SOFAR

ESI-5-12K-T1

5 / 6.5 / 8 / 9.9 / 10 / 12 kW

Three-phase hybrid inverter

We've
GOT YOU COVERED
with **CGL insurance.**

User-friendly

- Easy installation, support both all-in-one and split installations
- Natural heat dissipation, no extra noise

Flexible applications

- Supports 100% three-phase unbalanced loads
- Seamless switchover between on and off-grid (10ms)

Safe & Reliable

- Up to 3 MPPTs with AFCI
- IP66 rated design

Inverter Module	ESI-5K-T1	ESI-6.5K-T1	ESI-8K-T1	ESI-9.9K-T1-A	ESI-10K-T1	ESI-12K-T1
PV Input						
Recommended Max. PV Power	10 kWp	13 kWp	16 kWp	20 kWp	20 kWp	24 kWp
Max. Input Voltage			1000 Vd.c.			
Start-up Voltage [1]			200 Vd.c.			
Rated Input Voltage			600 Vd.c.			
MPP Voltage Range			160-950 Vd.c.			
Number of MPPT			3			
Max. Number of Input String per MPPT			1/1/1			
Max. Input Current			20/20/20 A			
Max. Isc			25/25/25 A			
Battery						
Voltage Range			350-435 Vd.c.			
Number of Battery Input Channel			1			
Max. Charging Power			10 kW			
Max. Discharging Power	5 kW	6.5 kW	8 kW	9.9 kW	10 kW	10 kW
Max. Charging Current			25 A			
Max. Discharging Current	15 A	19.5 A	24 A	29.7 A	30 A	30 A
Battery Type [2]			Lithium-ion			
BMS Communication			CAN			
AC Backup						
Rated Output Voltage			3N~+PE, 380/400/415 Va.c.			
Rated Output Frequency			50/60 Hz			
Rated Output Power	5 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW
Rated Output Current	7.6/7.2/6.9 A	9.9/9.4/9.0 A	12.1/11.6/11.1 A	15.0/14.3/13.8 A	15.2/14.5/13.9 A	18.2/17.4/16.7 A
Rated Apparent Power	5 kVA	6.5 kVA	8 kVA	9.9 kVA	10 kVA	12 kVA
Max. Apparent Power	5.5 kVA	7.15 kVA	8.8 kVA	9.9 kVA	11 kVA	13.2 kVA
Max. Output Current	8.3/8.0/7.6 A	10.9/10.3/9.9 A	13.3/12.8/12.2 A	15.0/14.3/13.8 A	16.7/15.9/15.3 A	20.0/19.1/18.3 A
Peak Output Apparent Power [3]			2 times of rated power, 10s			
THDv(@ linear load)			< 3%			
Switching Time			10 ms default			
Asymmetric load			Yes, Supports 100% three-phase unbalanced load			
AC Grid						
Rated Voltage			3(N)~+PE, 380/400/415 Va.c.			
Rated Frequency			50/60 Hz			
Rated Output Power	5 kW	6.5 kW	8 kW	9.9 kW	10 kW	12 kW
Rated Output Current	7.6/7.2/6.9 A	9.9/9.4/9.0 A	12.1/11.6/11.1 A	15.0/14.3/13.8 A	15.2/14.5/13.9 A	18.2/17.4/16.7A
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Max. Output Current	8.3/8.0/7.6 A	10.9/10.3/9.9 A	13.3/12.8/12.2 A	15.0/14.3/13.8 A	16.7/15.9/15.3 A	20.0/19.1/18.3A
Max. Input Current	15.2/14.5/13.9 A	19.8/18.8/18.1 A	24.2/23.2/22.2 A	30.3/29.0/27.8 A	30.3/29.0/27.8 A	33.3/31.9/30.6 A
THDi			< 3%			
Power Factor Range			0.8 lagging - 0.8 leading			
Efficiency						
Max. MPPT Efficiency			99.9%			
Max. Efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%
European Efficiency	97.0%	97.0%	97.0%	97.5%	97.5%	97.5%
Max. Efficiency of Charging/Discharging [4]	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%
Protection						
DC Switch			Yes			
PV Reverse Connection Protection			Yes			
Battery Reverse Connection Protection			Yes			
Output Short Circuit Protection			Yes			
Output Overcurrent Protection			Yes			
Output Overvoltage Protection			Yes			
Insulation Impedance Detection			Yes			
Residual Current Detection			Yes			
Anti-island Protection			Yes			
Surge Protection [5]			PV: Type II, AC: Type II			
General Parameter						
Inverter Topology			Non-Isolation			
Protective Class			Class I			
IP Rating			IP66			
Overvoltage Category			AC III, DC II			
Operating Temperature Range			-30℃ ~+ 60℃ (derating above + 45℃)			
Relative Humidity Range			5%-95%			
Max. Operating Altitude			4000 m (derating above 2000 m)			
Standby Self-consumption [6]			< 10 W			
Installation Method			Wall Mounted			
Dimensions (W×H×D)			708×440×170 mm			
Cooling Mode			Natural			
Weight			30 kg			
Communication			RS485, Optional: WiFi/4G/LAN			
Display			LCD & APP			

[1] Minimum PV voltage to start MPPT operation.　　[2] Please refer to document "SOFAR inverter Model compatible battery list".　　[3] Full battery and sun.
[4] Battery-AC maximum efficiency of battery charge and discharge.　　[5] According to EN/IEC 61643-11.　　[6] Standby loss at rated input voltage.

*All specifications are subject to change without notice.