

11 Appendix

11.1 Technical Data

Parameters	SG30KTL	SG30KTL-M
Input Side Data		
Max. PV input power	32000W	
Max. PV input voltage	1000V	
Startup voltage	300V	
Nominal input voltage	650V	
MPP voltage range	280...950V	
MPP voltage range for nominal power	480...800V	
No. of MPPT(s)	1	2
Max. number of PV strings per MPPT	10	5
Max. PV input current(DC1/DC2)	66A	66A(33A/33A)
Max. input current for input connector	10A	
Short-circuit current of PV input (DC1/DC2)	80A	80A(40A/40A)
Output Side Data		
Nominal AC output power	30000W	
Max. AC output apparent power	33120VA	
Max. AC output current	48A	
Nominal AC voltage	3/N/PE, 230/400Vac	
AC voltage range	310...480Vac (May vary as per corresponding country's grid standard.)	
Nominal grid frequency	50Hz	
Grid frequency range	45...55Hz (May vary as per corresponding country's grid standard.)	
THD	< 3 % (at nominal power)	
DC current injection	<0.5%In	
Power factor	>0.99 default value at nominal power (adj. 0.9 overexcited...0.9 underexcited)	
Protection		
Anti-islanding protection	Yes	
LVRT	Yes	
DC reverse connection protection	Yes	

Parameters	SG30KTL	SG30KTL-M
AC short circuit protection	Yes	
Leakage current protection	Yes	
DC switch	Integrated	
DC fuse	Integrated	
Overvoltage protection	Type II DIN rail surge arrester	
System data		
Max. efficiency	98.3%	
Max. European efficiency	98.0%	
Isolation method	Transformerless	
Ingress protection rating	IP65 (Fans: IP55)	
Night power consumption	<1W	
Operating ambient temperature range	-25... + 60°C (>45°C derating)	
Allowable relative humidity range	0...95%, no condensing	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000m (>2000m derating)	
Display	Graphic LCD	
Communication	RS485 (RJ45 connector)	
Certification	VDE0126-1-1, EN62109-1, EN62109-2, G59/2, CEI-021, AS/NZS 3100, AS4777.2, AS4777.3, VDE-AR-N-4105, BDEW, CGC-SOLAR.	
Mechanical Data		
Dimensions (W×H×D)	634×820×257mm	
Mounting method	Wall bracket	
Weight	65kg	

11.2 Terminals and Cables

Terminal	Type	Conductor size	Recommended conductor size
AC terminals	PGA29L-27 Phoenix Spring terminal block PLH 16/ 5-15	8AWG...5AWG 8... 16mm ²	7AWG 10 mm ²
DC terminals	MC4 PV-KST4/6II-UR PV-KBT4/6II-UR	12AWG... 10AWG 4...6mm ²	11AWG 4mm ²
RS485Comm. terminals	MG25A-H2-06-ST	Twist-pair type cable Twist-pair type shielding Ethernet cable	
Second PE terminal	-	10AWG...8AWG 6mm ²	9AWG 6mm ²