

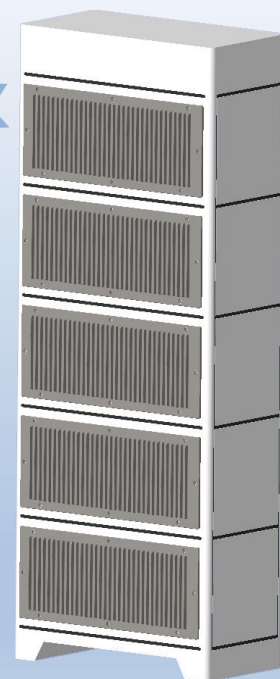
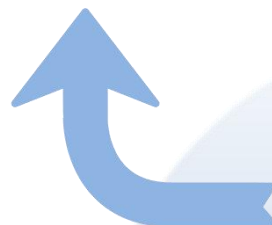
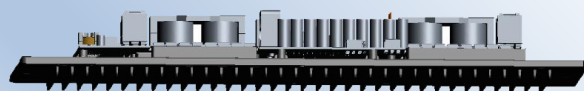
Energy Storage and PV&EV Power Conversion BOCO Solutions



Bi-directional DC Converter P400SK48-502PB

Key Feature:

- Up to 97% conversion efficiency, low loss
- High power density, small size, light weight
- Modular design full digital control
- Wide input and output voltage range
- High frequency isolation, safer use
- Supports multiple modules in parallel
- Online software upgrade
- Comprehensive overvoltage, overcurrent, short circuit protection
- Natural-Air Cooling



Small-Scale
Business



Communication
Base



Household

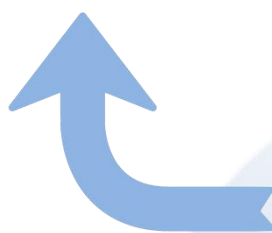
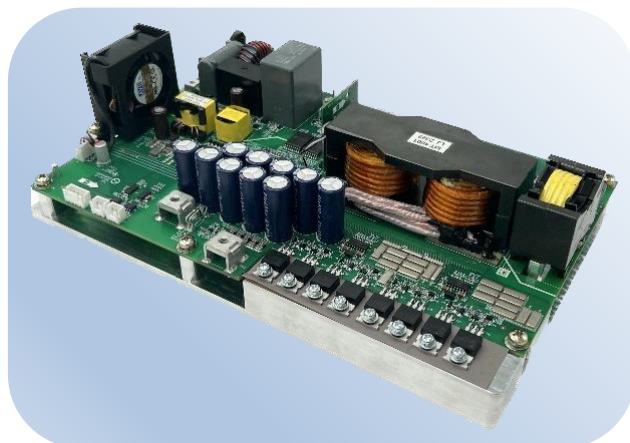


Specification		Min.	Nom.	Max.	Note
External High Voltage port	External Port Voltage	350Vdc	400Vdc	450Vdc	
	Voltage Range	350Vdc	400Vdc	450Vdc	
	Conversion Efficiency	96.5%			Battery Discharge
	Power		5000W(continus)	7000W(10S)	Battery Discharge
Battery Port	Battery Voltage	42Vdc	48Vdc	57Vdc	
	Charge Current		100A		
	Conversion Efficiency	97%			Battery Charge
	Output Power		5000W(continue)	6000W (10S)	Battery Charge
	Discharge Current		100A	150A (30S)	
Environment	Operating Temperature	-20℃	25℃	55℃	45 ° C-55 ° C Power derates to 20%
	Operating Humidity	0%		95%	
	Storage Temperature	-30℃	25℃	75℃	
	Storage Humidity	10%		95%	
	Operating Altitude			3000m	
Structure	Dimension (mm) (L×W×H)	500×205×95			
	Weight	<6KG			
	Cooling	Natural-air cooling, independent air duct			
	High Voltage Port Connection	M4 Welding Terminal Block			
	Low Voltage Port Connection	M5 Welding Terminal Block			
Signal Interface	Serial Communication	RS485、CAN2.0B			
	Digital IO Signal	DI×1、DO×1			
Protection	Battery Port	OVP, UVP, short circuit, OCP			
	External Port	OVP, UVP, short circuit, OCP			

Bi-directional DC Converter B400SK48-252PB

Key Feature:

- Up to 97% conversion efficiency, low loss
- High power density, small size, light weight
- Modular design full digital control
- Wide voltage range on the high voltage side and low voltage side
- High frequency isolation, safer use
- Supports multiple modules in parallel
- Online software upgrade
- Comprehensive overvoltage, overcurrent, short circuit protection
- Natural-Air Cooling



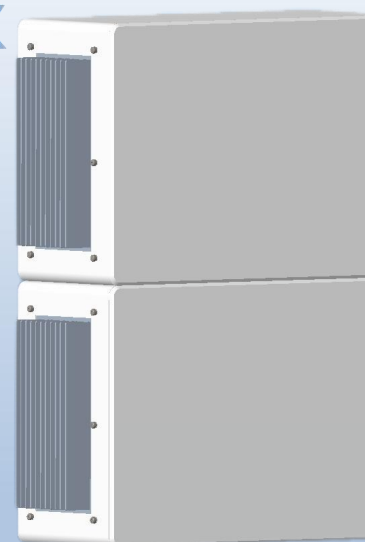
Small-Scale
Business



Communication
Base



Household

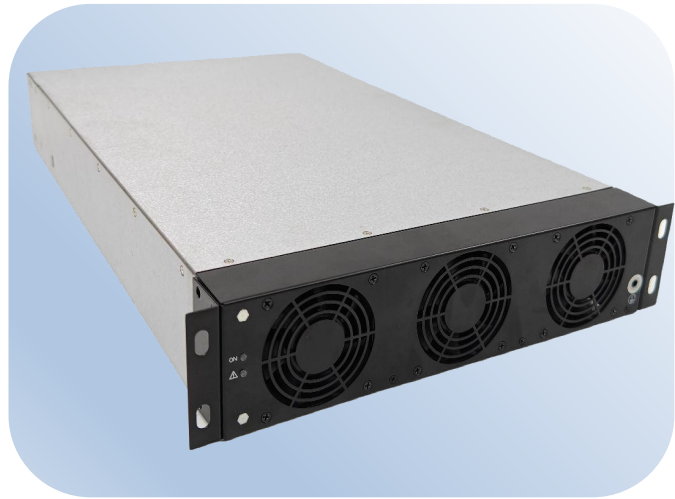


Specification		Min.	Nom.	Max.	Note
External High Voltage port	External Port Voltage	350Vdc	400Vdc	450Vdc	
	Voltage Range	350Vdc	400Vdc	450Vdc	
	Conversion Efficiency	96.5%			Battery Discharge
	Power		5000W(continus)	6000W(10S)	Battery Discharge
Battery Port	Battery Voltage	42Vdc	48Vdc	57Vdc	
	Charge Current		100A		
	Conversion Efficiency	97%			Battery Charge
	Output Power		250W(continue)	3000W (10S)	Battery Charge
	Discharge Current		50A	75A (30S)	
Environment	Operating Temperature	-20℃	25℃	55℃	45 ° C-55 ° C Power derates to 20%
	Operating Humidity	0%		95%	
	Storage Temperature	-30℃	25℃	75℃	
	Storage Humidity	10%		95%	
	Operating Altitude			3000m	
Structure	Dimension (mm) (L×W×H)	260×160×125			
	Weight	<6KG			
	Cooling	Natural-air cooling, independent air duct			
	High Voltage Port Connection	M4 Welding Terminal Block			
	Low Voltage Port Connection	M5 Welding Terminal Block			
Signal Interface	Serial Communication	RS485、CAN2.0B			
	Digital IO Signal	DI×1、DO×1			
Protection	Battery Port	OVP, UVP, short circuit, OCP			
	External Port	OVP, UVP, short circuit, OCP			

Gemini 125 Bi-directional DC-DC Converter

Key Feature:

- **High Efficiency**
Wide range, high efficiency up to 99.2%
- **High Reliability**
Short circuit protection, fault current cleared in microsecond level
- **Built-in Function Integration**
Control unit, contactors, fuses, current sensors
- **Diversified Function**
Support constant current, constant voltage charge and discharge, parallel expansion
Integrated PV MPPT algorithm
- **Safety Compliance**
UL1741, IEC 62477-1



Business



Industry



Power
Network

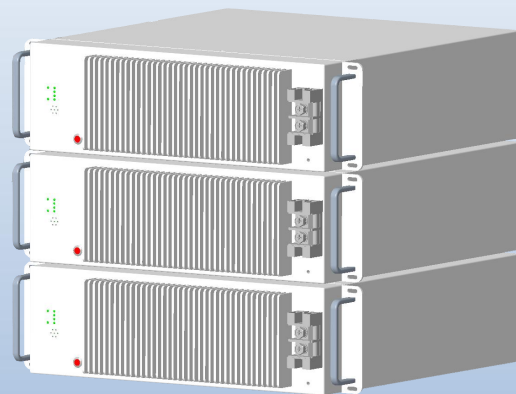
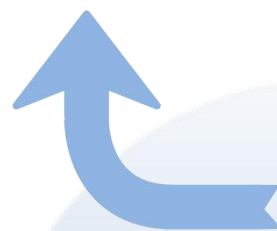
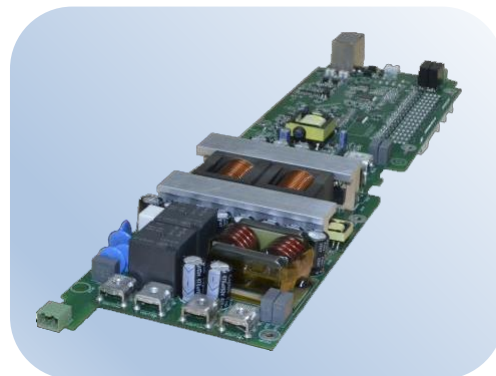


Specification		Min.	Nom.	Max.	Note
External port	Nominal Voltage		1500V		
	Operating Voltage Range	500Vdc		1500Vdc	
	Nominal Current		100A		
Battery Port	Nominal Voltage		1250V		
	Operating Voltage Range	500V		1500V	
	Nominal Current		100A		
	OC Protection	105%~120%, 20s; >120%, 0.1s			
Bidirectional Conversion Performance	Nominal Power		125kW		@1250V
	Nominal Current		100A		
	Efficiency	99.2%	99.4%		Port voltage >1000V, Power >50%
	Power response time			5ms	
Auxiliary Power Supply	Auxiliary Power Supply		24V±2V		Power: <60W; External power supply
General Parameter	Operating Temperature Range	-20℃	25℃	45℃	45 °C to 55℃ Power derating
	Operating Humidity Range	5%		85%	
	Storage Temperature Range	-40℃	25℃	70℃	
	Altitude			4000m	
	Noise		70dB	75dB	≤70dB, ambient temperature<30℃
	Class of Pollution		PD2		
	Vibration and Shock	Operating: IEC 60721-3-3, 3M12 Transport: IEC 60721-3-2, 2M5			
	Communication	RS-485, CAN, Ethernet			
Signal Interface	Dimension (mm) (L×W×H)	600×350×85			
	Weight	<15KG			
	Cooling	Forced-Air Cooling			

Bidirectional Buckboost DC-DC Battery Optimizer B48SK48-482PB

Key Feature:

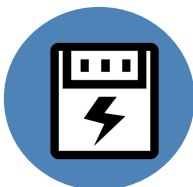
- **High Efficiency**
Wide range buckboost efficiency >98%.
- **High Reliability**
Short-circuit protection fault current cleared in μ s level.
OVP, UVP, OTP.
- **Plug and Play**
Control unit, contactors, fuses, current sensors
- **Diversified Function**
Self-management for batteries including iron lithium battery, ternary lithium battery and lead-acid batteries.
Can be used in parallel with lead-acid batteries.
New and aged batteries can be used together.
Support black start (charge DC bus).
- **Power Expansion**
Supports multiple sets of batteries in parallel.



Communication
Base



Household



Battery
Pack



Specification		Min.	Nom.	Max.	Note
External Port	Operating Voltage Range	39Vdc	48Vdc	57Vdc	
Battery Port	Voltage Range	36Vdc	48Vdc	75Vdc	
	Output Current			50A	
	Nominal Power		4800W		
	Nominal Current		100A		
Bidirectional Conversion	Efficiency	98%			
Charge and Discharge Specification	Maximum Charging Current			100A	
	Maximum Discharge Current			100A	
	Surge Impulse Current			150A	Transient Current
	Charge and Discharge Current Limit Range	0A		100A	
	Charge and Discharge Switching Time		0ms		
Environment	Operating Temperature	-20°C	25°C	55°C	The battery operating temperature range needs to be defined separately
	Relative Humidity	5%		95%	
	Storage Temperature	-25°C	25°C	85°C	
	Atmospheric Pressure	61kPa		113kPa	
	Altitude			4000m	
Structure	Dimension (mm) (L×W×H)	441.1×112×38			
	Cooling	Natural-air cooling integrated with housing panel.			
	Noise			30dB	
	Output Terminal	4-pin M5 Welding Terminals			
	Operating Mode	Bidirectional lift voltage DC-DC, constant current/constant voltage			
	Insulation Detection	Insulation resistance < 100Ω/V, protection			
Signal Interface	Serial Communication	CAN, RS485			

20kW Electric Vehicle Charging Module B380BJ100-203FH

Key Feature:

- **Output low voltage and high current**
40Vdc-105Vdc
0-200A
- **High Reliability**
Short circuit protection (no damage)
No damage hot swap, plug and play
Built-in intelligent discharge circuit, automatic discharge of residual charge.
High frequency transformer isolation
- **High Power Density**
Nominal Pwer 20kW
>39W/in³, Fan Cooling



Specification		Min.	Nom.	Max.	Note
DC Output	Type of connected battery				Rechargeable Battery
	Output Voltage Range	40Vdc		105Vdc	
	Output Nominal Power		20kW		
	Maximum Outout Current			200A	
	Response Time (s)		5S		Time from Turn-On to Output
	Output Voltage Ripple Peak Value			1%	
Battery Port	Nominal Input Voltage	323Vac	380/400Vac	437Vac	(3W+PE)
	Operating Voltage Range	260Vac		485Vac	260~322Vac, Power Derating
	Frequency		50Hz		
	Input Current			38A	
	Power Factor	0.98			Load ≥ 50%
	THD		<5%		
Environment	Operating Temperature Range	-40℃	25℃	75℃	Derating above 50 ° C
	Relative Humidity	0%		90%	
	Storage Temperature Range	-40℃	25℃	85℃	
	Operating Altitude			2000m	
Basic Parameter	Dimension (mm) (D×W×H)	395×248×85			
	Weight	<9KG			
	Efficiency	93%			
	Quiescent Dissipation			10W	
	Cooling	Forced-Air Cooling			
	Noise			75dB	
	Indicator Light	Green: normal operation, Yellow: protection alarm, Red: fault alarm			
	Communication	CAN			
	Conversion Efficiency		>93%	>96%	



Safer. Saver. Greener.

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