



HF PowerX Series/Modular DC Charger/Rectifier

Charger & Rectifier

24/48/110/220Vdc

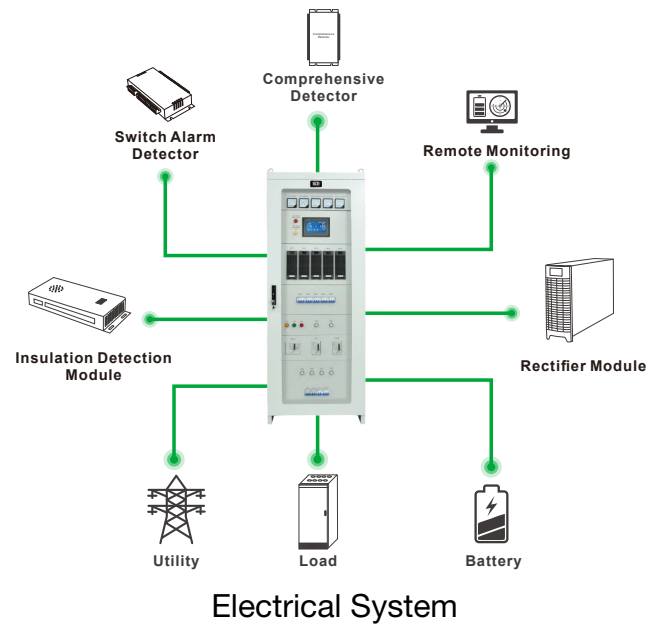
Normal current 10-800A



HF PowerX Series modular DC charger apply substation for different voltage levels, power plants, industrial and mining enterprises, electrified railways and high-rise buildings in the field. It can be used as operating power high voltage switch, relay protection, automatic device and control power. State of the art switch mode technology, N+1 redundant rectifier system is designed to be scalable, simple to use and easy to maintain with hot swappable rectifier modules. It allows you to benefit from low electromagnetic pollution and high efficiency, resulting in a cost effective system with reduced operating costs, short delivery time and prepared for possible future power expansion

Key Features

- Wide input voltage range with strong adaptability color named RAL-7035, IP21 (IP55 Optional)
- Dropper diode unit for voltage regulation of DC supply (Optional)
- Production with single phase and three phase input supply
- Low MTTR due to modular design
- Power increase possibility on site
- Digital processing and setting of all parameters
- High reliability with N+1 redundancy of rectifier modules
- Low DC voltage ripple for an optimized battery life time
- Low input current harmonics and high power factor, high efficiency
- Alarm- and event logger, with a date and time-stamped event log memory
- Automatic float boost facility
- Compact design and light weight
- High power density
- User friendly, easy and comprehensible LCD display and mimic diagram
- Smart communication and Remote monitoring-through isolated RS485, Ethernet, with modbus or IEC61850 protocol
- Special, durable cabinet, powder coated with standard



HMI Operation Interface



Benefits

- Existing pre-defined configurations to permit reduced lead times
- Highly customizable with a fully comprehensive option list and fully flexible design
- Compatible with all industrial battery types including gas recombination, with easy parameter adjustment
- Reduces capital and operational expenses (CAPEX & OPEX)
- Ease of installation, start-up & maintenance, low Mean Time To Repair (MTTR)
- International service support

FLEXIBLE SOLUTION

BCN's DC system cabinet range is very flexible and allows us to meet different customer specifications.

Besides wall and floor cabinets, cabinets for the integration of batteries are available.

BCN also offers some new AC and DC distribution solutions, which makes it easier to adapt the distribution design to various customer requirements.



Earth fault monitoring

The earth fault monitoring function monitors the insulation resistance of the DC-output to earth. Plus and minus are measured and monitored alternately. If the insulation resistance falls below the adjusted value (adjustable from 100 kOhm to 1 MOhm), this will be indicated by the LEDs and the common alarm.

Modular monitoring

The voltage and current of each module are detected, as well as the communication status. The module is in load sharing mode.

Mains failure

In case of mains failure the alarm signal activates the common alarm relay and the LCD will display. If the mains voltage returns, the charger restarts after the adjusted time delay and the alarm signal will reset. During mains fault, only battery- assisted systems continue to supply DC output voltage.

Status monitoring

It can detect AC voltage, charge voltage, current, charge and discharge status, and alarm status history.

AC high and low alarm

When the AC voltage exceeds the set range, the charger will occur alarm.

DC high and low alarm

When the DC voltage exceeds the set range, the charger will occur alarm.

Boost and float charging

Boost and float voltages are set according to the number and capacity of batteries, and the equalization voltage time is supported (for example, equalization every 6 months).



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Technical Parameters

Items		220V Series	110V Series	48V Series	24V Series
Input	Input mode	Single phase L/N/PE or 3phase 4wires			
	Input voltage	90AC~264VAC or 323VAC~475VAC		90VAC-290VAC	90VAC-290VAC
	Frequency	45Hz~65Hz			
	Power factor	≥0.9		≥0.99@220VAC/50A	≥0.99@220VAC/60A
Output	DC distribution	According to actual situation			
	Voltage range	198VDC~286VDC	99VDC~143VDC	43VDC-58VDC adjustable	21VDC~29VDC adjustable
	DC current	10A~600A		10A~800A	
	Voltage ripple	≤+0.1%			
	Voltage regulation accuracy	≤+0.5%			
	Current regulation accuracy	≤+0.5%			
	Charging modules output	≤5%			
	Current imbalance parameters				
	Efficiency	≥93% (full load)		≥92%@220VAC 50%-100% Load, ≥93%@peak value	>90%@220VAC @ 220VAC 100% load
Insulating property	Output to ground	2kVAC, Leakage currents ≤30mA, 1 min, no electric arcing			
	Input to ground				
	Input to output				
System	Operation temperature	-10°C~+45°C 100% power output			
		+45°C~+ 60°C, power derated output			
	Storage temperature	-25°C- 70°C (without batteries)			
	Noise	≤55dB			
Mechanical parameter	Dimension (W*D*H)	600mm*600mm*1600mm(depend on system cnguration)			
	Weight	180-550kg (depend on system cnguration)			

BT CONNECT CO.,LTD

Head Office

Address: 2220/72 Soi Ramkhamhaeng 36/1, Ramkhamhaeng Road, Hua Mak, Bang Kapi, Bangkok 10240, Thailand.

Contact

Tel. (66)2-374-5460 Auto 9 Lines, Fax. (66)2-374-6067 Website: www.btconnect.co.th; Email: info@btconnect.co.th



LINE @btconnect

