Power conversion system EAPCS100K



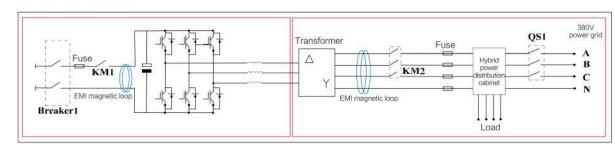
Features

- · Smooth switching between grid-connected and off-grid modes
- Having two charging modes of grid-connected constant current and constant power, which can make online seamless switching to meet needs in a variety of applications
- Having multiple battery interfaces and BMS communication function
- Accepting the dispatching in real time from the upper level computer, dispatching active power and reactive power via PQ mode or droop mode to meet the requirement of grid-connected charge and discharge
- Having functions of second frequency modulation and second voltage regulation when operating independently in off-grid mode
- Adjustable range of power factor: -1~1
- Flexible and configurable multiple communications, such as RS485, Ethernet
- Using advanced GBT power module; effective system protection functions; safe and reliable
- Wide DC voltage input range
- · Color LCD-touch screen display, configurable operating parameters
- Simplified installation, easy operation and maintenance

Technical data

DC side	
Max. DC power (kW)	110
Max. voltage of DC bus (V)	850
Max. current of DC side (A)	220
Rated voltage operating range (V)	500 ~ 800
DC voltage ripple factor (%)	< 2%
AC side	
Rated power (kW)	100
Max. output power (kVA)	110
AC connection mode	3P4W (Three-phase four-wire)
Isolation method	Power frequency isolation
Reactive power range (kvar)	0 ~ ± 100
Grid-connected operating parameters	
Rated power grid voltage (V)	230
Allowable power grid voltage (V)	195 ~ 253
Rated power grid frequency (Hz)	50 / 60
Allowable power grid frequency (Hz)	47.0 ~ 52.0
Total current harmonic distortion rate (%)	< 3% (full load)
Power factor	-0.9 ~ 0.9 (adjustable)
Transfer time of charging/discharging (ms)	≤ 100
Off-grid operating parameters	
Rated output voltage (V)	220
Voltage deviation	< 1%
Voltage unbalance (%)	< 1%
Total voltage harmonic distortion rate (%)	< 1.5%
Rated output frequency (Hz)	50/60
Dynamic voltage transient range (%)	< 10%
Output overvoltage protection value (V)	242
Output undervoltage protection value (V)	198
System parameters	
Max. efficiency (%)	> 98.7% (without transformer); > 97.2% (with transformer)
Standby loss (W)	< 50
Allowable ambient temperature (℃)	-20°C ~ 55°C
Allow relative humidity (%)	0 ~ 95% (non-condensing)
Installation altitude (m)	> 3000 m (derating)
Noise (dB)	< 65 dB
Dimensions (W × D × W) (mm)	1600 × 800 × 2200
Weight (kg)	1350
IP rating	IP 20 (indoor)
Cooling method	Air cooling
Insulation resistance (MW)	> 2
Dielectric strength (V)	2500
Communication interfaces and protocol	RS485, Ethernet Modbus/TCP
Human-computer interface	Touch screen

Block diagram



13 | www.eastups.com | 14