

SC500TL/SC630TL New



High Yield

- Advanced three-level technology, max. efficiency 99%
- Effective forced air cooling, 1.1 overload capacity, no derating up to 55°C
- Various charge and discharge mode, flexible for battery configuration



Easy O&M

- Integrated current & voltage monitoring function for online analysis and fast trouble shooting
- Modular design and all components front accessible, easy for maintenance
- Integrated auxiliary power supply panels for external devices



ESS Applications

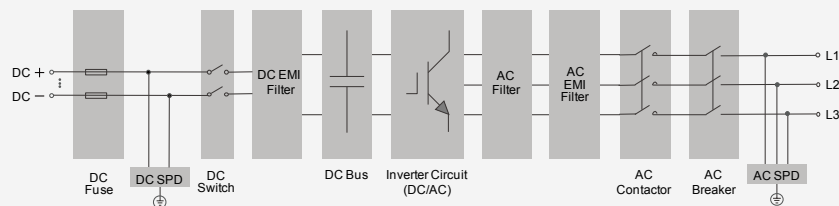
- Typical applications: peak shaving, energy shifting, frequency regulation, capacity firming
- Bidirectional power conversion system with full four-quadrant operation
- Battery charge & dis-charge management, black start function and VSG integrated



Grid Support

- Compliance with IEC 61727, IEC 62116, SGSF
- Dynamic grid voltage and frequency support
- L/HVRT, L/HFRT, soft start/stop, specified power factor control and reactive power support

Circuit Diagram



DC side	SC500TL	SC630TL
Max. DC voltage	1000 V	
Min. DC voltage	520 V	580 V
DC voltage range for nominal power	520 – 850 V	580 – 850 V
Max. DC current	1077 A	1217 A
Max. DC power	560 kW	706 kW
AC side (Grid)		
AC output power	550 kVA @ 50 °C / 500 kVA @ 55 °C	693 kVA @ 50 °C / 630 kVA @ 55 °C
Max. AC current	882 A	1000 A
Nominal AC voltage	360 V	400 V
AC voltage range	315 – 396 V	350 – 440 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
AC current THD	< 3 % (at nominal power)	
DC current injection	< 0.5 % In	
Power factor at nominal power / Adjustable power factor	> 0.99 / 1 leading – 1 lagging	
Adjustable reactive power	-100% – 100%	
AC side (Off-Grid)		
Nominal AC voltage	360 V	400 V
AC voltage range	315 – 396 V	350 – 440 V
AC voltage THD	< 3 % (Linear load)	
DC voltage component	< 0.5 % Un (Linear balance load)	
Unbalance load capacity	100 %	
Voltage dynamic range	≤ 10% (Resistive load jump from 0 to 100 %)	
AC side (VSG)		
Nominal AC voltage	360 V	400 V
Voltage command range	350 – 360V	390 – 400 V
Frequency command range	49 – 51 Hz / 59 – 61 Hz	
Active power command range	-500 – 500 kW	-630 – 630 kW
Reactive power command range	-500 – 500 kVar	-630 – 630 kVar
Efficiency		
Max. efficiency / Euro. efficiency	99 % / 98.7 %	
Protection		
DC input protection	Load break switch + fuse	
AC output protection	Circuit breaker	
Overvoltage 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)	1005*1915*835 mm	
Weight	800 kg	
Isolation method	Transformerless	
Degree of protection	IP21	
Operating ambient temperature range	-30 to 65 °C (> 55 °C derating)	
Allowable relative humidity range (non-condensing)	0 – 95 % (non-condensing)	
Cooling method	Temperature controlled forced air cooling	
Max. operating altitude	5000 m (> 4000 m derating)	
Display	Touch screen	
Communication	Standard: RS485, CAN, Ethernet; Optional: optical fiber	
Compliance	CE, IEC 61727, IEC 62116, SGSF	
Grid support	L/HVRT, L/HFRT, active & reactive power control and power ramp rate control	
Type designation	SC500TL-10	SC630TL-10

