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

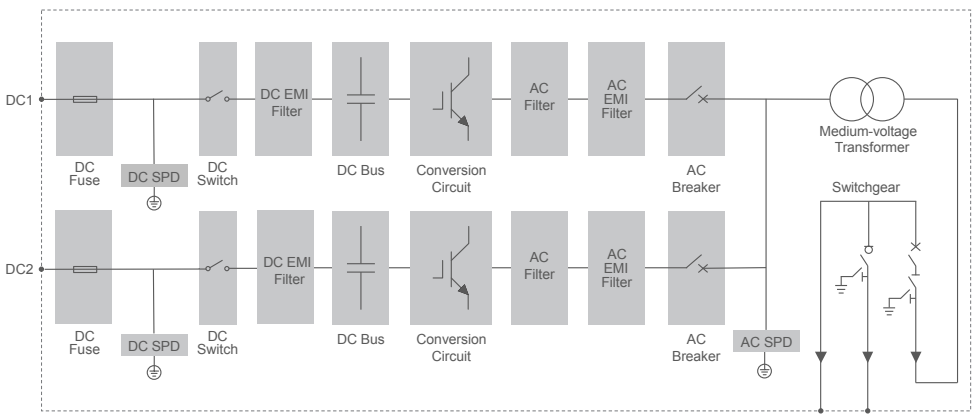
FLEXIBLE APPLICATION

- Bidirectional power conversion system with full four-quadrant operation
- Compatible with high voltage battery system,low system cost
- Battery charge & 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



SUNGROW
Clean power for all

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 ℃ 3025 kVA @ 30 ℃	3150 kVA @ 45 ℃ 3465 kVA @ 30 ℃	3450 kVA @ 45 ℃ 3795 kVA @ 30 ℃
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 ℃ (> 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	

columbus **Official representative in Ukraine** +380 93 714 59 95 • info@columbusenergy.com.ua • **columbusenergy.com.ua**