

ALL-IN-ONE SOLUTION

500 kVA up to 6000 kVA



Technical Data	MSC BESS 500	MSC BESS 700	MSC BESS 1000	MSC BESS 1500	MSC BESS 2000	MSC BESS 3000	MSC BESS 4000	MSC BESS 5000	MSC BESS 6000
Nominal AC voltage	400 V								
Nominal apparent power	500 kVA	700 kVA	1000 kVA	1500 kVA	2000 kVA	3000 kVA	4000 kVA	5000 kVA	6000 kVA
Nominal current	723 A	1012 A	1445 A	2167 A	2890 A	4336 A	5780 A	7217 A	8670 A
Power factor at rated power / adjustable	1 / 0.0 overexcited ... 0.0 underexcited								
AC power frequency (range)	50 Hz (47 Hz ... 53 Hz) / 60 Hz (57 Hz ... 63 Hz)								
IGBT switching frequency	2 ... 4 kHz								
DC link voltage	800 VDC								
Number of DC outputs	8						16		
DC voltage range	320 VDC ... 420 VDC								
DC current per output	196 ADC	274 ADC	391 ADC	586 ADC	781 ADC	1172 ADC	781 ADC	977 ADC	1172 ADC
DC current combined outputs	1568 ADC	2192 ADC	3128 ADC	4688 ADC	6248 ADC	9376 ADC	12496 ADC	15624 ADC	18752 ADC
Main controller	Siemens Simotion P320-4								
Battery	PB300-14, Lithium-Ion batteries								
Manufacturer of the battery	Mercedes-Benz Energy (MBE)								
Battery capacity (nominal)	37.8 Ah								
Battery energy content (nominal)	13.8 kWh								
Battery nominal voltage / min./max.	365 VDC / 320 VDC / 420 VDC								
Number of batteries in MBE container 40 ft	112								
Number of strings	8						16		
Battery arrangement	14 Batteries in parallel per DC string								
MBE 40 ft battery container energy content	1545 kWh								
MBE 40 ft battery container energy content usable	1400 kWh								
Temperature range (storage)	-20 °C ... +50 °C								
Operating temperature (ambient)	-20 °C ... +50 °C								
Maximum ripple current	<5% of nominal current								
Battery Management System (BMS)	Mercedes-Benz Energy BMS								
Standards and Certifications	Low Voltage Directive (NSRL) DIN EN 62109-1 and DIN EN 62109-2 EMV-Directive (EMVRL) DIN EN 61000-4-2 and DIN EN 61000-6-4								
Internal communication	Profinet IRT								
External communication interfaces	Ethernet, CAN bus, RS485, RS232, MODBUS TCP, Profibus, Profinet								
Protection class (MBE/FREQCON container)	IP56 / IP54								
Max. THD	<3% at nominal power								
Max. efficiency (AC to DC) (DC to DC)	98.3% / 99.4%								
Cooling principle	liquid cooled								
Lifetime (converter)	20 years								
Protection Devices									
Battery (DC)	fuse and DC load break switch								
AC side disconnection point	ACB 4-pole								
DC overvoltage protection	surge arrester, type I								
AC overvoltage protection	surge arrester, class I								
Ground fault monitoring	yes								
Earthing	IT system								
Insulation monitoring at AC and DC	yes								
Fire protection	smoke and arc detection, smoke and oxygen exhaust system per battery								