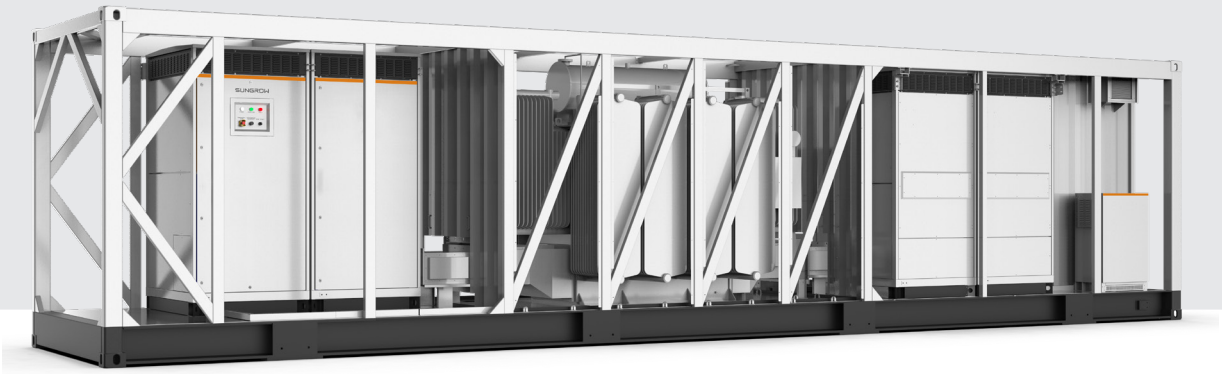
SC5500UD-MV/SC6300UD-MV/ SC6900UD-MV

MV Power Conversion Unit



HIGH YIELD

- Advanced three-level technology,max. efficiency 99%
- Effective forced air cooling,no derating up to 45°C
- Wide DC voltage operation window, full power operation at 1500V

SMART O&M

- Modular design,easy for maintenance
- IP65 protection degree, easy for outdoor installation
- C5 anti-corrosion degree, adjust to applications close to the sea

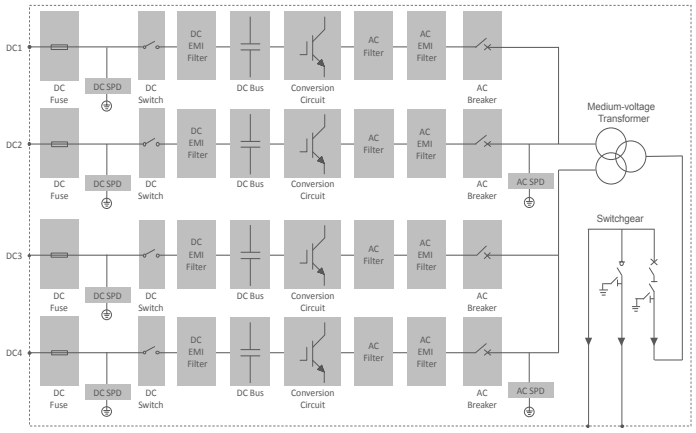
FLEXIBLE APPLICATION

- Bidirectional power conversion system with full four-quadrant operation
- Compatible with high voltage battery system,low system cost
- Battery charge & dis-charge management and black start function integrated

GRID SUPPORT

- Compliant with CE, IEC 62477, IEC 61000 and grid regulations
- Fast active/reactive power response
- L/HVRT,FRT, soft start/stop, specified power factor control and reactive power support

CIRCUIT DIAGRAM



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SUNGROW
Clean power for all

Type Designation	SC5500UD-MV	SC6300UD-MV	SC6900UD-MV
DC side			
Max. DC voltage	1500 V		
Min. DC voltage	800 V	915 V	1000 V
DC voltage range	800 – 1500 V	915 – 1500 V	1000 – 1500 V
Max. DC current	1935 A * 4		
No. of DC inputs	4		
AC side (Grid)			
AC output power	5500 kVA @ 45 ℃ 6050 kVA @ 30 ℃	6300 kVA @ 45 ℃ 6930 kVA @ 30 ℃	6900 kVA @ 45 ℃ 7590 kVA @ 30 ℃
Converter port max. AC output current	1587 A*4		
Converter port nominal AC voltage	550 V	630 V	690 V
Converter port AC voltage range	484 – 605 V	554 – 693 V	607 – 759 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz		
Harmonic (THD)	< 3 % (at nominal power)		
Power factor at nominal power / Adjustable power factor	>0.99 / 1 leading – 1 lagging		
Adjustable reactive power range	-100 % – 100 %		
Feed-in phases / AC connection	3 / 3		
AC side (Off-Grid)			
Converter port nominal AC voltage	550 V	630 V	690 V
Converter port AC voltage range	484 – 605 V	554 – 693 V	607 – 759 V
AC voltage Distortion	< 3 % (Linear load)		
DC voltage component	< 0.5 % Un (Linear balance load)		
Unbalance load Capacity	100 %		
Nominal frequency / Frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz		
Efficiency			
Converter max. efficiency	99%		
Transformer			
Transformer rated power	5500 kVA	6300 kVA	6900 kVA
Transformer max. power	6050 kVA	6930 kVA	7590 kVA
LV / MV voltage	0.55 kV / 20 – 35 kV	0.63 kV / 20 – 35 kV	0.69 kV / 20 – 35 kV
Transformer vector	Dy11y11		
Transformer cooling type	ONAN		
Oil type	Mineral oil(PCB free) or degradable oil on request		
Protection			
DC input protection	DC load switch + fuse		
Converter output protection	AC circuit breaker		
AC output protection	MV load switch + fuse		
Surge protection	DC Type II / AC Type II		
Grid monitoring / Ground fault monitoring	Yes / Yes		
Insulation monitoring	Yes		
Overheat protection	Yes		
General Data			
Dimensions (W*H*D)	12192*2896*2438 mm		
Weight	29000 kg		
Degree of protection	IP54 (Converter: IP65)		
Operating ambient temperature range	-35 to 60 ℃ (> 45 ℃ derating)		
Allowable relative humidity range	0 – 100 %		
Cooling method	Temperature controlled forced air cooling		
Max. operating altitude	4000 m (> 2000 m derating)		
Display	LED, WEB HMI		
Communication	RS485, CAN, Ethernet		
Compliance	CE, IEC 62477-1, IEC 61000-6-2, IEC 61000-6-4		
Grid support	L/HVRT, FRT, active & reactive power control and power ramp rate control, Volt-var, Volt-watt, Frequency-watt		

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