

EVANTRA-TH

Three Phase Home Battery Energy Storage System

EVANTRA



* The product features a shiny silver colour design with a mirror-like logo, Follow us which exhibits subtle colour variations under different lighting conditions.

Product Introduction

Evantra-TH, a high-efficiency three-phase high voltage hybrid all-in-one BESS. Modular design, always ready for power upgrade, better function for bigger clean energy usage.

Fabulous

- Max. 16/26A DC input current per string, compatible with 210 PV modules.
- Up to 110% three-phase unbalanced output.

Scalable

- Max. 5 units in parallel, covering a capacity range up to 149.76kWh.

Flexible

- Cable free connection, saving 75% installation time between modules.

Safe

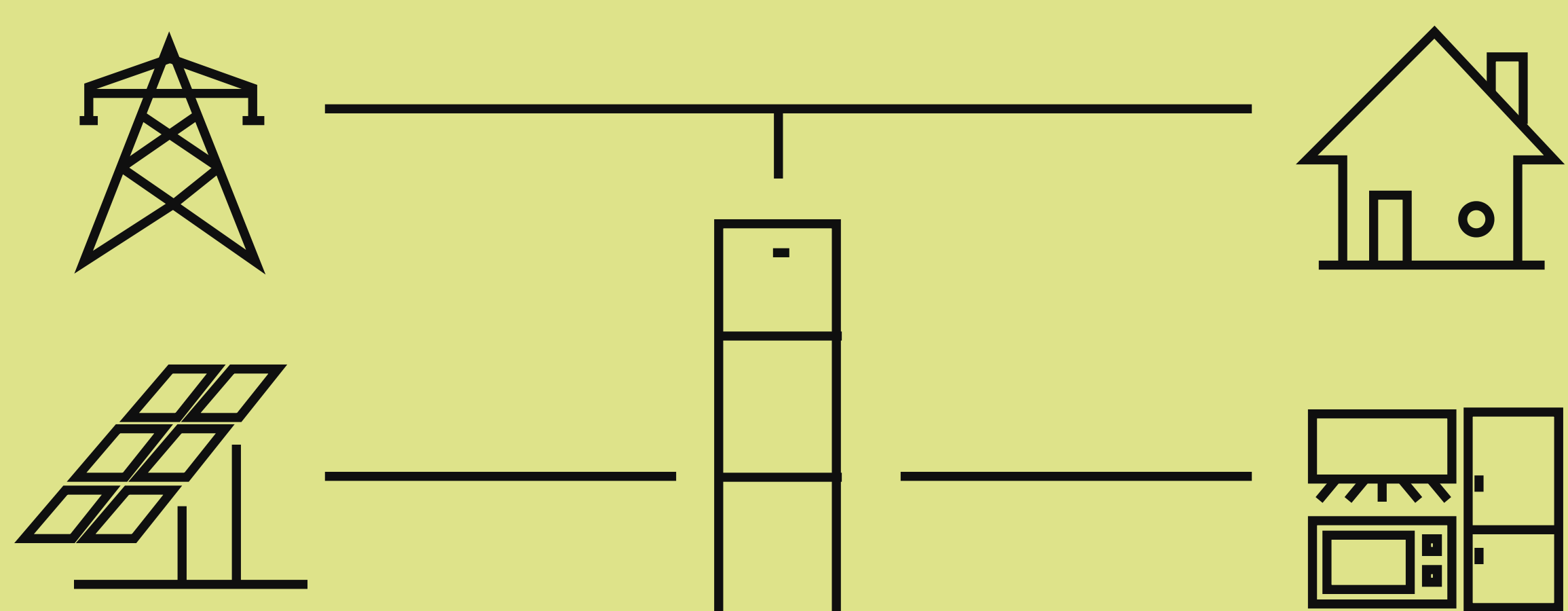
- 4-layer protection design.
- Long life cell, the most stringent safety standard - UL 9540A.

Friendly

- IP65, indoor or outdoor applications.
- <25dB, no noise pollution.

Smart

- VPP, EV and diesel generator ready.
- Remote updates & self-diagnosis.



- Evantra-TH will store photovoltaic or grid energy. If there is not enough solar energy to support consumption, the stored battery power will be discharged by Evantra-TH to meet the power demand.
- Autonomous strategy, automatically optimising energy use based on the user's needs and preferences.

Technical Parameters

Model	WH-TIA502		WH-TIA602		WH-TIA802		WH-TIA103		WH-TIA123		WH-TIA133	
PV Input												
Absolute max Voltage (d.c.V)							1000					
MPPT Voltage Range (d.c.V)							180...980					
Max. DC Input Power (W)	10000		12000		16000		20000		20000		20000	
Start-up Voltage (d.c.V)							145					
Rated Operating Voltage (d.c.V)							620					
Max. Input Current (d.c.A)							16/26					
Isc PV (d.c.A)							20/36					
No.of MPP Trackers							2					
No.of Strings per MPP Tracker							1/2					
Battery Model												
Battery Type							LFP					
Battery Voltage Range (V)							160...700					
Battery Module							4.992kWh, 96V					
Number of Battery Module *1							2...6					
Battery Capacity (kWh)							9.98...29.9					
Max. Charge/Discharge Current (A)							30/30					
AC Input/Output												
Nominal Output Power (W)	5000		6000		8000		10000		12000		13000	
Max. Apparent Power to Grid (VA)	5000		6600		8000		10000		12000		13000	
Max. Apparent Power from Grid (VA)	10000		12000		16000		17900		17900		17900	
Nonmial Voltage (a.c. V)					3/N/PE;220/380		3/N/PE;230/400		3/N/PE;240/415			
Nomial Frequency (Hz)							50/60					
Max. AC Current to Grid (A)	8.1		9.6		12.8		16.0		19.2		20.8	
Max. AC Current from Grid (A)	16.2		19.2		25.6		26.0		26.0		26.0	
Inrush Current (A)					16 a.c.A (peak), 11.3 us (duration)							
Max. Output Fault Current (A)					52 (peak), 37 (rms)							
AC Output Max. Output Overcurrent Protection (A)					37							
AC Input Power Factor					-0.8...+0.8							
AC Output Power Factor					1 (-0.8...+0.8 adjustable)							
THDi							<3%					
EPS Output (With Battery)												
Nominal Output Power (W) *2	5000		6000		8000		10000		12000		13000	
Peak Output Apparent Power (VA) @60 sec	10000		12000		16000		16000		16000		16000	
Nominal Voltage (V)					3/N/PE;220/380		3/N/PE;230/400		3/N/PE;240/415			
Nominal Frequency (Hz)							50/60 (±0.2%)					
Max. Output Current (A)	8.1		9.6		12.8		16		19.2		20.8	
Max. Output Fault Current (A)					52 (peak), 37 (rms)							
EPS Output Max. Output Overcurrent Protection (A)					37							
Switch Time (ms)					< 10							
THDv @ Linear Load					< 2%							
Power Factor					-0.8...+0.8							
Efficiency												
PV Max. Efficiency							98.5%					
PV Europe Efficiency							97%					
PV Max. MPPT Efficiency							99.9%					
Max. Battery Charge Efficiency (PV to BAT)							98.5%					
Max. Battery Discharge Efficiency (BAT to AC)							98.5%					
Protection												
Over/Under Voltage Protection							Yes					
DC Isolation Protection							Yes					
DC Injection Monitoring							Yes					
Residual Current Detection							Yes					
Anti-islanding Protection							Yes					
Over Load Protection							Yes					
Battery Input Reverse Polarity Protection							Yes					
PV Reverse Polarity Protection							Yes					
Surge Protection							Yes					
Over Heat Protection							Yes					
General Data												
Dimension (W*D*H) (mm)					600*350*1875 (four battery modules, with foundation)							
Hybrid Inverter Net Weight (kg)							33					
Operating Temperature Range (°C)							-20...+55					
Relative Humidity							0...95%					
Altitude (m)							≤3000					
Ingress Protection							IP65					
Cooling							Natural					
Inverter Topology							Non-isolated					
Over Voltage Category							III(AC), II(DC)					
Protective Class							Class I					
Active Anti-islanding Method							Frequency shift					
Human Interface							LED/APP					
BMS Communication Interface							RS485/CAN					
Meter Communication Interface							RS485					
Noise Emission (dB)							< 25					
Standby Power Consumption (W)							< 10					

* 1 There are installation space restrictions in some scenarios. The optimal number of batteries to be installed is less than or equal to 4.

* 2 Depends on the voltage and the discharge current of the batteries connected.