIRONMENT	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

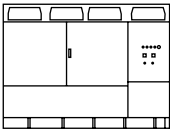
Freemaq PCSK
500 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	500 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	708 V - 1250 V		
	Maximum DC Voltage	1250 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%		
	Euroeta (η) ^[4]	98.35%		
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
	Type of Ventilation	Forced air cooling		
	Degree of Protection	NEMA 3R / IP55		
ENVIRONMENT	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

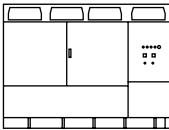
Freemaq PCSK
480 V



		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
	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Voltage (VAC)	480 V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Range ^[3]	679 V - 1200 V		
	Maximum DC Voltage	1200 V		
	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)		
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%		
	Euroeta (η) ^[4]	98.35%		
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55		
	Operating Temperature Range ^[5]	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. ^[6]	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 / IEC		
	Utility Interconnect ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014		

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

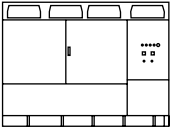
Freemaq Multi PCSK
690 V



		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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	690 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	976 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.94%			
	Euroeta (η) ^[4]	98.51%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies. [5] Optional available for temperatures down to -35°C. [6] Battery short circuit disconnection must be done on the battery side. [7] Consult Power Electronics for other applicable standards/grid codes.
-------	---

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	660 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	934 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.95%			
	Euroeta (η) ^[4]	98.53%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

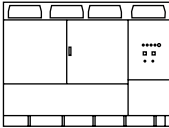
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	645 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	913 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.81%			
	Euroeta (η) ^[4]	98.41%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

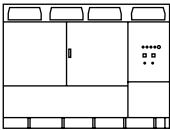
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	630 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	891 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.88%			
	Euroeta (η) ^[4]	98.45%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

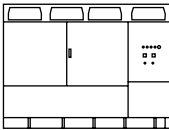
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	615 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	870 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.77%			
	Euroeta (η) ^[4]	98.37%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

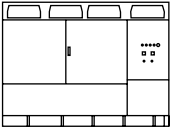
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	600 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	849 V - 1500 V			
	Maximum DC Voltage	1500 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
	EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%		
Euroeta (η) ^[4]		98.35%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

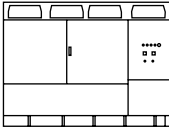
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	530 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	750 V - 1300 V			
	Maximum DC Voltage	1300 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%			
	Euroeta (η) ^[4]	98.35%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

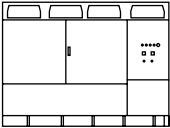
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	500 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	708 V - 1250 V			
	Maximum DC Voltage	1250 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%			
	Euroeta (η) ^[4]	98.35%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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.

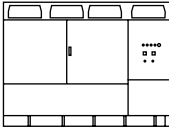
[4] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

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

[6] Battery short circuit disconnection must be done on the battery side.

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

Freemaq Multi PCSK
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	
	Max. AC Output Current (A) @40°C	1837	2756	3674	
	Operating Grid Voltage (VAC)	480 V ±10%			
	Operating Grid Frequency (Hz)	50/60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
	Power Factor (CosPhi) ^[2]	0.5 leading ... 0.5 lagging			
	Reactive Power Compensation	Four quadrant operation			
DC	DC Voltage Range ^[3]	679 V - 1200 V			
	Maximum DC Voltage	1200 V			
	DC Voltage Ripple	< 3%			
	Max. DC Continuous Current per Input (A)	1148	1148	2295	1148
	Max. DC Short Circuit Current per Input (kA)	250 kA with a time constant of 3ms			
	Battery Technology	All type of batteries (BMS required)			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) ^[4]	98.78%			
	Euroeta (η) ^[4]	98.35%			
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	
	Type of Ventilation	Forced air cooling			
ENVIRONMENT	Degree of Protection	NEMA 3R / IP55			
	Operating Temperature Range ^[5]	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. ^[6]	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 ^[7]	IEEE 1547:2018 / UL 1741 SA & SB/ IEC 62116:2014			

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 P-Q charts available: Q(kVar)=√(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] Consult Power Electronics for Frame 2 and Frame 3 efficiencies.

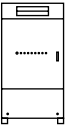
[5] Optional available for temperatures down to -35°C.

[6] Battery short circuit disconnection must be done on the battery side.

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



DC/DC

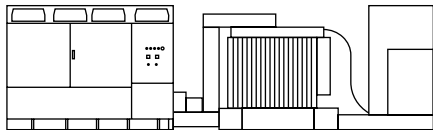


REFERENCES		FD1200
DC INPUT & OUTPUT	DC Rated Power (kW) @ 30 °C	1200
	DC Rated Power (kW) @ 40 °C	1120
	DC Rated Power (kW) @ 50 °C	1040
	Max. DC Output Current (A) @ 30 °C	1200
	Max. DC Output Current (A) @ 40 °C	1120
	Max. DC Output Current (A) @ 50 °C	1040
	DC PV Voltage Range (Vdc) ^[1]	850 - 1500
	DC ESS Voltage Range (Vdc) ^[1]	850 - 1500
	Maximum DC PV Input Voltage (Vdc)	1500
	DC Voltage Ripple	< 3%
	Max. DC Short Circuit Current ESS (kA)	250 kA with a time constant of 3 ms
	Max. DC Short Circuit Current PV (kA)	14
EFFICIENCY	Battery Technology	Compatible with all battery technologies
	Efficiency (Max)	98.9% (preliminary)
	Dimensions [WxDxH] (ft)	3.94 x 5.90 x 7.56
	Dimensions [WxDxH] (m)	1.20 x 1.80 x 2.30
CABINET	Cooling	Forced air
	Enclosure Protection Degree	N EMA 3R / IP54
CONNECTIONS	Number of PV connections	4 negative / 4 positive
	Operating Temperature Range ^[2]	-25°C to +60°C, >50°C / Active Power derating
ENVIRONMENT	Relative Humidity	From 4% to 100% non-condensing
	Max. Altitude (above sea level)	4000 m (> 2000 m power derating)
CONTROL INTERFACE	Interfaces	Emergency stop pushbutton and indicator lights
	Communications Protocol	Modbus TCP
PROTECTIONS	Inverter side ^[3]	Motorized DC disconnect switch
	BESS side ^[4]	Motorized DC disconnect switch and ultra-fast fuses
CERTIFICATIONS	Safety	UL1741, IEC 62109

NOTES

[1] Consult Power Electronics for derating curves.
[2] Consult Power Electronics for temperatures below -25°C.
[3] In case of augmentation application, ultra-fast fuses are included on the inverter side.
[4] Battery short circuit disconnection must be done on the battery side.

MV Skid Compact

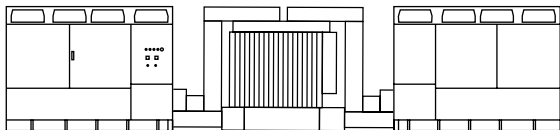


RATINGS	Power range @ 40 °C	1525 kVA - 4390 kVA
	Power range @ 50 °C	1415 kVA - 4075 kVA
MEDIUM VOLTAGE EQUIPMENT	MV voltage range	6.6 kV / 11 kV / 13.2 kV / 13.8 kV / 15 kV / 20 kV / 22 kV / 23 kV / 25 kV / 30 kV / 33 kV / 34.5 kV
	LV voltage range	480 V / 500 V / 530 V / 600 V / 615 V / 630 V/ 645 V / 660 V / 690 V
	Transformer cooling	ONAN
	Transformer vector group	Dy11
	Transformer protection	Protection relay for pressure, temperature (two levels) and gassing
		Monitoring of dielectric level decrease
		PT100 optional.
	Transformer index of protection	IP54
	Transformer losses	IEC standard or IEC Tier-2
	Oil retention tank	Galvanized steel. Integrated with hydrocarbon filter. Optional
	Switchgear configuration	Double feeder (2L)
	Switchgear protection	Circuit breaker (V)
	Switchgear short circuit rating ^[1]	16 kA 1 s (optionally 20 kA or 25 kA)
	Switchgear IAC ^[1]	A FLR 16 kA 1 s
	LV-MV connections	Close coupled solution (plug & play)
CONNECTIONS	LV protection	Motorized circuit breaker included in the inverter
	HV AC wiring	MV bridge between transformer and protection switchgear prewired
ENVIRONMENT	Ambient temperature range ^[2]	-25 °C... +50 °C (T > 50 °C power derating)
	Maximum altitude (above sea level) ^[1]	Up to 1000 m
	Relative humidity	4% to 95% non condensing
AUXILIARY SERVICES	User cabinet	Integrated in the inverter (by default). Optionally, LV cabinet in the skid.
	UPS system ^[1]	1 kVA/1 kW (12 minutes). Optional
OTHER EQUIPMENT	Safety mechanism	Interlocking system
	Fire suppression system	Transformer oil tank retention accessory. Optional.
STANDARDS	Compliance	IEC 62271-212, IEC 62271-200, IEC 60076, IEC 61439-1

NOTES

[1] Consult with Power Electronics for other options.
[2] For lower temperatures, consult with Power Electronics.

Twin Skid Compact

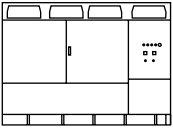


RATINGS	Power range @ 40 °C	3050 kVA - 8780 kVA
	Power range @ 50 °C	2830 kVA - 8150 kVA
MEDIUM VOLTAGE EQUIPMENT	MV voltage range	11 kV / 13.2 kV / 13.8 kV / 15 kV / 20 kV / 22 kV / 23 kV / 25 kV / 30 kV / 33 kV / 34.5 kV
	LV voltage range	480 V / 500 V / 530 V / 600 V / 615 V / 630 V / 645 V / 660 V / 690 V
	Transformer cooling	ONAN
	Transformer vector group	Dy11y11
	Transformer protection	Protection relay for pressure, temperature (two levels) and gassing.
		Monitoring of dielectric level decrease.
		PT100 optional.
	Transformer index of protection	IP54
	Transformer losses	IEC standard or IEC Tier-2.
	Oil retention tank	Galvanized steel. Integrated with hydrocarbon filter. Optional
	Switchgear configuration	Double feeder (2L)
	Switchgear protection	Circuit breaker (V)
	Switchgear short circuit rating ^[1]	16 kA 1 s (optionally 20 kA or 25 kA)
	Switchgear IAC ^[1]	A FLR 16 kA 1 s
	LV-MV connections	Close coupled solution (plug & play)
CONNECTIONS	LV protection	Motorized circuit breaker included in the inverter
	HV AC wiring	MV bridge between transformer and protection switchgear prewired
ENVIRONMENT	Ambient temperature range ^[2]	-25 °C... +50 °C (T > 50 °C power derating)
	Maximum altitude (above sea level) ^[1]	Up to 1000 m
	Relative humidity	4% to 95% non condensing
AUXILIARY SERVICES	User cabinet	Integrated in the inverter (by default). Optionally, LV cabinet in the skid.
	UPS system ^[1]	1 kVA/1 kW (12 minutes). Optional
OTHER EQUIPMENT	Safety mechanism	Interlocking system
	Fire suppression system	Transformer oil tank retention accessory. Optional.
STANDARDS	Compliance	IEC 62271-212, IEC 62271-200, IEC 60076, IEC 61439-1

NOTES

[1] Consult with Power Electronics for other options.
[2] For lower temperatures, consult with Power Electronics.

Freemaq Statcom



REFERENCES		FRAME 2	FRAME 3	FRAME 4
		FT1900	FT2850	FT3800
NUMBER OF MODULES		2	3	4
	AC Output Power (kVA/kW) @50°C ^[1]	1900	2850	3800
	Max. AC Output Current (A) @50°C	1590	2385	3180
	Operating Grid Voltage (VAC)	690V ±10%		
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
EFFICIENCY	Efficiency (Max) (η)	98.84%	98.87%	98.93%
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
	Type of Ventilation	Forced air cooling		
ENVIRONMENT	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		
	Max. Altitude (above sea level)	2000m / >2000m power derating (Max. 4000m)		
CONTROL INTERFACE	Communication Protocol	Modbus TCP		
	Power Plant Controller	Optional		
	Keyed ON/OFF Switch	Standard		
PROTECTIONS	Ground Fault Protection	Isolation monitoring device		
	Humidity Control	Active Heating		
	General AC Protection & Disconn.	Circuit Breaker		
	Overvoltage Protection	Type 2		

NOTES

[1] Values at 1.00-Vac nom. Consult Power Electronics for derating curves.
[2] Optional available for temperatures down to -35°C.

PPC PRO



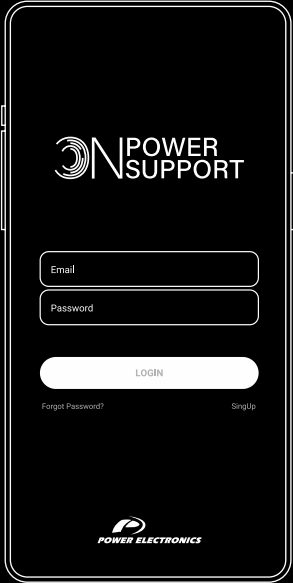
MECHANICAL DATA	Material	Polyester
	Installation	Wall or rack mounted
	Flammability	Halogen-free, self-extinguishing enclosure material (UL94-5V)
	Cable entry	Bottom in & out
	Maintenance	Front
	Cooling	Forced ventilation
	Weight ^[1]	34 kg / 75 lbs
	Dimensions (H X W X D) ^[1]	641 X 847 X 357 (mm) / 26 x 34 x 14 (inches)
ELECTRICAL DATA	Maximum consumption	350 W
	AC Voltage input	230 Vac (IEC) [±10%], 120 Vac (UL) [±10%]
	DC Voltage input	120-290 Vdc
	Frequency input:	50/60 Hz
COMMUNICATIONS	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
	Communication protocols	Modbus TCP/ ADS for inverter control / DNP3 with Grid Operators. ^[2]
	Communication Switch	6 RJ45 Ports + 2 FO Multi Mode SC connectors
ENVIRONMENTAL CONDITIONS	Temperature range	From -20 to +50°C
	Humidity	From 5 to 95 % (5 to 95 % non-condensing).
	Protection degree	IP 54 / NEMA 3R
	Pollution degree	Type III
	Maximum altitude	3000 m / 9840 ft
CERTIFICATIONS	Marking	CE
	Standards	UL 916
FUNCTIONALITIES ^[3]	Active power control	Open & closed loop active power control, frequency response (with /without reserve), ramp rate. Negative and positive active power setpoints, SoC Balancing (storage applications)
	Reactive power control	Reactive power control, power factor control, voltage control, Q(V) curve, cosphi(P) curve, ramp rate, statcom control, capacitor bank control, night mode, SQD.
	Diagnosis functions	Warning / fault messages real-time data monitoring, plant phasor operation diagrmas.
	Others	Internal measurement and compatibility with power analyzers, P/Q plant limitations, hot standby redundancy, controlled plant start, individual inverter control, line drop compensation, communication loss security process.
OTHERS	Web server	For local and remote monitoring / control.
	Customizable solution	Flexible solution based on a powerful modular and programmable controller

NOTES

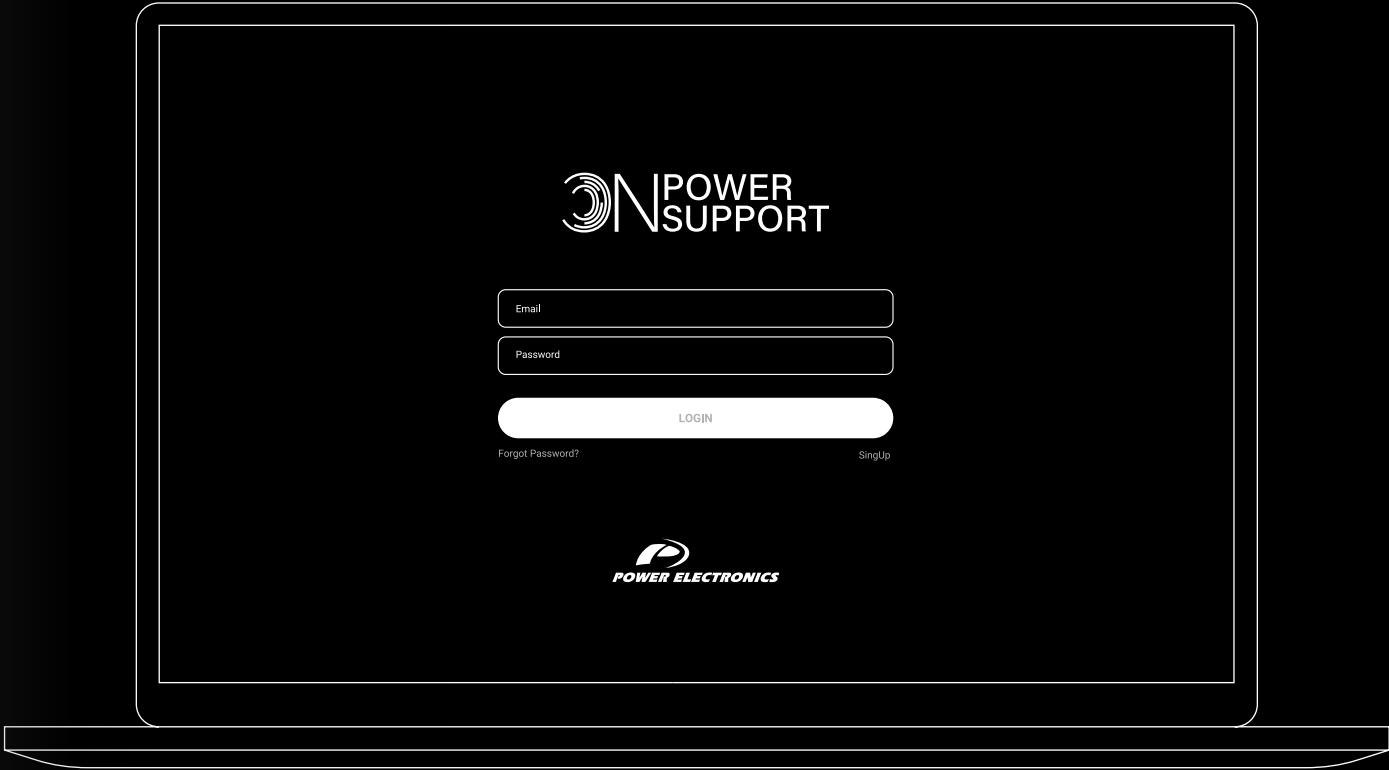
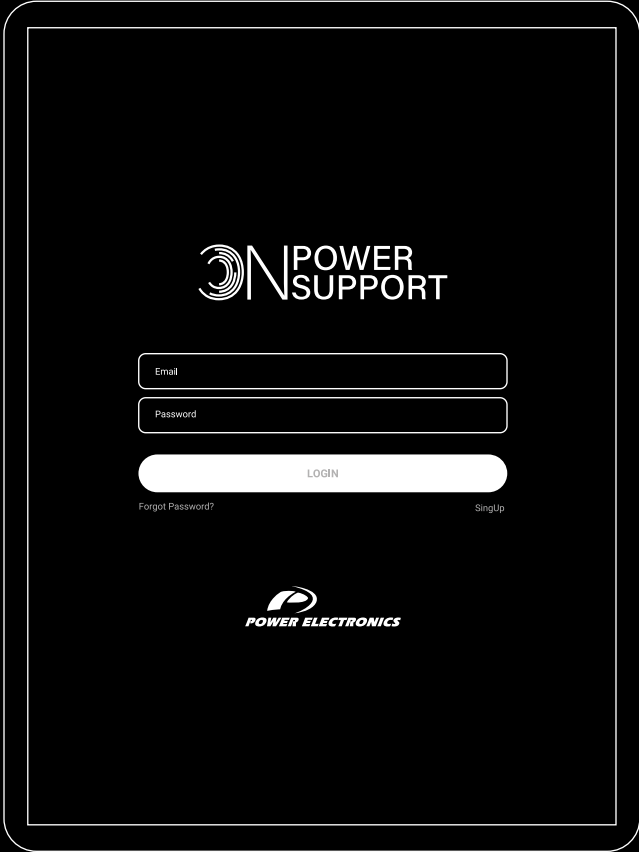
[1] Weight and dimensions may vary depending on the specific project.
[2] Consult with Power Electronics for further information.
[3] Consult Power Electronics for functionalities and availability.

Our secret. The key of our success for more than 35 years, our 24/7 after sales service, Power On Support.

Power ON Support



Download Power on Support from any device and get easily all the information about your equipment. Request assistance through the app and our team will be there in less than 48 hrs.Stay updated on your assistance details and check the history of your assistance records.



We take care of the legacy generations. Each new generation of **inverters** involves adapting the manufacturing lines to optimize the production of these new units. Power Electronics has optimized facilities for the production of previous generation units, where we manufacture ongoing subcomponents adapted to equipment that is no longer in production, allowing an extended life.

Long Term Service. We repair subcomponents or even manufacture equivalent units in our Dedicated Service Factory located near our Production Plant. Power Electronics has experience in repowering old photovoltaic plants, where we supply state-of-the-art equipment adapting its electrical characteristics to be compatible with the existing configuration, while providing all the advantages of the latest generation **inverters**.



We are here
to help you

Vertical Integration throughout the entire process

Vertical integration is one of our key values. We look after the entire value chain, from design to the on-site commissioning of the products, ensuring the accurate development of all the power electronics inside our **Inverters**.

BEFORE COMMISSIONING	– Technical application & design requirement review. – Dedicated Project Management Support. – Hands on functional & safety product training.
DURING COMMISSIONING	– Dedicated commissioning teams. – Rigorous execution through site operation.
AFTER COMMISSIONING	– Support 24/7, 365 days a year. – Full warranty coverage with options for extension and full preventative maintenance packages. – Advanced remote monitoring, detailed performance reporting, and interactive portals for tracking metrics directly with Power Electronics.

HEADQUARTERS

SPAIN Polígono Industrial Carrases Ronda del Camp d’Aviació, 4 46160 Llíria, Valencia (Spain) Cell. (+34) 96 136 65 57 Fax (+34) 96 131 82 01 24/7 Technical Assistance Service Phone. (+34) 902 40 20 70	UNITED STATES 1510 N. Hobson Street, Gilbert Arizona, USA Cell. (+001) 602-354-4890 sales@power-electronics.us 24/7 Technical Assistance Service
---	--

INTERNATIONAL

ARGENTINA Arroyo 894, 5° Oficina 10, Ciudad autónoma de Buenos Aires.	FRANCE 51 Rue Hoche, 94200 Ivry Sur Seine, Paris. +33(0)1 46 46 10 34 ventesfrance@power-electronics.com	MEXICO Henry Ford n.3, Fraccionamiento Industrial San Nicolás, Tlalnepantla, Estado de México. (+52) 1 5510529888 / (+52) 53908818 mexico@power-electronics.com
ASIA 30th Floor, CATIC Plaza, 8 Causeway Road, Hong Kong SAR	GERMANY Neuseser Strasse 15, Nürnberg. germany@power-electronics.com	NEW ZEALAND 14B Opawa Road, Christchurch 8023. (+64) 3 379 9826 sales@power-electronics.co.nz
AUSTRALIA U6, 30-34 Octal St. Yatala, Brisbane, Queensland 4118. (+61) 7 3386 1993 sales@power-electronics.com.au	INDIA Silver Jade, Off. No 03, G.F., A-Wing CTS NO. -188, Behind Tarun Bharat Society, Chakala, Andheri East, Mumbai, Maharashtra (+91) 80 6569 0489 india@power-electronics.com	PERU Avenida El Polo n° 670, Centro Comercial El Polo II – Oficina 603, Piso 6°, Bloque C Santiago de Surco, Lima. (+51) 979 749 772 ventasperu@power-electronics.com
BEIJING Xiaoying Road Chaoyang, N°25, Beijing City.	IRELAND 20 Harcourt Street, D02 H364, Dublin.	PHILIPPINES Unit 209 ZF Page 1 Bldg MBP Ayala Alabang, Muntinlupa.
BRAZIL Avda. Robert Kennedy 2070. Sao Bernardo do Campo. Sao Paulo. (+55) 11 5891 9612 / (+55) 11 5891 9762 brasil@power-electronics.com	ITALY Piazzale Cadorna, 6, 20123, Milano. italy@power-electronics.com	SOUTH AFRICA Central Office Park Unit 5 257 Jean Avenue – Centurion 0157. southafrica@power-electronics.com
CHILE Av. Alonso de Córdova 5870, Of. 210-211 Las Condes, Santiago de Chile. (+56) 2 3223 8916 ventaschile@power-electronics.com	JAPAN Nishi-Shinbasi 2-17-2 HF Toranomom Bldg 5F. 105-0003 Minato-Ku Tokio. japan@power-electronics.com	UNITED KINGDOM Chippenham Drive, Unit 2, Madingley Court. Kingston, Milton Keynes. MK10 0BZ. uksales@power-electronics.com
COLOMBIA Cl 77 9-20 Bogotá DC. (+57) 322 3464855 colombia@power-electronics.com	MALAYSIA Level 7, Menara Milenium, Jalan Damanlela, Pusat Bandar Damansara, Damansara Heights, 50490 Kuala Lumpur W.P. malaysia@power-electronics.com	
DOMINICAN REPUBLIC Ave. John F. Kennedy Núm. 7, Los Jardines, Distrito Nacional, Santo Domingo.		

NOTES

WARRANTY

Power Electronics (the Seller) warrants that their Products are free of faults and defects for a period of 3 years, valid from the date of delivery to the Buyer. It shall be understood that a product is free of faults and defects when its condition and performance is in compliance with its specification.

The warranty shall not extend to any Products whose defects are due to (i) careless or improper use, (ii) failure to observe the Seller's instructions regarding the transport, installation, functioning, maintenance and the storage of the Products, (iii) repairs or modifications made by the Buyer or third party without prior written authorization of the Seller, (iv) negligence during the implementation of authorized repairs or modifications, (v) if serial numbers are modified or illegible, (vi) anomalies caused by, or connected to, the elements coupled directly by the Buyer or by the final customer, (vii) accidents or events that place the Product outside its storage and operational specification, (viii) continued use of the Products after identification of a fault or defect.

The warranty excludes components that must be replaced periodically such as fuses, lamps & air filters or consumable materials subject to normal wear and tear.

The warranty excludes external parts that are not manufactured by the Seller under the brand of Power Electronics.

The Seller undertakes to replace or to repair, himself, at their discretion, any Product or its part that demonstrates a fault or defect, which is in conformance with the aforementioned terms of the warranty. Reasonable costs associated with the disassembly/ assembly, transport and customs of equipment will also be undertaken by the Seller except in cases of approved intervention by the Buyer and/or their representative where cost allocation has been previously agreed.



Power Electronics reserves the right to modify whole or part of the content of this brochure at any time and without prior notice.

