

SC2750UD-MV/SC3150UD-MV/ SC3450UD-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

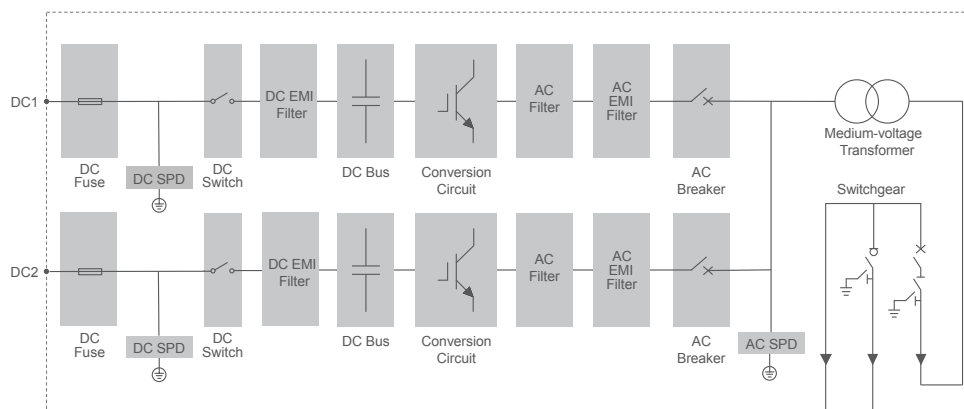
- Bidirectional power conversion system with full four-quadrant operation
- Compatible with high voltage battery system, low system cost
- Battery charge & discharge management and black start function integrated



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



Type Designation	SC2750UD-MV	SC3150UD-MV	SC3450UD-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 * 2		
No. of DC inputs	2		
AC side (Grid)			
AC output power	2750 kVA @ 45 °C 3025 kVA @ 30 °C	3150 kVA @ 45 °C 3465 kVA @ 30 °C	3450 kVA @ 45 °C 3795 kVA @ 30 °C
Converter port max. AC output current	1587 A*2		
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	2750 kVA	3150 kVA	3450 kVA
Transformer max. power	3025 kVA	3465 kVA	3795 kVA
LV / MV voltage	0.55 kV / 20 – 35 kV	0.63 kV / 20 – 35 kV	0.69 kV / 20 – 35 kV
Transformer vector	Dy11		
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)	6058*2896*2438 mm		
Weight	16000 kg		
Degree of protection	IP54 (Converter: IP65)		
Operating ambient temperature range	-35 to 60 °C (> 45 °C 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		

