



TG-ESS-9HV-2

10kW Three Phase 5-in-1 Inverter ESS

10 kW / 19.2 kWh

DATASHEET



SMART
ENERGY
SOLUTION

MODEL		TG-ESS-9HV-2
Inverter Model		THI-10000-3P-HVL
PV Input (DC Input)		
Max. PV Input Power	Wp	15000
Max. PV input voltage	V	1000
Nominal/Rated PV input voltage	Voc	600
Startup input voltage	V	180
MPPT voltage range	V	180-950
No. of MPPT		2
Strings per MPPT (MPPT1 / MPPT2)		1/2
Max. PV input current	A	48 (PV1: 16A / PV2+PV3: 32A)
Short-circuit current of PV input	A	60 (PV1: 20A / PV2+PV3: 40A)
AC Input and Output		
Max. AC power from grid	VA	20500 (10kW load + 10kW charging)
Rated AC output power	W	10000
Max. AC output apparent power	VA	11000
Rated / Max AC output current	A	15.2 / 16.7
Rated Grid voltage	V	3L/N/PE 220/380; 230/400; 240/415
AC voltage range	V	270-480
Rated grid frequency	Hz	50/60
Grid frequency range	Hz	45~55 / 55~65
Harmonic (THD)(of rated power)		< 3%
Power factor at Rated power		> 0.99
Adjustable power factor		1 (0.8 leading to 0.8 lagging)
AC Type		3P - Three Phase (TT, TN-C, TN-S and TN-C-S)
Efficiency		
Max. Efficiency	%	98.40
European efficiency	%	97.90
PV to battery Max. Efficiency	%	99.5
Battery to AC Max. Efficiency	%	98.4
Protection & Safety		
LVRT (Low Voltage Ride Through)		Yes
Grid monitoring		Yes
DC reverse polarity protection		Yes
AC short-circuit protection		Yes
AC Overcurrent/Overvoltage Protection		Yes
Leakage current protection		Yes
Residual current monitoring		Yes
Insulation Monitoring		Yes
Anti-islanding Protection		Yes
Surge Protection (SPD)		DC: Type II / AC: Type II
DC switch (PV)		Yes
Battery charging and discharging fuse		Yes

Battery input reverse polarity protection		Yes
Battery Data		
Battery Management System		Included
Battery type		LiFePO4 - High Voltage
Battery voltage	V	150-600
Max. charge / Max. discharge current	A	30 / 30
Rated power	W	9600
Energy storage capacity	kWh	19.2
Cell combination		120S1P
Rated Capacity (Cell)	Ah	50
Cycle life (C=Capacity)		6000 cycles 0.5C
Charge Voltage	V	420
Max. charge/discharge current	A	25 / 25
Charge / Discharge out-off voltage	V	430 / 336
Rated Voltage	V	384
EPS Data (Off-grid mode)		
Off-grid mode (Backup & Off-grid use)		Yes, 100% Off-Grid and HomeGrid+
Switch time to emergency mode	ms	< 10 (Online)
Rated output power		10000 W /10000 VA
Peak output power	VA	12000, 5min
Three Phase Backup		Yes, 100% unbalanced 3.33kW per phase
Environment		
Charge temperature		0C to 55C @ 60+25% Relative Humidity
Discharge temperature		-20C to 55C @ 60+25% Relative Humidity
Storage temperature		-20C to 50C @ 60+25% Relative Humidity
System Data		
Ingress Protection		IP65
Case material		Metal
Case type		All in One, Magnet cover
AC connection type		Plug & Play connector 1-click (no cable assembly required)
Operating ambient temperature range		-25°C~60°C, Derating at +45 °C
Allowable relative humidity range	%	5~95 (no condensation)
Max. operating altitude	m	4000
PV/Battery connection type		MC4 (Original Staubli)
Communication		RS485/CAN/WLAN/BLE – SOLARMAN app
Cooling method		Natural convection
Mounting method		Wall-mounting bracket included
Display		Status LED
Smart Meter		Acrel ADL400
Dimensions		
Product size	mm	800*210*1805 270kg
Dimensions L*W*H	mm	Inverter-BMS module: 800*210*775 Battery modules: 800*210*512 x 2
Package Dimension L*W*H	mm	1x Inverter-BMS box: 1115*300*880 2x Battery box: 920*310*735 (single) (Accessories inside)

Dimensions		
Net Weight	kg	Inverter-BMS module: 65kg Battery module: 2x95kg Accessories: 9kg
Gross Weight	kg	Inverter-BMS box: 76kg Battery box: 2x105kg Accessory box: 11kg
Packaging		Woodbox-pallet
Standard		
Safety	IEC EN 62109 / IEC EN 62619 / MSDS / UN38.3	
EMC	EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3	
Certification	VDE V 0124-100 / VDE-AR-N 4105 / EN50549 / RfG:2016 / NC RfG:2018 / PTPIREE:2021	

High Voltage Battery

Three Phase Backup

100% Off-grid use

Easy installation

16A PV Input

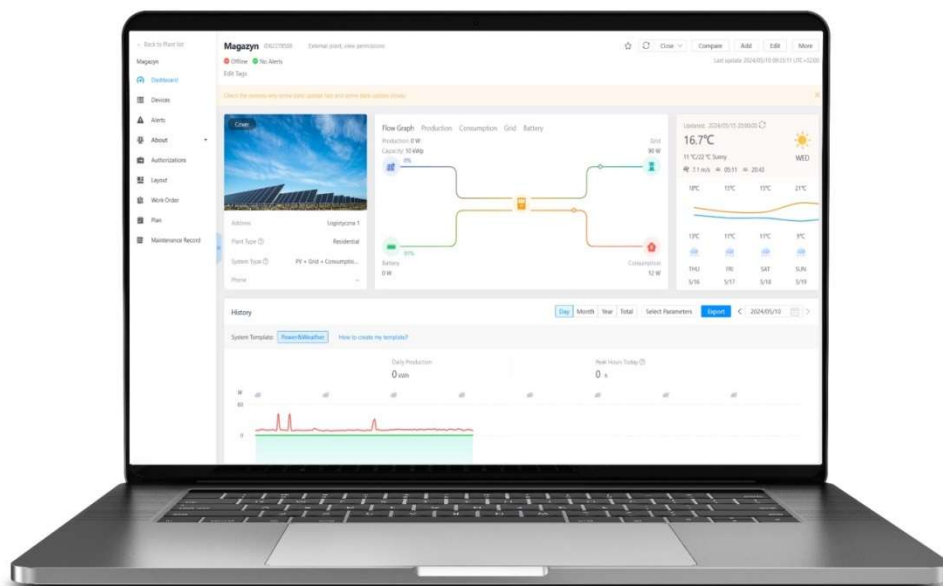
Outdoor use IP65

Extendable kWh

HomeGrid+

The HomeGrid+ technology allows you to still use your solar power in the event of grid over-voltage. Reduce the loss of solar energy in peak hours, charge your battery and supply your home with solar power.

COMPATIBLE WITH



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