



THREE PHASE HYBRID INVERTER

SunExpert TH30|40|50|60K-EU



• FEATURES

 100% three-phase unbalanced output, with each phase capable of delivering up to 50% of the rated power

 Ac coupling to retrofit Existing solar system

 Max. 10 pcs parallel for on-grid and off-grid operation; Support multiple batteries parallel

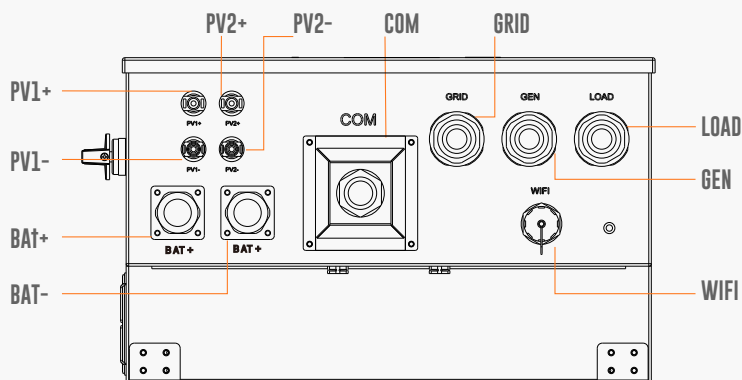
 Support multiple batteries parallel

 High voltage battery, higher efficiency

 6 time periods for battery charging/discharging

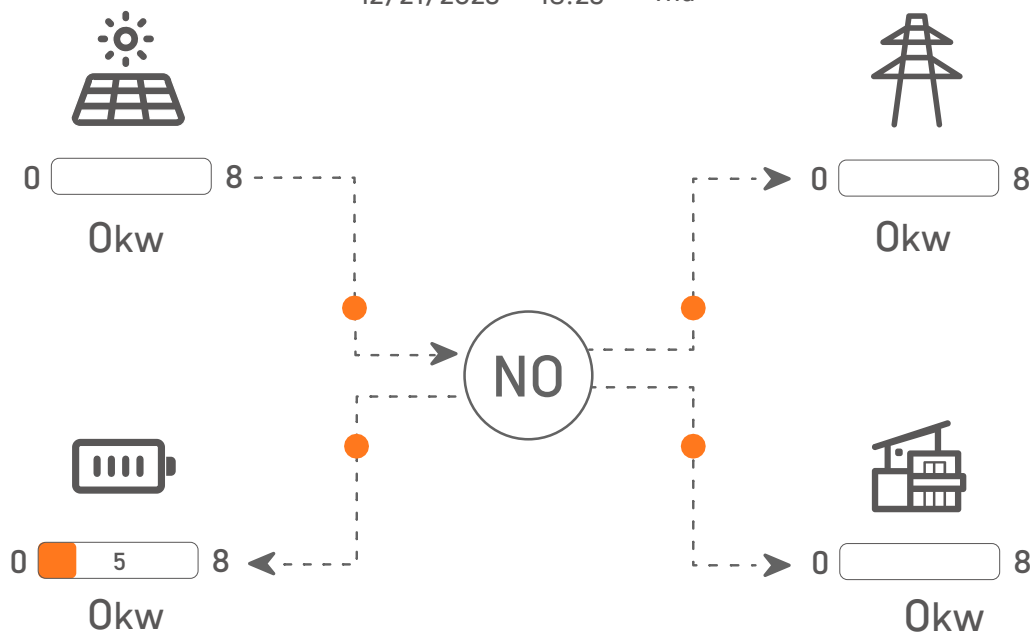
 Support storing energy from diesel generator

• PRODUCT CHARACTERISTICS

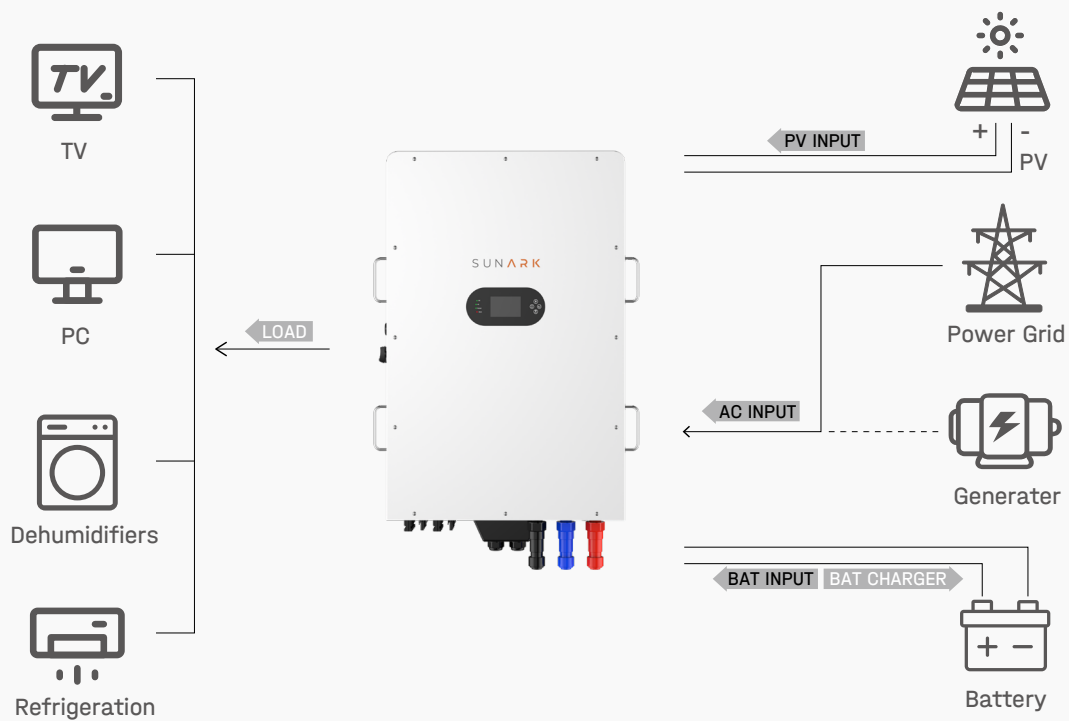


Model	SunExpert TH30K-EU	SunExpert TH40K-EU	SunExpert TH50K-EU	SunExpert TH60K-EU
PV String Input Data				
Max. DC Input Power (W)	39000	52000	65000	78000
Max. DC Input Voltage (V)	1000			
Start-up Voltage (V)	180			
MPPT Range (V)	150-850			
Full Load MPPT Voltage Range (V)	360-850	360-850	450-850	450-850
Rated DC Input Voltage (V)	600			
PV Input Current (A)	36+36+36	36+36+36+36		
Max. PV Isc (A)	55+55+55	55+55+55+55		
No. of MPPT Trackers	3	4		
No. of Strings per MPPT Tracker	2+2+2	2+2+2+2		
AC Output Data				
Rated AC Output Power (W)	30000	40000	50000	60000
Max. AC Output Power (W)	33000	44000	55000	66000
AC Output Rated Current (A)	45.6	60.8	76.0	91
Max. AC Output Current (A)	50.2	66.9	83.6	100
Max. Three-phase Unbalanced Output Current (A)	60	70	83.3	100
Max. Continuous AC Passthrough (A)	118	158	197	237
Peak Power (Off Grid)	1.5 times of rated power, 10 S			
Generator Input/Smart Load/AC Couple Current (A)	45.4 / 118 / 45.4	60.6 / 158 / 60.6	76 / 197 / 76	91 / 237 / 91
Power Factor	0.8 leading - 0.8 lagging			
Output Frequency and Voltage	50/60Hz; 3L/N/PE 220/380Vac 230/400Vac			
Grid Type	Three Phase			
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)			
DC Current Injection	<0.5% In			
Battery				
Battery Type	Lithium-ion			
Battery Voltage Range (V)	160-700			
Max. Charging Current (A)	50+50			
Max. Discharging Current (A)	50+50			
Number of Battery Input	2			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
Efficiency				
Max. Efficiency	97.6%			
Euro Efficiency	97.0%			
MPPT Efficiency	99.0%			
Protection				
Anti-islanding Protection	Yes			
PV String Input Reverse Polarity Protection	Yes			
Insulation Resistor Detection	Yes			
Residual Current Monitoring Unit	Yes			
Output Over Current Protection	Yes			
Output Shorted Protection	Yes			
Surge Protection	Yes			
Arc Fault Circuit Interruption (AFCI optional)	Yes			
Over Voltage Category	DC Type II/AC Type III			
Certifications and Standards				
Grid Regulation	IEC61727/62116, EN50549-1			
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
General Data				
Operating Temperature Range (°C)	-40-60°C, > 45°C Derating			
Cooling	Smart Cooling			
Noise (dB)	≤65 dB			
Communication with BMS	CAN			
Monitoring mode	WIFI, APP			
Weight (kg)	80			
Size (W x H x D mm)	527×894×294 (Excluding Connectors and Brackets)			
Protection Degree	IP65			
Installation Style	Wall-mounted			
Warranty	5 Years (10 Years Optional)			

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Lcd Display Icons



Basic System Architecture