

EA-PSB 20000 Triple

3-Channel Programmable Bidirectional DC Power Supply

FACT SHEET

The EA-PSB 20000 Triple was designed to be the most compact, multi-channel, bidirectional, high-power DC power supply on the market. Delivering three independent channels for parallel testing of components, this series is capable of delivering greater test coverage, test density, and test capacity across multiple devices at once, reducing rack space and need for additional equipment while driving energy optimization, efficiency, recovery and cost.

Key Features

- With three independent channels, customers can conduct parallel testing on different components or subsystems, such as motors, inverters, and on-board chargers, within the same test setup. This reduces the time needed to validate each component individually.
- The occupation of rack space is reduced by more than 50% when using triple devices instead of single output devices.
- By enabling more efficient testing and reducing the time required for validation and integration, a triple-channel power supply helps customers accelerate their development process. This is particularly important in fast-moving industries like automotive and renewable energy, where being first to market can be a significant competitive advantage.
- Operational expenses are significantly lower due to high energy recovery (up to greater than 96%) when used in bidirectional mode. Both operational and HVAC energy cost savings are realized.

- Worldwide Input Voltage: 208 V - 480 V, +/- 10%, 3ph AC
- Active Power Factor Correction, typical 0.99
- Very high efficiency of over 96% in regenerative with energy recovery back to the grid
- Voltages from 0 - 60 V up to 0 - 920 V
- High performance with up to 10 kW per channel
- Currents from 0 - 40 A up to 0 - 340 A per channel
- 3 Independent, fully isolated and bidirectional DC output/input stages, with autoranging
- Galvanically isolated Share-Bus for parallel operation
- 3 Built-in high speed control interfaces with 1 ms communication speed

Built-in interfaces

- USB
- Ethernet (1 Gbit/s)
- EtherCAT
- CAN FD
- Master-Aux-Bus Share-Bus
- USB Host on front panel
- Digital In/Out

Software

- EA Power Control
- EA Battery Simulator

Options

- Water Cooling in stainless steel



Technical data EA-PSB 20000 Triple 3U

Technical specifications	PSB 20060-170 Triple	PSB 20080-170 Triple	PSB 20200-70 Triple	PSB 20360-40 Triple
DC output per channel				
Number of channels	3	3	3	3
Total device power range	0 - 15000 W	0 - 15000 W	0 - 15000 W	0 - 15000 W
Voltage range	0 - 60 V	0 - 80 V	0 - 200 V	0 - 360 V
Current range	0 - 170 A	0 - 170 A	0 - 70 A	0 - 40 A
Efficiency sink/source (up to)	94.5%	94.5%	94.5%	95.5%

Technical specifications	PSB 20500-30 Triple	PSB 20920-20 Triple		
DC output per channel				
Number of channels	3	3		
Total device power range	0 - 15000 W	0 - 15000 W		
Voltage range	0 - 500 V	0 - 920 V		
Current range	0 - 30 A	0 - 20 A		
Efficiency sink/source (up to)	95.5%	95.5%		

Technical data EA-PSB 20000 Triple 4U

Technical specifications	PSB 20060-340 Triple	PSB 20080-340 Triple	PSB 20200-140 Triple	PSB 20360-80 Triple
DC output per channel				
Number of channels	3	3	3	3
Total device power range	0 - 30000 W	0 - 30000 W	0 - 30000 W	0 - 30000 W
Voltage range	0 - 60 V	0 - 80 V	0 - 200 V	0 - 360 V
Current range	0 - 340 A	0 - 340 A	0 - 140 A	0 - 80 A
Efficiency sink/source (up to)	95.1%	95.5%	95.3%	95.8%

Technical specifications	PSB 20500-60 Triple	PSB 20920-40 Triple		
DC output per channel				
Number of channels	3	3		
Total device power range	0 - 30000 W	0 - 30000 W		
Voltage range	0 - 500 V	0 - 920 V		
Current range	0 - 60 A	0 - 40 A		
Efficiency sink/source (up to)	96.5%	96.5%		

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