

ECH12K-TH-EU

THREE PHASE HYBRID HV INVERTER

DC INPUT 19.2 kW

Smart load handling above rated capacity — no tripping, no rewiring, no compromise.



High Return

- Max efficiency 98.3%, Battery efficiency 97.5%
- 5 basic modes to meet the needs of various scenarios
- Smart TOU mode, further increasing revenue
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High Capability

- Up to 40kW output power in backup port with grid supply
- Save cost of separating loads, freedom of electricity in case of power failure
- Supports SG Ready heat pump and smart load control
- Three-phase unbalance capacity, single-phase up to 50% of rated power
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High Protection

- Standard AFCI to protect your home
- Built-in Type II SPD on DC side
- IP66 protection for challenging environments
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Inverter

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PV INPUT DATA

Max DC Input Power	19.20 kW
MPPTs	4
Rated DC Input Voltage	600V
Max DC Input Voltage	1100V
Max Input Current	16A per MPPT
Max Short Circuit Current	24A per MPPT
Start Input Voltage	160V
PV Operating Voltage Range	160-1000V
No. of Strings per MPPT	1

AC OUTPUT DATA

Max Output Current On-Grid	60.8A
Max Output Apparent Power (Off Grid)	40.0 kVA
Peak Output Apparent Power	13.2 kVA
Nominal Output Voltage 3W + N + PE	22 kVA @ 60s
Nominal Output Frequency	380V / 400V 415V
THDV@ 100% rated load	50Hz / 60Hz
Switching Time	<2%
Max. Output Single Phase Apparent Power	10ms
	6.0kVAz

GRID

Max Input Current	60.8A
Rated Output Apparent Power	12.0 kVA
Max. Output Apparent Power	13.2 kVA
Rated Output Voltage 3W / N / PE (adjustable)	220 / 380, 230 400, 240/ 415
Rated Grid Frequency	50 Hz
THDI (at rated power)	<2%
Power Factor	>0.99 (-0.8 to +0.8)

BATTERY INPUT DATA

Battery Type	Lithium Ion Lead Acid
Max Charging/ Discharging Current	50A / 50A
Max Charging/ Discharging Power	20 kW / 12kW
Battery Voltage Range	160–600V

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GENERAL DATA

IP	Rating	Cooling	IP66
Operating Temperature Range		Forced Airflow	
Relative Humidity Range		-25°C to 60°C	
Noise Typical Dimensions (W*H*D)	Weight	Display	0-100%
Communication			<45dB
			≈580 × 500 × 250 mm
			37kg
			LED&APP
			RS485,CAN, WIFI

EFFICIENCY DATA

Max Efficiency PV to Grid	98.30%
Eur. Efficiency PV to Grid	97.70%
Max Efficiency PV to Load	97.80%

SAFETY DATA

Certifications	IEC 62109-1 & 2, IEC 61000
Grid Code	EN50549, VDE4105, Tor erzeuger type A+R25, Tor erzeuger type B, EIFS2018-2, CEI 0-21, NC RfG, PTPIREE, PSE S.A., EN50549-1

PROTECTION DATA

DC Switch	Yes
Anti-Islanding Protection	Yes
AC Overcurrent Protection	Yes
PV String Reverse Protection	Yes
Surge Arrester	AC Type II, DC Type II
AFCI	Yes
RSD Function	Option