



LiHome

Energy in your own hands

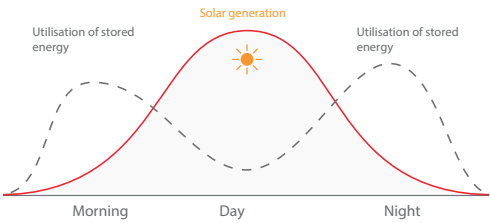
www.faam.com

FAAM

WHY ENERGY STORAGE?

The best solution to maximize the efficiency of your home renewable energies

Residential energy storage systems are designed to maximise the self-consumption of clean energy from external systems (such as photovoltaic panels) and to harness renewable energy in such a way that it powers homes even when the grid is interrupted. Photovoltaic panels produce most of their energy during the day, when energy consumption is usually lower. Energy storage makes energy available where and when it is needed: a 'reservoir' of energy is indispensable for increasing self-consumption and energy self-sufficiency, as it solves the problem of cyclicity and unpredictability of renewable energy sources.





KEY FEATURES

FAAM-branded lithium technology products are the safest and most reliable in terms of efficiency.

The FAAM-branded Energy Storage solution, thanks to the use of high-quality materials, the structure and composition of the components, and the high level of engineering, provides excellent performance in terms of energy storage and release in every situation, condition and time.

- Overvoltage control
- Undervoltage monitoring
- Over-temperature control
- MODBUS RS-485 communication
- Wi-Fi communication via a proprietary App on IOS or Android (on request)
- CAN Bus 2.0 communication for BMS
- Pre-loading system



LiHome 4kWh

4,10 kWh
Nominal Energy

60 kg
Weight

4.10 kW
Peak Power

up to 48 kWh
Scalability

up to 3 kW
Continuous Power

10 years
Warranty

Wiring Diagrams:

AC

DC

RS-485

CAN BUS 2.0



Grid



Wattmeter



Monitoring
And Start-Up



LiHome



Hybrid Inverter



Non-Critical Loads



Critical Loads



PV Array 1

- Layout example

930 mm

664 mm

220 mm

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LiHome | Advanced Lithium Technology

LiHome 8kWh

8,19 kWh
Nominal Energy

100 kg
Weight

8.19 kW
Peak Power

up to 48 kWh
Scalability

up to 6 kW
Continous Power

10 years
Warranty

LiHome configurations available with single-phase inverter

Configuration	Rated Power	Nominal Capacity	Nominal Energy	Nominal Voltage	Minimum Voltage	Maximum Voltage	Maximum Current in Discharge	Maximum Current in Charge
LiHome 4kWh	3kW	80Ah	4,10kWh	51,2V	40V	57,6V	0,75C	0,37C
LiHome 8kWh	3kW-6kW	80Ah	8,19kWh	102,4V	80V	115,2V	0,75C	0,37C
LiHome 12kWh	3kW-6kW	80Ah	12,29kWh	153,6V	120V	172,8V	0,75C	0,37C
LiHome 16kWh	3kW-6kW	80Ah	16,38kWh	204,8V	160V	230,4V	0,75C	0,37C
LiHome 20kWh	3kW-6kW	80Ah	20,48kWh	256V	200V	288V	0,75C	0,37C
LiHome 24kWh	3kW-6kW	80Ah	24,58kWh	307,2V	240V	345,6V	0,75C	0,37C



LiHome 8+4 kWh

12,28 kWh

Nominal energy

100+60 kg

Weight

12,28 kW

Peak power

Up to 48 kWh

Scalability

Up to 10 kW

Continuous power

10 years

Guarantee

LiHome configurations available with three-phase inverter

Configuration	Power Nominal	Nominal Capacity	Nominal Energy	Minimum Voltage	Maximum Voltage	Maximum Discharge Current	Maximum Charge Current
LiHome 12kWh	10kW	40Ah	12,28kWh	240V	350,4V	0,75C	0,37C
LiHome 16kWh	10kW	80Ah	16,38kWh	160V	233,6V	0,75C	0,37C
LiHome 20kWh	10kW	80Ah	20,48kWh	200V	292V	0,75C	0,37C
LiHome 24kWh	10kW	80Ah	24,58kWh	240V	350,4V	0,75C	0,37C
LiHome 28kWh	10kW	80Ah	28,67kWh	280V	408,8V	0,75C	0,37C
LiHome 32kWh	10kW	160Ah	32,77kWh	160V	233,6V	0,75C	0,37C
LiHome 36kWh	10kW	160Ah	36,86kWh	180V	262,8V	0,75C	0,37C
LiHome 40kWh	10kW	160Ah	40,96kWh	200V	292V	0,75C	0,37C
LiHome 44kWh	10kW	160Ah	45,05kWh	220V	321,2V	0,75C	0,37C
LiHome 48kWh	10kW	160Ah	49,15kWh	240V	350,4V	0,75C	0,37C

20kW inverter also available



+ LiHOME INVERTER



INVERTER FOR SINGLE-PHASE AND THREE-PHASE BATTERIES WITHOUT TRANSFORMER, WITH DUAL MPPT.

The **FAAM LiHOME SUN STORAGE IM3/ IM6** (single phase) and **IT10** (three-phase) hybrid inverters allow the combination of photovoltaic generation and energy storage without the need for additional photovoltaic inverters, as well as stand-alone operation.

Dual MPPT system. The inverters are equipped with a dual Maximum Power Point Tracking (MPPT) system, allowing it to draw maximum power from the PV array, including roof-mounted systems with different orientations or partial shading.

EMS Inside. The inverters are equipped with an energy management system (EMS) as standard.

The EMS enables more advanced functionalities, such as self-consumption.

Thanks to the integrated EMS, the plant can be monitored at any time via PC or mobile phone with the free FAAM LiView monitoring app, available on the Play Store and App Store.

Start-up and monitoring

Quick and easy start-up and visualisation of data and graphs through the integrated user interface.

In addition, users can easily apply the software through a PC, tablet or mobile phone.

PROTECTION

- AC overvoltages. Insulation faults
- Output short circuits and overloads
- DC switch for the photovoltaic field
- Anti-islanding with automatic disconnection

FEATURES

- Dual MPPT system
- RS-485 communication for the wattmeter
- Wi-Fi and Ethernet communication
- CAN Bus 2.0 communication for the BMS (Battery Management System)
- 2 configurable digital inputs
- 2 potential-free configurable outputs
- Battery input precharge system
- Relays for neutral-to-ground connection for critical loads in TT systems
- Quick start and visualisation of the installation thanks to the FAAM SUN Monitor user interface
- Possibility to operate only from the PV field and to add storage system later.
- Suitable for indoor and outdoor installation (IP65)
- Back-up functionality available for self consumption installations
- DRM0 included (for the Australian market)

MODES OF OPERATION

Self-consumption mode

This mode of operation is aimed at grid connected systems with renewable energy sources, in order to minimise grid consumption. If the energy generated exceeds demand, the excess energy can be used to charge batteries or be fed into the grid. In addition, it is equipped with a back-up functionality so that, in the event of a grid outage, the inverter can supply critical loads from the batteries and photovoltaic panels.

UPS mode

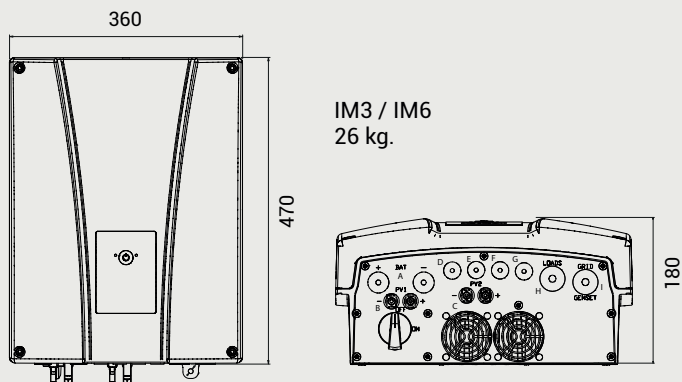
This mode of operation is designed for systems where grid interruptions are long and frequent, which means that a backup power source is required. To ensure a power source, the inverter keeps the batteries charged. During a grid outage, the inverter generates an AC grid and the energy stored in the batteries is used to power critical loads. Due to its fast response time, the grid interruption is insignificant for most loads.

Stand Alone mode

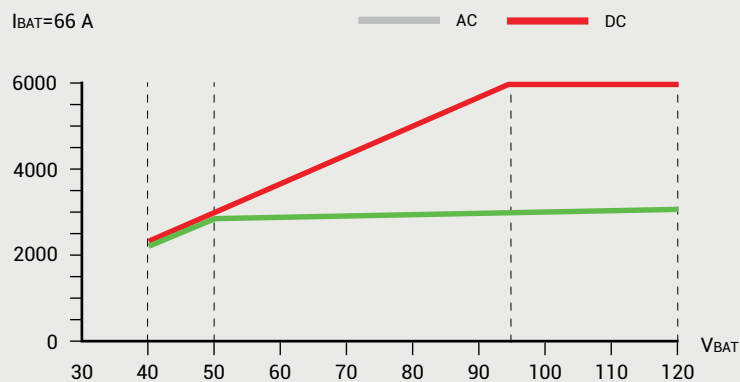
The inverter generates an AC grid in standalone mode and acts as a grid manager, ensuring the correct balance between photovoltaic generation, consumption and the storage system.

It is equipped with a relay for neutral-ground connection of the system loads to create a stand-alone TT grid. In addition, the inverter allows the connection of an auxiliary generator, which can be started via an exit.

Weight and dimensions (IM3/IM6) (mm)



AC power in relation to battery voltage (IM3/IM6) (without photovoltaic energy)



+ SINGLE-PHASE INVERTER FEATURES

IM3

IM6

Battery input (DC)			
Voltage range (1)	40 ~ 450 V		
Maximum charge/discharge current	66 A		
Battery type	Li-Ion LiHome ⁽²⁾		
Communication with lithium-ion batteries	CAN Bus 2.0		
PV input (DC)			
Maximum photovoltaic field power	11.5 kWp		
MPP voltage range	125 ~ 480 V		
Maximum input voltage (3)	550 V		
Maximum input current (input 1 / input 2)	12 A / 12 A		
Number of MPPTs 2	2		
Number of inputs (input 1 / input 2)	1/1		
Mains input (AC)			
Rated voltage	230 V		
Voltage range	172 ~ 264 V		
Rated frequency	50 / 60 Hz		
Frequency range	40 ~ 70 Hz		
Network type	TT / TN		
Rated power	3 kW	6 kW	
Maximum temperature Temperature for rated power	40 oC		
Maximum current	13 Arms	26 Arms	
Power factor	0 ~1		
Critical load output (AC)			
Power (25 oC) 30 min, 2 min, 3 s (4)	3,500 / 3,900 / 5,080 W		6,400 / 6,900 / 7,900 W
Maximum current	13 Arms	26 Arms	
Rated voltage (5) 220 ~ 240 V	220 ~ 240 V		
Rated frequency (5)	50 / 60 Hz		
Power factor	0.8 ~ 1 ~ 0.8		
Back-up function response time	12 ms		
Features			
Maximum efficiency	95.5%	96%	
Euroefficacy	95.1%	95.2%	
Mains input (AC)			
Cooling system	Forced ventilation		
Airflow	45 m3/h		
Consumption in stand-by mode	< 10 W		
Operating temperature	-20 ~ +65 oC		
Relative humidity (non-condensing)	4 ~ 100 %		
Protection class	IP65		
Maximum altitude 2,000 m	2,000 m		
Marking	CE		
EMC and safety regulations	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12, EN 62109-1, EN62109-2, AS62040.1, FCC Part 15		
Network connection standards	DIN V VDE V 0126-1-1, EN 50438, CEI 0-21, VDE-AR-N4105:2011-08, G59/3, G83/2, AS4777.2:2015, IEC 62116, IEC 61727, UNE 206007-1:2013, UNE 206006:2011, UNE 217001 IN:2015,NRS097-2-1, ABNT NBR 16149, ABNT NBR 16150, South African Grid code, P.O.12.2, G99, EN 50549-1		

Notes: (1) The maximum power output of the battery is given by the battery voltage multiplied by the maximum discharge current (2) See the FAAM website for a list of compatible batteries (3) Never exceed. Consider the increase in panel voltage 'Voc' at low temperatures (4) In stand-alone mode, these powers are only available if the battery power added to the photovoltaic power reaches these values (5) Voltage and frequency configurable.

+ THREE-PHASE INVERTER FEATURES

IT10

FVCC input		
Maximum input PV power Initial		15.0
Voltage		135
Maximum input Tesnion		1000
Rated input voltage Voltage		620
Range M PP		200-950
No. of Tackers M PP		2
No. of DC inputs per M PP		2/2
Maximum input current Maximum		30/30
Short-circuit current		40/40
Battery connection		
Battery type		Lithium-io n (con BMS)
Voltage range		135-750
Maximum charge/discharge current		40/40
Output		
Rated output power Maximum		10.0
Apparent output power		11.0 ¹
Maximum apparent input power Maximum		20.00
Battery charging power		10.00
Nominal output Voltage		3L/N/PE; 220/380V; 230/400; 240/415V
Rated AC mains frequency		50/60
Maximum output current		16,5 ²
Power factor		0.8 leading ... 0.8 lagging
Maximum total harmonic distortion		<3%@ Rated output power
DCI		<0.5% In
Backup		
Rated output power Max. output		10.0
Power Max.		11.00
Output current		16.5
Backup mode activation time		<10ms
Rated output voltage Rated output		3L/N/PE; 220/380V; 230/400; 240/415V
Frequency		50/60
Harmonic distortion		<3@ Linear load
Efficiency		
Maximum effi ciency		98,4%
European weighted efficiency		97,5%
Protection		
DC reverse polarity protection		Integrated
Reverse connection protection		Integrated
Insulation resistance protection		Integrated
Transient protection		Integrated
Overheat protection		Integrated
Overheating protection Residual		Integrated
Current protection Anti-islanding		Integrated
Protection AC overvoltage		Integrated
Protection Overload protection AC		Integrated
Short-circuit protection		Integrated
General Data		
Overvoltage category		CC: II CA : III
Dimensions	WxHxD mm	534x418x210
Weight	Kg	28.00
Degree of protection Night		IP 65
Energy consumption	W	<15
Type		Without transformer
Operating temperature range	°C	-30 ~ 60
Relative humidity	%	-0 ~ 100
Altitudiune operativam		3000 (downgrade @>3000m)
Cooling		Intelligent fan
Romance levels		<40
View		OLED e LED
Communication		CAN, RS485, WiFi/LAN (Optional))



+ SAFE

The safety of Lihome is proven by certified tests made by the main authorities of this field



+ RELIABLE

LiHome provides reliability for your home with its industry leading longevity.



+ COMPACT

Can be placed anywhere you want, both indoors and outdoors.



+ EXPANDABLE

LiHome Energy Storage System can be increased according to your needs





LiView^{V1.0}

Get real-time and historical data of your LiHome.

The LiView app works on your iOS and Android device as well as on your laptop on Windows and Mac, all through an intuitive and clean interface.

Download the LiView App to your smartphone or tablet for access to your FAAM smart energy storage system.



DOWNLOAD
At Google Play Store



DOWNLOAD
At iOS App Store



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Start to save energy with us

At your service for any question



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