

BESS

Battery energy storage system



100-1000kW

A complete offer
for your business



Consultancy



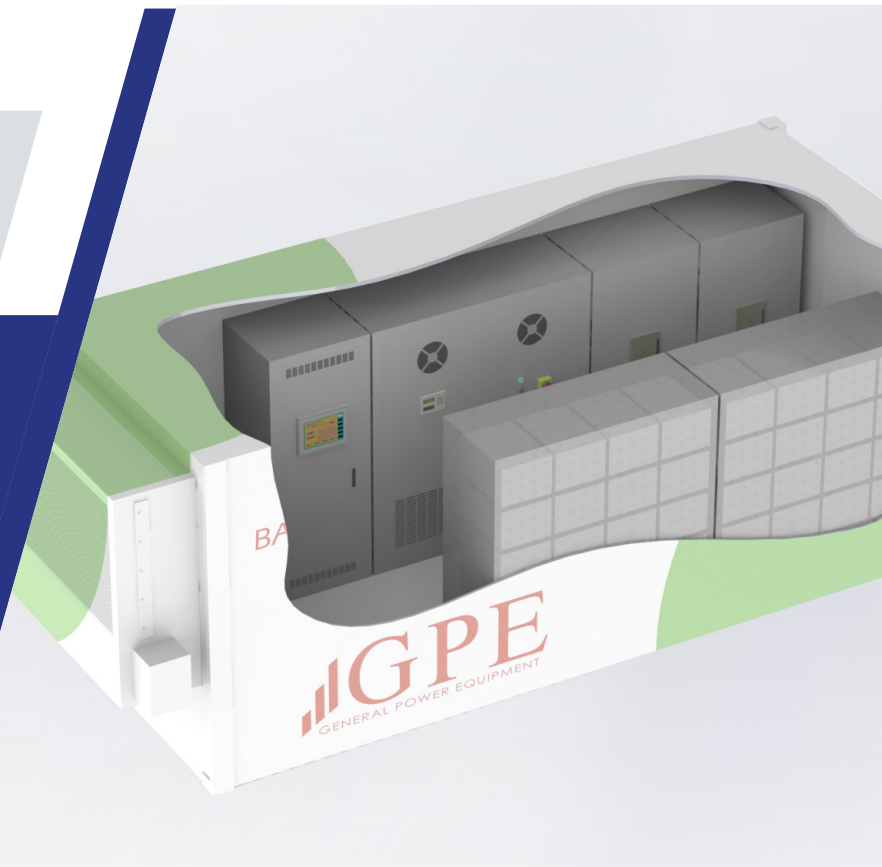
Production



Assistance



Maintenance



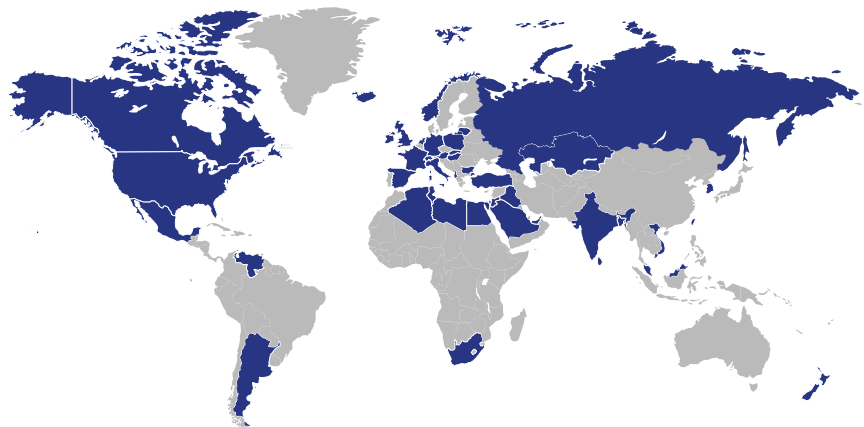
Made in Italy,

innovation from an
international company

- Direct parallel connection at AC side
- Wide DC voltage range suitable for battery system
- Support automatic or controlled frequency regulation
- Support on-grid charge/discharge and independent off-grid

**IPS
Innovative
Power Systems**

world market in over
30 years of experience



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Engineering solutions for your energy

BESS

Battery energy storage system



Device identification	F3K-250-400	F3K-500-400	F3K-750-400	F3K-1000-400
Tech specification				
Nominal system power	250 Kva/ Kw	500Kva/Kw	750Kva/kw	1.000Kva/Kw
Nominal AC voltage [Ph-Ph]	400 Vac	400 Vac	400 Vac	400 Vac
Input phases	3	3	3	3
Neutral wire	Not used	Not used	Not used	Not used
Input voltage tolerance	± 15%	± 15%	± 15%	± 15%
Grid Frequency	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Frequency grid tolerance	± 2,5 Hz	± 2,5 Hz	± 2,5 Hz	± 2,5 Hz
Maximum in/out AC current	360 A Rms	720 A Rms	1080 A Rms	1440 A Rms
Reactive power capability	±250Kvar	±500Kvar	±750Kvar	±1000Kvar
Power factor regulation capability	0 to1 lead/lag	0 to1 lead/lag	0 to1 lead/lag	0 to1 lead/lag
AC current THD @ rated P [KW]	< 5%	< 5%	< 5%	< 5%
DC voltage operation [Min-Max]	500-850VDC	500-850VDC	500-850VDC	500-850VDC
Nominal Dc current @ full load	310 A	620 A	930 A	1240 A
Ac ripple on recharging mode	<0,5%	<0,5%	<0,5%	<0,5%
Efficiency @ full load [generator]	98%	98%	98%	98%
Efficiency @ full load [charger]	96,3%	96,5%	96,8%	96,8%
Total dissipation @ full load [generator]	9,67Kw	16,53Kw	23,99Kw	31,99Kw
Total dissipation @ full load [charger]	12,33Kw	23,56Kw	32,88Kw	43,84Kw
Recharging current adjustment	50-360 A	50-720 A	100-1080 A	100-1200 A
Changeover delay [charge-generate]	10 mSec	10 mSec	10 mSec	10 mSec
Configurability [standalone-grid connected]	Yes	Yes	Yes	Yes
Parallelability [AC side]	Up to 5 unit	Up to 5 unit	Up to 5 unit	Up to 5 unit
Parallelability [DC side]	Yes	Yes	Yes	Yes
Standby power dissipation	700W	700W	700W	700W
Temperature of operation	-20-+50 °C	-20-+50 °C	-20-+50 °C	-20-+50 °C
Altitude without derating	1000 m asl	1000 m asl	1000 m asl	1000 m asl
Relative Humidity	0-90%	0-90%	0-90%	0-90%
Degree of protection	IP21	IP21	IP21	IP21
Cooling system	Forced air	Forced air	Forced air	Forced air
Space heaters	Yes	Yes	Yes	Yes
Input/ output protection devices	Fuse Isolators	Fuse Isolators	Fuse Isolators	Fuse Isolators
Human interface	10" TFT display	10" TFT display	10" TFT display	10" TFT display
Communication	Modbus RTU Ethernet	Modbus RTU Ethernet	Modbus RTU Ethernet	Modbus RTU Ethernet
Option				
PV charger adaptor	Yes	Yes	Yes	Yes
Scada control system for remote mon.	Yes	Yes	Yes	Yes
Battery monitoring system	Yes	Yes	Yes	Yes
Fire and Hydrogen alarm system	Yes	Yes	Yes	Yes
Conditioning Heat pump system	Yes	Yes	Yes	Yes
Ground fault monitor device	Yes	Yes	Yes	Yes
Grid monitoring device	Yes	Yes	Yes	Yes
Rules and regulation	CEI-016 - EN50178 - EN61000 - EN62116 - EN61727			

* Specifications subject to change without notice.



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