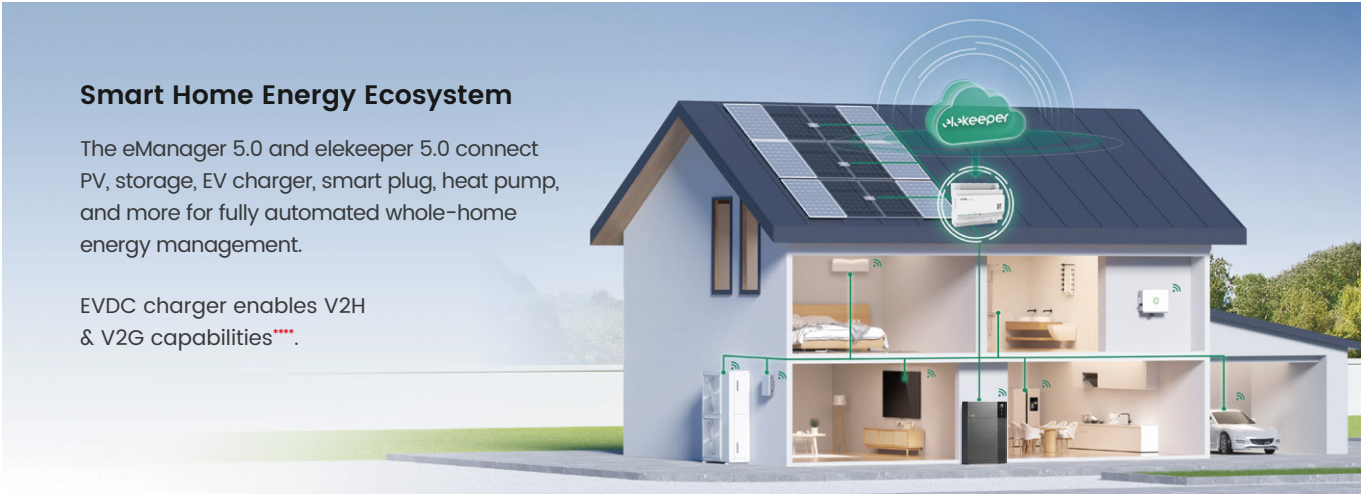


EK90 HS5 Three Phase All-in-One Solution

Your Ultimate Smart Home Butler





Smart Home Energy Ecosystem

The eManager 5.0 and elekeeper 5.0 connect PV, storage, EV charger, smart plug, heat pump, and more for fully automated whole-home energy management.

EVDC charger enables V2H & V2G capabilities****.

Easy, Fast, and Smart Installation

- Modular design with blind-mate connectors, no complex external cabling.
- Innovative Wireless-pro meter, providing longer range, more stable connectivity, and wiring-free installation.
- Effortless App commissioning features 3-step initialization and One Click Self-diagnosis (Meter & CT Phase Auto Adjustment)
- No backup retrofit required: 63A bypass, 50% single-phase high output power.



Total Peace of Mind with 9-layer Protection

- 5-layer Battery Protection
 - V2 flame-retardant material coverage
 - Full-coverage temperature sensor
 - Thermal insulation board
 - Thermal aerosol fire suppression
 - Decompression valve
- 4-layer System Protection
 - DC ground-fault protection
 - AI AFCI PV protection
 - Grid fault protection
 - DC Bus protection
- Top-standard UL9540A&B guarantees battery safety.

Future-Ready Scaling with Ultimate Battery Performance

- Built-in DCDC optimizer
- Fully independent charge & discharge
- Eliminates wooden barrel effect
- Seamless capacity expansion
- Built to Last: 12,000 cycles*** with premium 314Ah cell



AI-powered Energy Higher returns for every kWh

- **elekeeper 5.0**
 - AI Keeper – Intelligent energy manager
 - AI Care – AI-powered system health guardian
 - AI Designer – Intelligent plant design platform
 - VPP ready – empower a connected energy ecosystem
 - AI Edge – Keeps running smoothly even on weak connections
- **AI Saving 3.0**
 - AI + Multi-scenario (Peak Shaving, EV Charging, VPP, Temporary Scheduling...)



MODEL	EK90 HS5-10K-T3-X		EK90 HS5-15K-T3-X	EK90 HS5-20K-T3-X
Input (PV)				
Recommended max. PV power [W]	20000		30000	40000
Max. input voltage [V]			1000	
MPPT voltage range [V]			150~900	
Operating Voltage Range [V]			150~1000	
Start-up voltage [V]			160	
Nominal DC input voltage [V]			600	
Max. input current per MPPT [A]	20/20/20			40/20/20
Max. short-circuit current per MPPT [A]	25/25/25			50/25/25
Number of MPP trackers			3	
No. of Strings per MPP Tracker	1+1+1			2+1+1
Input (DC Battery)				
Battery Type			LiFePO4	
Battery Voltage Range [V]			600~900	
Communication Interface for BAT			CAN	
Max. Battery Quantity in one system			6	
AC Output/Input (On Grid)				
Rated output power [W]	9999		15000	20000
Rated apperant power [VA]	9999		15000	20000
Max. apparent power [VA]	9999		16500	22000
Rated. output current [A]	14.5		21.7	29.0
Max. output current [A]	14.5		23.9	31.9
Rated output/input voltage [V]			3L+N+PE, 220/380, 230/400	
Rated AC grid frequency [Hz]			50/60	
Max. Input Current (per phase) ** [A]			63	
Adjustable power factor			0.8 leading~ 0.8 lagging	
Total current harmonic distortion			< 3%	
AC Output (Back-up)				
Max. Output Apparent Power [VA]	10000		15000	20000
Peak Output Apparent Power [VA]	20000,10s		30000,10s	40000,10s
Max. Current (per phase) [A]	14.5		21.7	29.0
Maximum unbalanced load power [W]	5000		7500	10000
Rated output voltage [V]			3L+N+PE, 220/380, 230/400	
Rated AC grid frequency [Hz]			50/60	
Adjustable power factor			0.8 leading~ 0.8 lagging	
Total current harmonic distortion			< 3%	
Switch time [ms]			≤10	
Efficiency				
Euro Efficiency			97.6%	
Max. Efficiency			98.2%	
Protection				
Insulation Monitoring			Integrated	
Residual Current Monitoring			Integrated	
DC Reverse Polarity Protection			Integrated	
Anti-islanding Protection			AFD	
AC Short-circuit Protection			Integrated	
AC Overcurrent/Overvoltage Protection			Integrated	
DC Switch			Integrated	
surge protection			Type II DC/AC	
AFCI			Integrated	
General Data				
Inverter topology			Non-isolation	
Protective class			I	
Overvoltage category			DC II, AC III	
Dimensions (W / H / D) [mm]			Inverter: 835 / 350 / 270	
			Battery pack: 835 / 270 / 270	
			Battery base: 835 / 70 – 80 / 270	
Weight [kg]			Inverter: 44.5	
	Battery pack:EK90 BU5-6.0-TV: 60.4		EK90 BU5-7.0-TV: 71.7 EK90 BU5-9.0-TV: 79.2	
			Battery base: 8	
Operating temperature range [°C]			-30 ~ + 50 °C	
Relative humidity range			5% ~ 95% Non-condensing	
Corrosion resistance grade			C4	
Max. operating altitude [m]			3000	
Cooling			Smart air cooling	
Degree of protection			IP66	
Communication			WLAN / Fast Ethernet / RS485 / eSolar 4G pro /eSolar AIO3 pro	
Standard			IEC62109-1/2, IEC62040, IEC62477,EN61000-6-1/2/3/4, IEC62619,AS4777.2, SA TS 5398	
Warranty [Year]			Refer to the warranty policy	

* X for battery system configuration: X=14/16/18/21/25/27/28/35/36/42/45/50/54 kWh; each number presents the energy storage capacity for different models;
For battery combinations and ratings refer to the battery combination datasheet.
** The built-in 63A bypass function enables the whole-house backup power, and the current can be configured on the elekeeper App.
*** Provided by the battery manufacturer. Test conditions: 25±2°C, 0.5C charge and discharge rate, SOH 60%.
**** This feature is currently under development and coming soon.