

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.

+25 International delegations

+70_{GW}

OF AC INSTALLED POWER

#1

WORLD STORAGE LEADER

Our vertical integration gives us the flexibility and specialization to adapt customer requirements and still provide very short delivery times.

Our products control the ramp rate at which power is injected into the grid, attenuating the intermittent nature of renewable energy sources, to provide a smoother power output.

Control

And also, regulate grid frequency injecting or absorbing active power (P).

Store

The inverters can store energy in batteries during low-demand periods from the grid, in order to later supply the energy when there is a higher demand, selling the energy at a higher market price during peak demand periods.

Our storage products reduce the burden on the distribution network and increase significantly its efficiency.

Reduce

The result is a more flattened demand curve avoiding switching on more expensive and polluting generators.

Support

Our products can help to support the grid voltage by generating capacitive or inductive reactive 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 84

Contact 88

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).

ECON MODE. Removes no-load losses. Disconnecting the power station from the grid and, taking the medium-voltage transformer out of the circuit, eliminating the continuous energy cost of no-load losses.

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 3 level IGBT topology reduces power stage losses, increases inverter efficiency, and minimizes total harmonic distortion. High efficiency to deliver the lowest cost of energy.

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

DC voltage up to 1500 Vdc

Maximum power up to 40°C

Full grid support capability

*Up to 4 independent BESS



PCSK & Multi PCSK

The utility-scale battery inverters.
From one independent BESS with
PCSK, up to 4 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 4 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.

Multilevel topology. The 3 level IGBT topology reduces stage losses, increases inverter efficiency and minimizes total harmonic distortion.

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 3 level IGBT topology reduces power stage losses, increases inverter efficiency, and minimizes total harmonic distortion. High efficiency to deliver the lowest cost of energy.

Adaptive capacity. Choose your model depending on your requirements.



Maximum power up
to 1500 Vdc

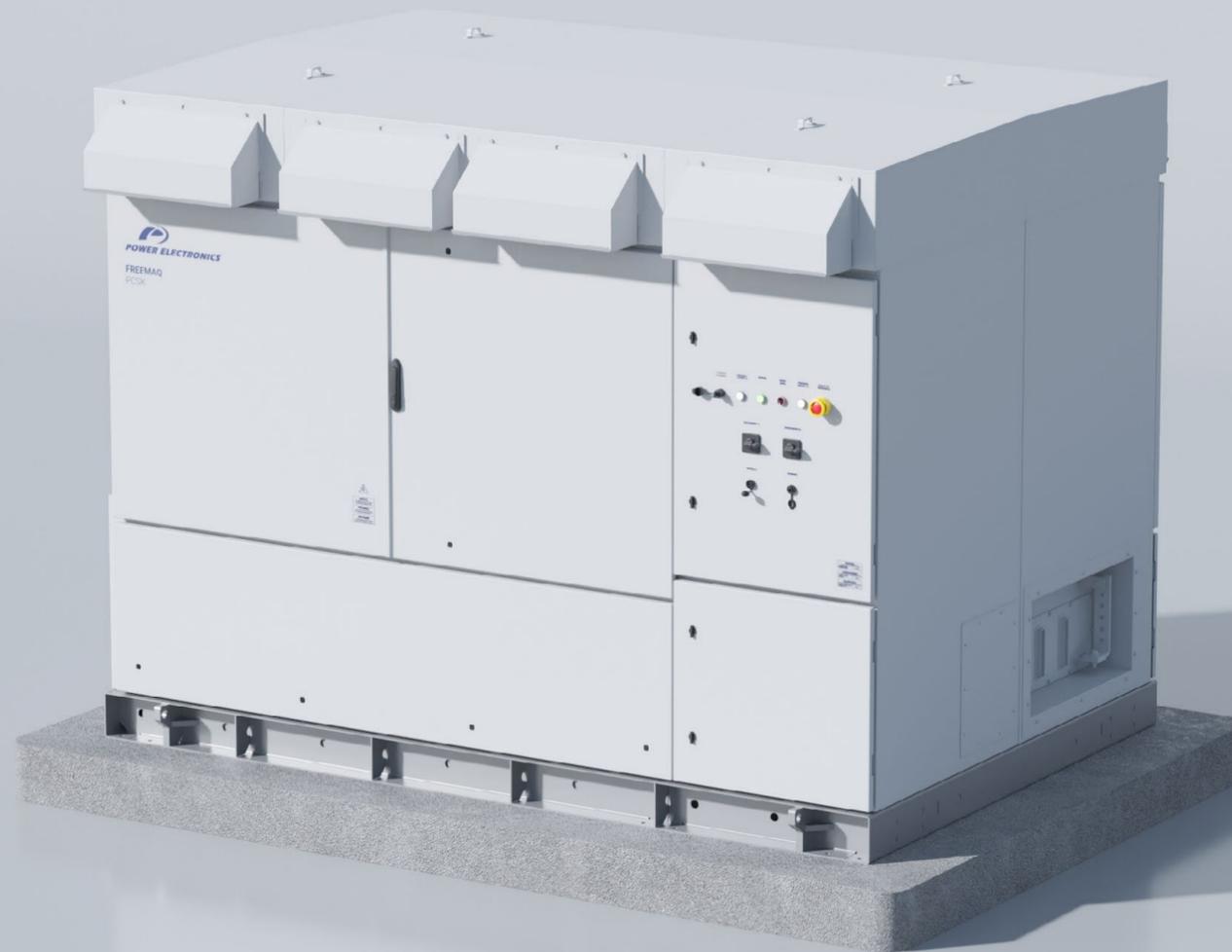
Up to 4390 kVA

Nine different voltage
DC windows

Maximum power up to 40°C

Full grid support capability

*Up to 4 independent BESS



Higher battery capacity due to the short-circuit withstand capability of each DC input. Up to 4 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

Maximize the benefits of solar+storage plants with our DC/DC converter. Easy to fit in any place and compatible with all battery technologies.

Freemaq DC/DC

Storage for solar plants

Re-designed to maximize the benefits of large-scale solar plants with a solar-plus-storage approach.

Functions: energy shifting, ramp control rate, frequency response, clipping energy recovery.

Its unique modular design provides the flexibility needed to design your project, choosing the amount of storage power to be dispatched, according to the specific grid requirements.





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

Modular Outdoor Solution

Nominal power of 1200 kW

Up to 1500 Vdc

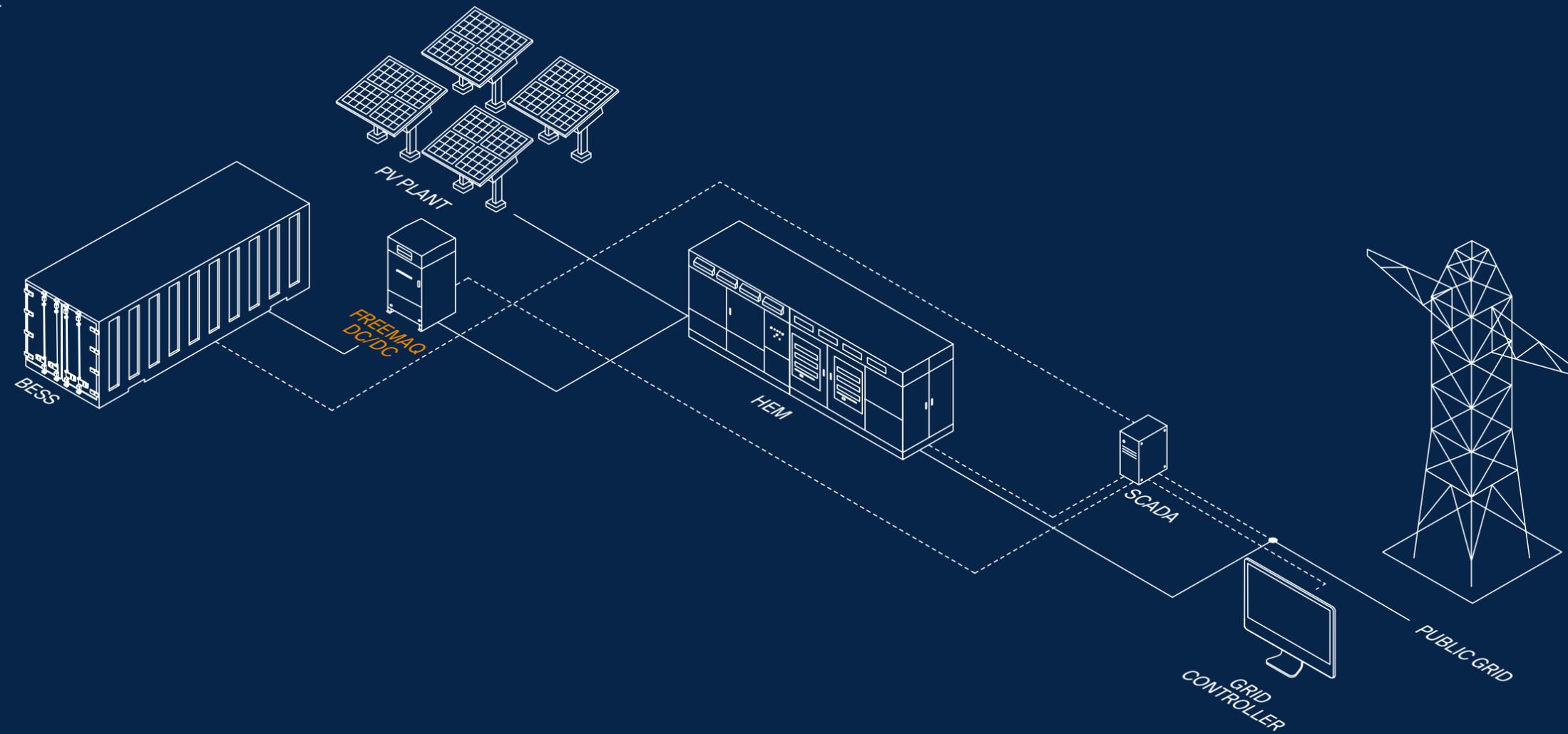


Maximize the benefits of solar plants with our Freemaq DC/DC. How?

1 With the DC-coupled energy storage system, the excess energy from the PV plant can be stored in the Battery Energy Storage System (BESS) and then delivered when needed.

2 DC/DC makes it possible to deliver the stored energy in periods of low PV power availability, achieving a greater overall efficiency of the PV plant.

This stored energy can be exported to the utility grid when the price per kWh is higher, optimizing the revenue.



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.

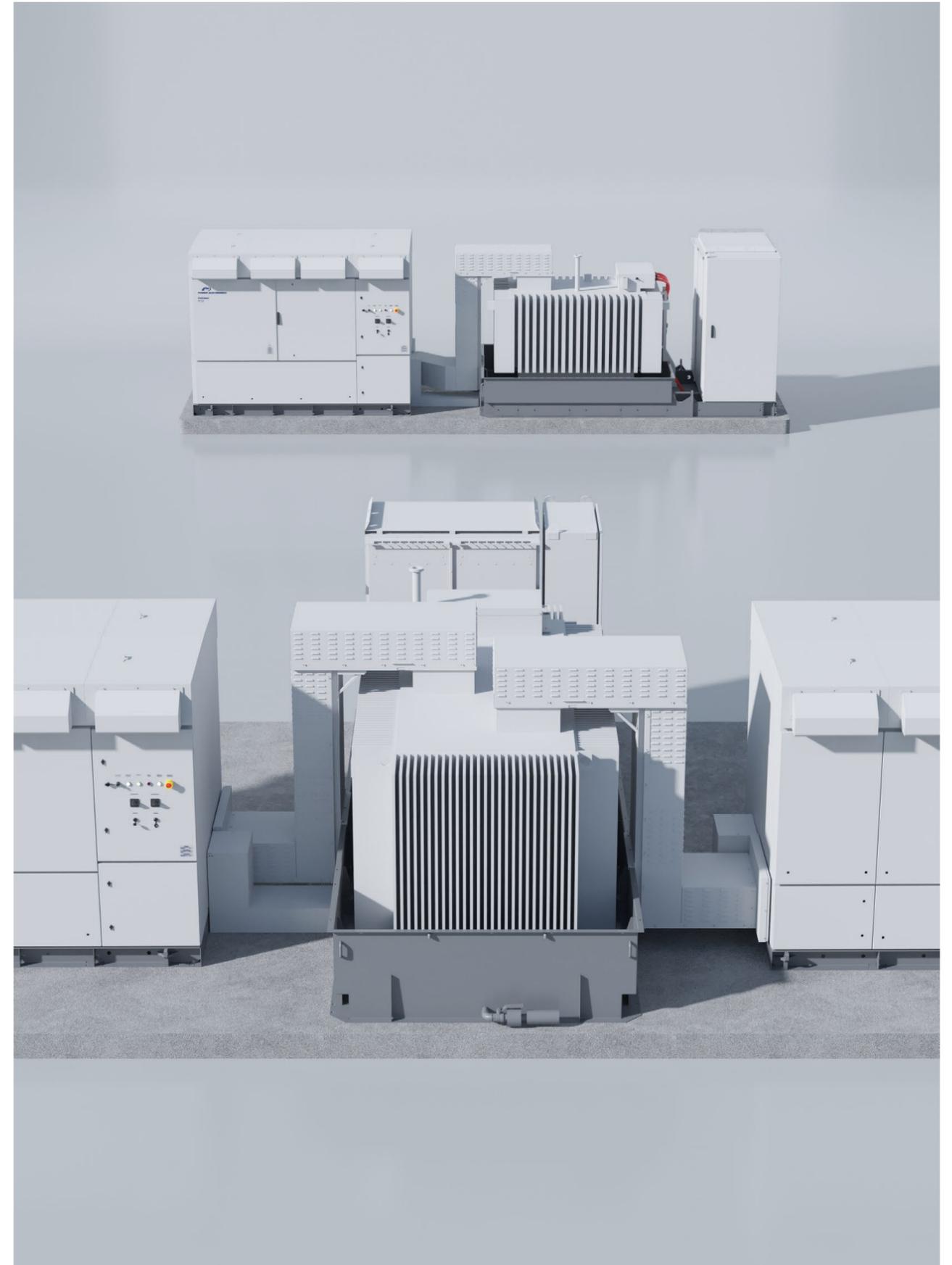
MV Skid Compact & Twin Skid Compact

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

Turn-key solution. The SKID family facilitates the project design and reduces the installation costs.

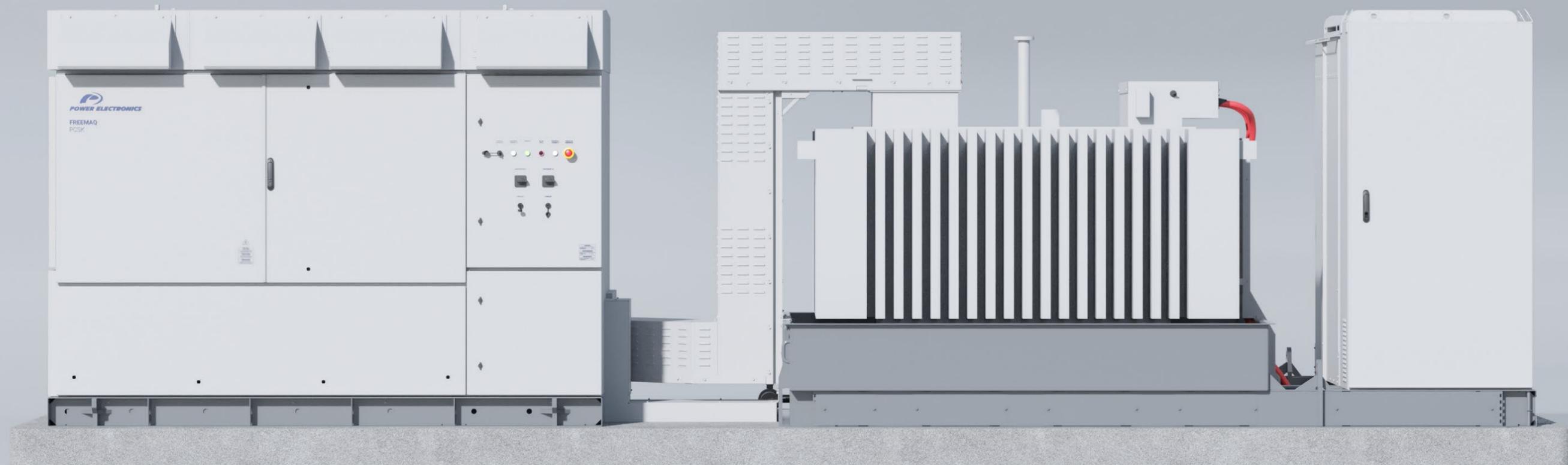
The fastest connection with any PCSK.

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

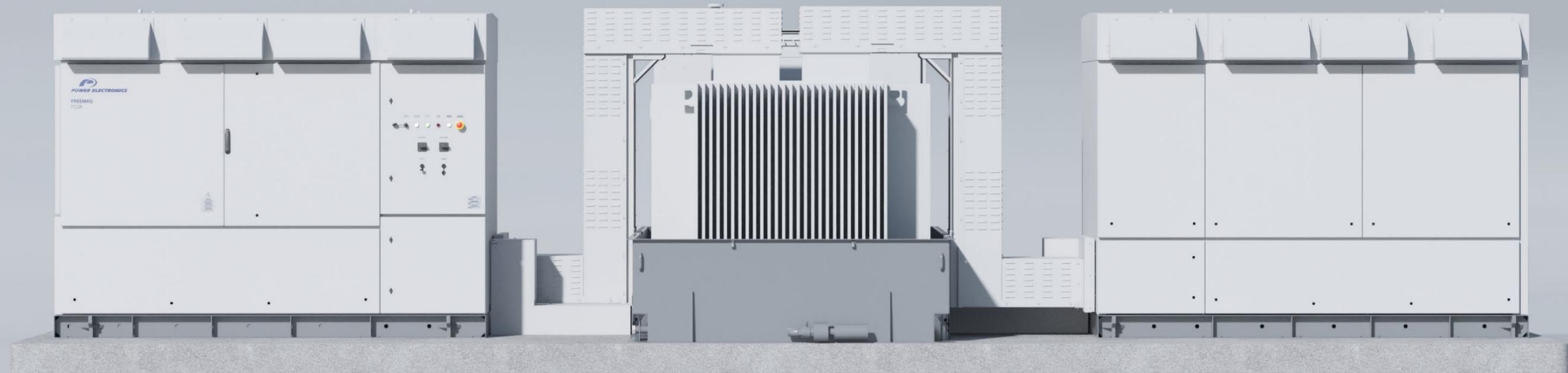
Power outputs from 1525 kVA to 4390 kVA

480 V - 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

480 V - 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 3 level IGBT topology reduces power stage losses, increases efficiency, and minimizes total harmonic distortion.

3 different frames ranging from 1900 kVAr to 3800 kVAr

PPC PRO

Advanced control solutions to have everything in view. The real time of your storage plant.

The PPC PRO is an advanced control solution for any application, including utility scale PV and Hybrid Plants; self-consumption applications and zero grid injection systems.

Main governor of the most complex power plants by monitoring the point of interconnection (POI) and controlling the power generation.

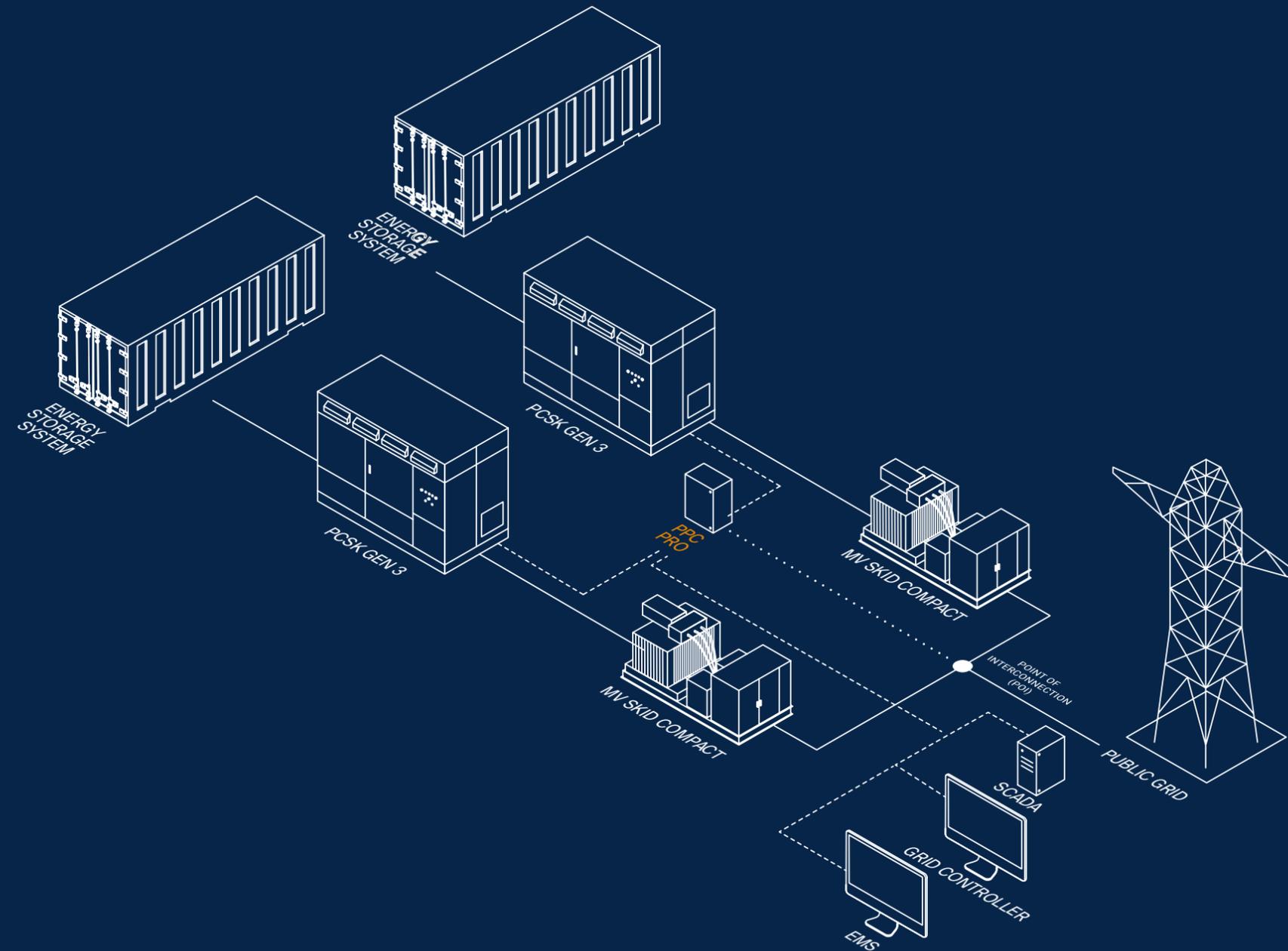
Equipped with the latest PLC technology and implements the most sophisticated communication system and regulation algorithms to comply with the most demanding grid codes.



PPC PRO

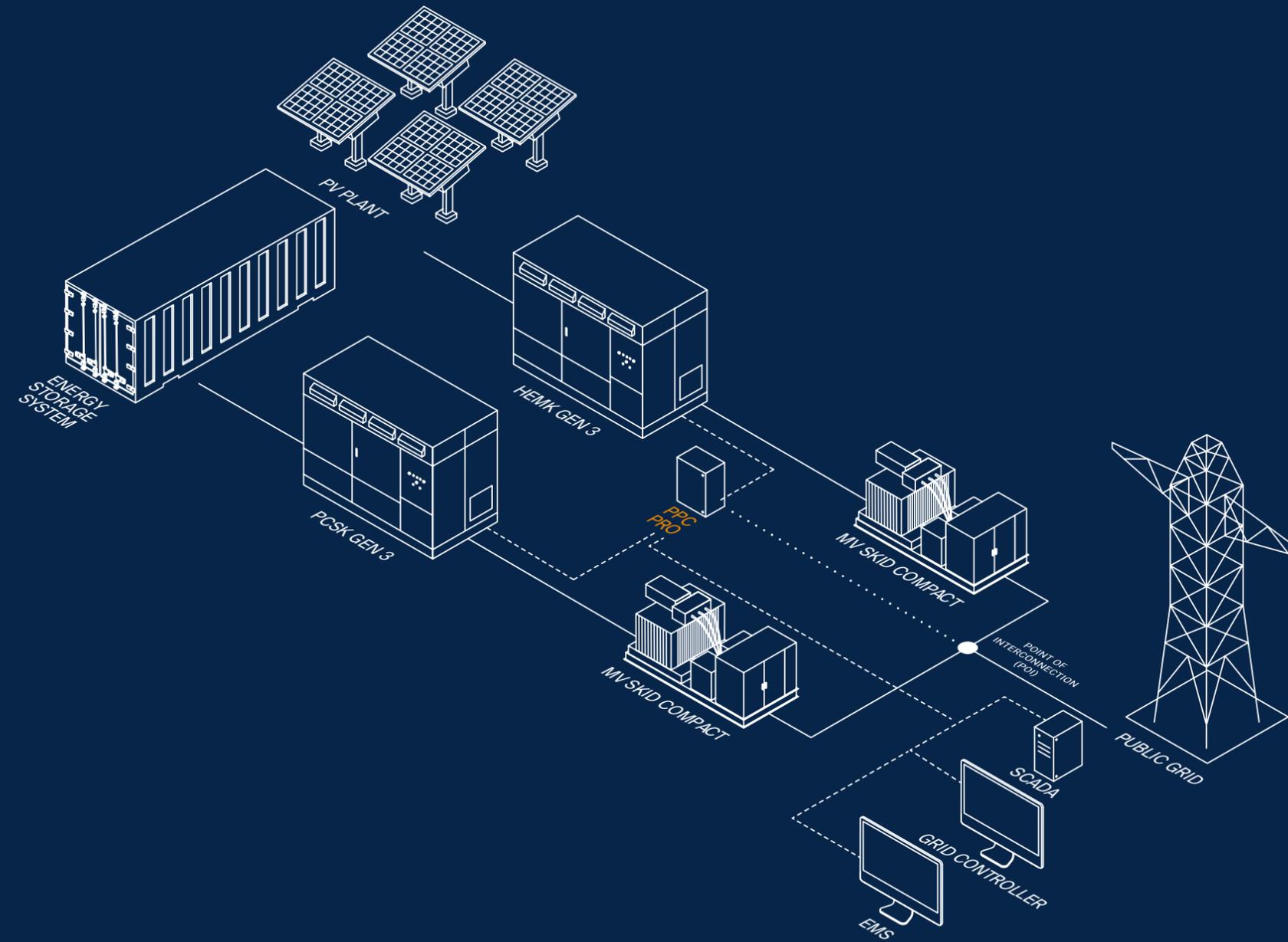
Advanced and reliable functionalities. PPC PRO is a device used to manage power plants in order to comply with all the utility and customer requirements, thanks to its fast and flexible control algorithms.

Smart Q distribution. This algorithm allows to distribute the reactive power between the inverters depending on the available active power, maximizing the energy production.



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

Storage plant



Hybrid plant

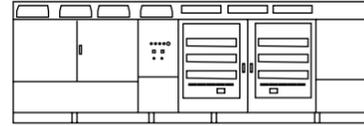
Datasheets

Find all the specifications of our products just here.



Freemaq PCSM

UL



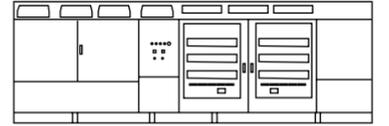
REFERENCES	FP4200M	FP4201M	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200	
	AC Output Power (kVA/kW) @50°C ^[1]	3900	
	Operating Grid Voltage (kV)	34.5kV ±10%	13.8kV ±10%
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	934V - 1500V	
	Maximum DC Voltage	1500V	
	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, >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) ^[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 (20 or 25 kA)	
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16	
	Installation	NEC 2020	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547:2020	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



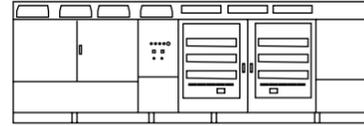
REFERENCES	FP4200MH	FP4203MH	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4200	
	AC Output Power (kVA/kW) @50°C ^[1]	3900	
	Operating Grid Voltage (kV)	34.5kV ±10%	33 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	50Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	934V - 1500V	
	Maximum DC Voltage	1500V	
	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, >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) ^[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.	DC switch-disconnectors ^[6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62477-2	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



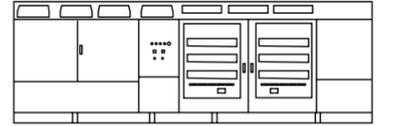
REFERENCES	FP4105M	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105
	AC Output Power (kVA/kW) @50°C ^[1]	3810
	Operating Grid Voltage (kV)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	913V - 1500V
	Maximum DC Voltage	1500V
	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
CABINET	CEC (η)	97.50% including MV transformer
	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
ENVIRONMENT	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	Weight (lbs)	30865
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
	Degree of Protection	NEMA 3R
CONTROL INTERFACE	Operating Temperature Range ^[4]	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) ^[5]	2000m
PROTECTIONS	Communication Protocol	Modbus TCP
	Power Plant Controller	Optional. Third party SCADA systems supported.
	Keyed ON/OFF Switch	Standard
CERTIFICATIONS & STANDARDS	Ground Fault Protection	Insulation monitoring device
	Humidity Control	Active heating
	General AC Protection & Disconn.	MV switchgear (20 or 25 kA)
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]
	Overvoltage Protection	Type II for AC and Type I+II for DC
NOTES	Safety	UL 1741 / CSA 22.2 No.107.1-16
	Installation	NEC 2020
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020

NOTES

- [1] Values at 1.00·Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



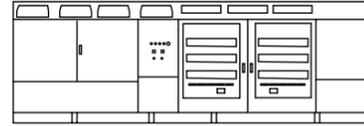
REFERENCES	FP4105MH	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105
	AC Output Power (kVA/kW) @50°C ^[1]	3810
	Operating Grid Voltage (kV)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	913V - 1500V
	Maximum DC Voltage	1500V
	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
CABINET	Euroeta (η) (preliminary)	97.50% including MV transformer
	Dimensions [WxDxH] (ft)	21.3 x 6.5 x 7.2
ENVIRONMENT	Dimensions [WxDxH] (m)	6.5 x 2.0 x 2.2
	Weight (lbs)	30865
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
	Degree of Protection	IP55
CONTROL INTERFACE	Operating Temperature Range ^[4]	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) ^[5]	2000m
PROTECTIONS	Communication Protocol	Modbus TCP
	Power Plant Controller	Optional. Third party SCADA systems supported.
	Keyed ON/OFF Switch	Standard
CERTIFICATIONS & STANDARDS	Ground Fault Protection	Insulation monitoring device
	Humidity Control	Active heating
	General AC Protection & Disconn.	MV switchgear (2L+V)
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]
	Overvoltage Protection	Type II for AC and Type I+II for DC
NOTES	Safety	IEC 62477-2

NOTES

- [1] Values at 1.00·Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



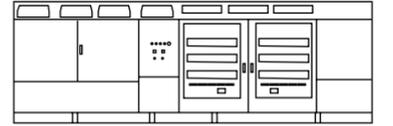
REFERENCES	FP4010M	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010
	AC Output Power (kVA/kW) @50°C ^[1]	3720
	Operating Grid Voltage (kV)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	891V - 1500V
	Maximum DC Voltage	1500V
	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
CABINET	CEC (η)	97.49% 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
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
	Degree of Protection	NEMA 3R
ENVIRONMENT	Operating Temperature Range ^[4]	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) ^[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 (20 or 25 kA)
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]
	Oversvoltage Protection	Type II for AC and Type I+II for DC
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16
	Installation	NEC 2020
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 15471:2020

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



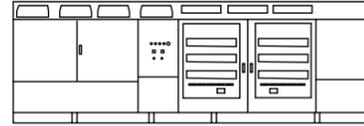
REFERENCES	FP4010MH	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010
	AC Output Power (kVA/kW) @50°C ^[1]	3720
	Operating Grid Voltage (kV)	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging
	Reactive Power Compensation	Four quadrant operation
DC	DC Voltage Range ^[3]	891V - 1500V
	Maximum DC Voltage	1500V
	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
CABINET	Euroeta (η) (preliminary)	97.48% 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
	Weight (kg)	14000
	Type of Ventilation	Forced air cooling
	Degree of Protection	IP55
ENVIRONMENT	Operating Temperature Range ^[4]	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) ^[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.	DC switch-disconnectors ^[6]
	Oversvoltage Protection	Type II for AC and Type I+II for DC
CERTIFICATIONS & STANDARDS	Safety	IEC 62477-2

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



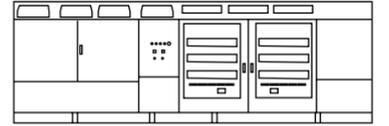
REFERENCES	FP4200M2	FP4201M2	FP4200M4	FP4201M4	
AC	AC Output Power (kVA/kW) @40°C ^[1]				
	4200				
	AC Output Power (kVA/kW) @50°C ^[1]				
	3900				
	Operating Grid Voltage (kV)	34.5kV ±10%	13.8kV ±10%	34.5kV ±10%	13.8kV ±10%
	Operating Grid Frequency (Hz)	60Hz			
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging				
Reactive Power Compensation	Four quadrant operation				
DC	DC Voltage Range ^[3]				
	934V - 1500V				
	Maximum DC Voltage	1500V			
	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)	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, >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) ^[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 (20 or 25 kA)			
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16			
	Installation	NEC 2020			
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 15471:2020			

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



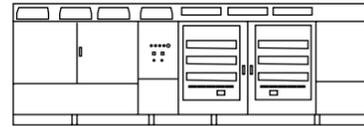
REFERENCES	FP4200MH2	FP4203MH2	FP4200MH4	FP4203MH4	
AC	AC Output Power (kVA/kW) @40°C ^[1]				
	4200				
	AC Output Power (kVA/kW) @50°C ^[1]				
	3900				
	Operating Grid Voltage (kV)	34.5kV ±10%	33 kV ±10%	34.5 kV ±10%	33 kV ±10%
	Operating Grid Frequency (Hz)	60Hz	50Hz	60Hz	50Hz
	Current Harmonic Distortion (THDi)	< 3% per IEEE519			
Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging				
Reactive Power Compensation	Four quadrant operation				
DC	DC Voltage Range ^[3]				
	934V - 1500V				
	Maximum DC Voltage	1500V			
	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)	97.80% including MV transformer			
	Euroeta (η)	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, >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) ^[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.	DC switch-disconnectors ^[6]			
	Overvoltage Protection	Type II for AC and Type I+II for DC			
CERTIFICATIONS & STANDARDS	Safety	IEC 62477-2			

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



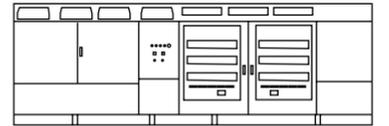
REFERENCES	FP4105M2	FP4105M4	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105	
	AC Output Power (kVA/kW) @50°C ^[1]	3810	
	Operating Grid Voltage (kV)	34.5kV ±10%	34.5kV ±10%
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	913V - 1500V	
	Maximum DC Voltage	1500V	
	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	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, >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) ^[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 (20 or 25 kA)	
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]	
	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 2020	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



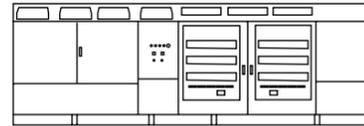
REFERENCES	FP4105MH2	FP4105MH4	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4105	
	AC Output Power (kVA/kW) @50°C ^[1]	3810	
	Operating Grid Voltage (kV)	34.5kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	913V - 1500V	
	Maximum DC Voltage	1500V	
	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	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, >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) ^[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.	DC switch-disconnectors ^[6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
CERTIFICATIONS & STANDARDS	Safety	IEC 62477-2	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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



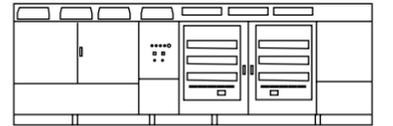
REFERENCES	FP4010M2	FP4010M4	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010	
	AC Output Power (kVA/kW) @50°C ^[1]	3720	
	Operating Grid Voltage (kV)	34.5kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	891V - 1500V	
	Maximum DC Voltage	1500V	
	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, >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) ^[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 (20 or 25 kA)	
	General DC Protection & Disconn.	DC switch-disconnectors ^[6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
	Safety	UL 1741 / CSA 22.2 No.107.1-16	
CERTIFICATIONS & STANDARDS	Installation	NEC 2020	
	Utility Interconnect ^[7]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1:2020	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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

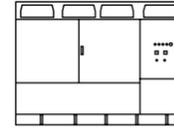


REFERENCES	FP4010MH2	FP4010MH4	
AC	AC Output Power (kVA/kW) @40°C ^[1]	4010	
	AC Output Power (kVA/kW) @50°C ^[1]	3720	
	Operating Grid Voltage (kV)	34.5kV ±10%	
	Operating Grid Frequency (Hz)	60Hz	
	Current Harmonic Distortion (THDi)	< 3% per IEEE519	
	Power Factor (cosine phi) ^[2]	0.5 leading ... 0.5 lagging	
	Reactive Power Compensation	Four quadrant operation	
DC	DC Voltage Range ^[3]	891V - 1500V	
	Maximum DC Voltage	1500V	
	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, >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) ^[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.	DC switch-disconnectors ^[6]	
	Overvoltage Protection	Type II for AC and Type I+II for DC	
	Safety	IEC 62477-2	

NOTES

- [1] Values at 1.00-Vac nom and cosφ=1. Consult Power Electronics for charging mode and derating curves.
 [2] Consult P-Q charts available: $Q(kVAr)=\sqrt{(S(kVA))^2-P(kW)^2}$.
 [3] Consult Power Electronics for derating curves.
 [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

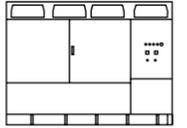


COMMON FEATURES PCSK		FRAME 2	FRAME 3	FRAME 4
AC	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (cosine phi) ^[1]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Ripple	< 3%		
	Max. DC Continuous Current (A)	2295	3443	4590
	Max. DC Short Circuit Current (kA)	250 kA with a time constant of 3ms		
	Battery Technology	All type of batteries (BMS required)		
CABINET	Dimensions [WxDxH] (ft)	9.8 x 6.5 x 7.2		
	Dimensions [WxDxH] (m)	3.0 x 2.0 x 2.2		
	Weight (lbs)	11465	11795	12125
	Weight (kg)	5200	5350	5500
	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. Third party SCADA systems supported.		
	Keyed ON/OFF Switch	Standard		
PROTECTIONS	Ground Fault Protection	Insulation monitoring device		
	Humidity Control	Active heating		
	General AC Protection & Disconn.	Circuit breaker		
	General DC Protection & Disconn.	DC switch-disconnectors ^[3]		
	Overvoltage Protection	Type II for AC and Type I+II for DC		
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16 / IEC 62109-1 / IEC 62109-2		
	Installation	NEC 2020 / IEC		
	Utility Interconnect ^[4]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1 2020 / IEC 62116:2014		

NOTES

- [1] Consult P-Q charts available: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [2] Optional available for temperatures down to -35°C.
 [3] Battery short circuit disconnection has to be done on the battery side.
 [4] Consult Power Electronics for other applicable standards/grid codes.

Freemaq Multi PCSK

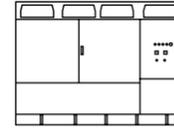


COMMON FEATURES MULTI PCSK		FRAME 2	FRAME 3	FRAME 4
AC	Max. AC Output Current (A) @40°C	1837	2756	3674
	Operating Grid Frequency (Hz)	50/60Hz		
	Current Harmonic Distortion (THDi)	< 3% per IEEE519		
	Power Factor (cosine phi) ^[1]	0.5 leading ... 0.5 lagging		
	Reactive Power Compensation	Four quadrant operation		
DC	DC Voltage Ripple	< 3%		
	Max. DC Continuous Current 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
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. Third party SCADA systems supported		
	Keyed ON/OFF Switch	Standard		
PROTECTIONS	Ground Fault Protection	Insulation monitoring device		
	Humidity Control	Active heating		
	General AC Protection & Disconn	Circuit breaker		
	General DC Protection & Disconn	DC switch-disconnectors ^[3]		
	Overvoltage Protection	Type II for AC and Type I+II for DC		
CERTIFICATIONS & STANDARDS	Safety	UL 1741 / CSA 22.2 No.1071-16 / IEC 62109-1 / IEC 62109-2		
	Installation	NEC 2020		
	Utility Interconnect ^[4]	UL 1741 SA & SB / RULE 21 / RULE 14H / IEEE 1547.1 2020 / IEC 62116:2014		

NOTES

- [1] Consult P-Q charts available: $Q(kVA) = \sqrt{(S(kVA))^2 - P(kW)^2}$.
 [2] Optional available for temperatures down to -35°C.
 [3] Battery short circuit disconnection has to be done on the battery side.
 [4] Consult Power Electronics for other applicable standards/grid codes.

Freemaq PCSK

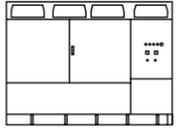


690 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP2195K	FP3290K	FP4390K
AC	AC Output Power (kVA/kW) @40°C [1]	2195	3290	4390
	AC Output Power (kVA/kW) @50°C [1]	2035	3055	4075
Operating Grid Voltage (VAC)		690V ±10%		
DC	DC Voltage Range [2]	976V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency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

NOTES

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

Freemaq PCSK

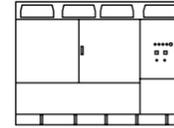


600 V		FRAME 2	FRAME 3	FRAME 4
REFERENCES		FP1910K	FP2865K	FP3820K
AC	AC Output Power (kVA/kW) @40°C [1]	1910	2865	3820
	AC Output Power (kVA/kW) @50°C [1]	1775	2660	3545
Operating Grid Voltage (VAC)		600V ±10%		
DC	DC Voltage Range [2]	849V - 1500V		
	Maximum DC Voltage	1500V		
EFFICIENCY	Efficiency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

NOTES

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

Freemaq Multi PCSK

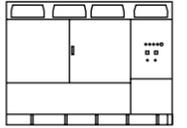


690 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2195K2	FP3290K3	FP4390K2	FP4390K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	2195	3290	4390	
	AC Output Power (kVA/kW) @50°C ^[1]	2035	3055	4075	
	Operating Grid Voltage (VAC)	690V ±10%			
DC	DC Voltage Range ^[2]	976V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.84%	98.87%	98.93%	
	Euroeta (η) (preliminary)	98.45%	98.48%	98.65%	
660 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2101K2	FP3151K3	FP4200K2	FP4200K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	2100	3150	4200	
	AC Output Power (kVA/kW) @50°C ^[1]	1950	2925	3900	
	Operating Grid Voltage (VAC)	660V ±10%			
DC	DC Voltage Range ^[2]	934V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.81%	98.84%	98.90%	
	Euroeta (η) (preliminary)	98.45%	98.48%	98.65%	
645 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2055K2	FP3080K3	FP4105K2	FP4105K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	2055	3080	4105	
	AC Output Power (kVA/kW) @50°C ^[1]	1905	2855	3810	
	Operating Grid Voltage (VAC)	645V ±10%			
DC	DC Voltage Range ^[2]	913V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.78%	98.87%	98.87%	
	Euroeta (η) (preliminary)	98.40%	98.60%	98.60%	
630 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP2005K2	FP3005K3	FP4010K2	FP4010K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	2005	3005	4010	
	AC Output Power (kVA/kW) @50°C ^[1]	1860	2790	3720	
	Operating Grid Voltage (VAC)	630V ±10%			
DC	DC Voltage Range ^[2]	891V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.79%	98.85%	
	Euroeta (η) (preliminary)	98.39%	98.42%	98.59%	
615 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1955K2	FP2935K3	FP3915K2	FP3915K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	1955	2935	3915	
	AC Output Power (kVA/kW) @50°C ^[1]	1815	2725	3635	
	Operating Grid Voltage (VAC)	615V ±10%			
DC	DC Voltage Range ^[2]	870V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.79%	98.84%	
	Euroeta (η) (preliminary)	98.38%	98.41%	98.57%	

NOTES

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

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	
	Operating Grid Voltage (VAC)	600V ±10%			
DC	DC Voltage Range ^[2]	849V - 1500V			
	Maximum DC Voltage	1500V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.94%	
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%	
530 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1685K2	FP2530K3	FP3370K2	FP3370K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	1685	2530	3370	
	AC Output Power (kVA/kW) @50°C ^[1]	1565	2350	3130	
	Operating Grid Voltage (VAC)	530V ±10%			
DC	DC Voltage Range ^[2]	750V - 1300V			
	Maximum DC Voltage	1300V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.94%	
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%	
500 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1590K2	FP2385K3	FP3180K2	FP3180K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	1590	2385	3180	
	AC Output Power (kVA/kW) @50°C ^[1]	1475	2215	2955	
	Operating Grid Voltage (VAC)	500V ±10%			
DC	DC Voltage Range ^[2]	708V - 1250V			
	Maximum DC Voltage	1250V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.94%	
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%	
480 V		FRAME 2	FRAME 3	FRAME 4	
REFERENCES		FP1525K2	FP2290K3	FP3055K2	FP3055K4
AC	AC Output Power (kVA/kW) @40°C ^[1]	1525	2290	3055	
	AC Output Power (kVA/kW) @50°C ^[1]	1415	2125	2840	
	Operating Grid Voltage (VAC)	480V ±10%			
DC	DC Voltage Range ^[2]	679V - 1200V			
	Maximum DC Voltage	1200V			
	Number of Separate DC Inputs	2	3	2	4
EFFICIENCY	Efficiency (Max) (η) (preliminary)	98.76%	98.78%	98.84%	
	Euroeta (η) (preliminary)	98.37%	98.39%	98.56%	

NOTES

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



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	1000
	Max. DC Output Current (A) @ 40 °C	1100
	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%
Battery Technology	Compatible with all battery technologies	
EFFICIENCY	Efficiency (Max)	98.9%
CABINET	Dimensions [WxDxH] (ft)	3.94 x 5.90 x 7.56
	Dimensions [WxDxH] (m)	1.20 x 1.80 x 2.30
	Cooling	Forced air
CONNECTIONS	Enclosure Protection Degree	NEMA 3R / IP54
	Number of PV connections	4 negative / 4 positive
ENVIRONMENT	Operating Temperature Range ^[2]	-25°C to +60°C, >50°C / Active Power derating
	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	PV side	DC switch-disconnector
	BESS side	DC switch-disconnector ^[3]
CERTIFICATIONS	Safety	UL1741, IEC 62109

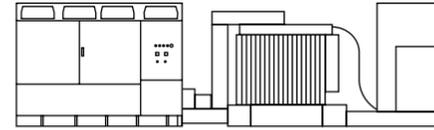
NOTES

[1] Consult Power Electronics for derating curves.

[2] Consult Power Electronics for temperatures below -25°C.

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

MV Skid Compact

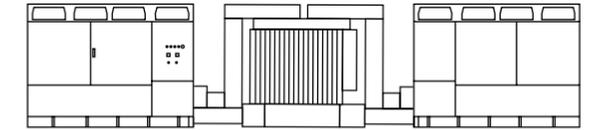


RATINGS	Power range @ 40 °C	1525 kVA - 4390 kVA	
	Power range @ 50 °C	1415 kVA - 4075 kVA	
MEDIUM VOLTAGE EQUIPMENT	MV voltage range	6.6 kV / 11 kV / 13.2 kV / 13.8 kV / 15 kV / 20 kV / 22 kV / 23 kV / 25 kV / 30 kV / 33 kV / 34.5 kV	
	LV voltage range	480 V / 500 V / 530 V / 600 V / 615 V / 630 V / 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	
	CONNECTIONS	LV-MV connections	Close coupled solution (plug & play)
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

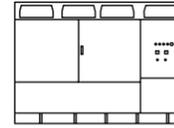


RATINGS	Power range @ 40 °C	3050 kVA - 8780 kVA	
	Power range @ 50 °C	2830 kVA - 8150 kVA	
MEDIUM VOLTAGE EQUIPMENT	MV voltage range	11 kV / 13.2 kV / 13.8 kV / 15 kV / 20 kV / 22 kV / 23 kV / 25 kV / 30 kV / 33 kV / 34.5 kV	
	LV voltage range	480 V / 500 V / 530 V / 600 V / 615 V / 630 V / 645 V / 660 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	
	CONNECTIONS	LV-MV connections	Close coupled solution (plug & play)
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%
	Dimensions [WxDxH] (ft)	9.8 x 6.5 x 7.2		
	Dimensions [WxDxH] (m)	3.0 x 2.0 x 2.2		
CABINET	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 ^[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



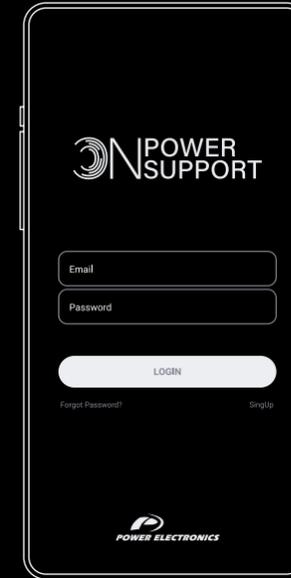
	Material	Polycarbonate
	Assembly	Wall or structure mounted
GENERAL DATA	Flammability	Halogen-free, self-extinguishing enclosure material (UL94-5V)
	Power Supply	80 W. [220/240 Vac (IEC) - 110/115 Vac (UL)]. [110-290 Vdc]
	Compatible inverters	HEM, HEMK, PCSM, PCSK, Freemaq Statcom
COMMUNICATIONS	Communication protocols	Modbus TCP. Consult with Power Electronics for other options
	Communication Switch	6 RJ45 Ports + 2 FO Multi Mode SC connectors
ENVIRONMENTAL CONDITIONS	Temperature range	From -20 to +50°C
	Humidity	From 15 to 95 % (0 to 95 % non-condensing).
	Protection degree	IP54 / NEMA 3
	Pollution degree	Type II
	Maximum altitude	4000 m
CERTIFICATIONS	Marking	CE
	Active power control	Active power control, frequency response (with /without reserve), ramp rate. Negative and positive active power setpoints.
FUNCTIONALITIES [1]	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.
	Others	Internal measurement, compatibility with power analyzers. Consult Power Electronics for other functionalities.
OTHERS	Web server	For local and remote monitoring / control.
	Customizable solution	Flexible solution based on a powerful modular and programmable controller

NOTES

- [1] 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

The 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	<ul style="list-style-type: none"> – Technical application & design requirement review. – Dedicated Project Management Support. – Hands on functional & safety product training.
DURING COMMISSIONING	<ul style="list-style-type: none"> – Dedicated commissioning teams. – Rigorous execution through site operation.
AFTER COMMISSIONING	<ul style="list-style-type: none"> – 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
Phone. (+001) 902 40 20 70

INTERNATIONAL**ARGENTINA**

Arroyo 894, 5°
Oficina 10, Ciudad autónoma
de Buenos Aires.

ASIA

30th Floor, CATIC Plaza, 8 Causeway
Road, Hong Kong SAR

AUSTRALIA

U6, 30-34 Octal St. Yatala, Brisbane,
Queensland 4118.
(+61) 7 3386 1993
sales@power-electronics.com.au

BEIJING

Xiaoying Road Chaoyang, N°25,
Beijing City.

BRAZIL

Avda. Robert Kennedy 2070. Sao
Bernardo do Campo. Sao Paulo.
(+55) 11 5891 9612 / (+55) 11 5891 9762
brasil@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

COLOMBIA

Cl 77 9-20 Bogotá DC.
(+57) 322 3464855
colombia@power-electronics.com

DOMINICAN REPUBLIC

Ave. John F. Kennedy Núm. 7,
Los Jardines, Distrito Nacional,
Santo Domingo.

FRANCE

51 Rue Hoche, 94200 Ivry Sur Seine, Paris.
+33(0)1 46 46 10 34
ventesfrance@power-electronics.com

GERMANY

Neuseser Strasse 15, Nürnberg.
germany@power-electronics.com

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

IRELAND

20 Harcourt Street, D02 H364, Dublin.

ITALY

Piazzale Cadorna, 6, 20123, Milano.
italy@power-electronics.com

JAPAN

Nishi-Shinbasi 2-17-2 HF Toranomom Bldg
5F. 105-0003 Minato-Ku Tokio.
japan@power-electronics.com

MALAYSIA

Level 7, Menara Milenium, Jalan
Damanlela, Pusat Bandar Damansara,
Damansara Heights, 50490
Kuala Lumpur W.P.
malaysia@power-electronics.com

MEXICO

Henry Ford n.3, Fraccionamiento
Industrial San Nicolás, Tlalnepantla,
Estado de México.
(+52) 1 55 4949 0830 / (+52) 539 08818
mexico@power-electronics.com

NEW ZEALAND

14B Opawa Road, Christchurch 8023.
(+64) 3 379 9826

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

PHILIPPINES

Unit 209 ZF Page 1 Bldg MBP
Ayala Alabang, Muntinlupa.

SOUTH AFRICA

Central Office Park Unit 5
257 Jean Avenue – Centurion 0157.
southafrica@power-electronics.com

UNITED KINGDOM

Chippenham Drive, Unit 2, Madingley
Court. Kingston, Milton Keynes.
MK10 0BZ.
uksales@power-electronics.com

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.

