

Ingecon®Hybrid MS

THREE PHASE

30 / 60 / 90 / 120



Adaptable to off grid and micro grid installations

Ingecon®Hybrid MS is an innovative modular system that shortens the manufacturing and assembly times.

The flexibility of this new system enables the adaptation to the specific requirements of each installation, whilst also permitting a future expansion.

A maximum of 4 battery charger modules, 4 inverter modules, 4 PV modules and 4 wind turbine modules can be connected to each installation.

The wind turbine and PV modules are each equipped with 3 inputs that can be connected in parallel.

Each PV input has been designed with an advanced algorithm for maximum power point tracking (MPPT) in order to maximize the PV array output.

The wind energy input is designed specifically for an easy AC connection directly to the wind turbine, whether asynchronous or synchronous.

The monitoring, control and parameter configuration can either be made on-site using the front display and keypad or remotely through the **Ingecon®Hybrid Monitor** software.

3 year guarantee, extendable to 25 years.

Protections

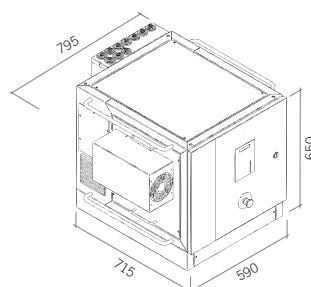
- Against low transient surges by varistors.
- PV array insulation failure.
- Output short-circuits and overloads.
- Lightning suppressors.

Optional accessories

- **Ingecon®Hybrid Monitor** PC-based logger program for data display and recording, graph preparation, parameterization, MSEcel® spread-sheet creation, etc.
- Monitoring and control of the system using RS-485, fibre optics, wireless, or Ethernet.
- Modem for GSM/GPRS remote communications.
- Galvanic isolation transformer.
- Connection boxes.
- Kit for input of auxiliary generator.

Size and weight (mm)

IngeconHybrid MS 120 kg.
(each module)

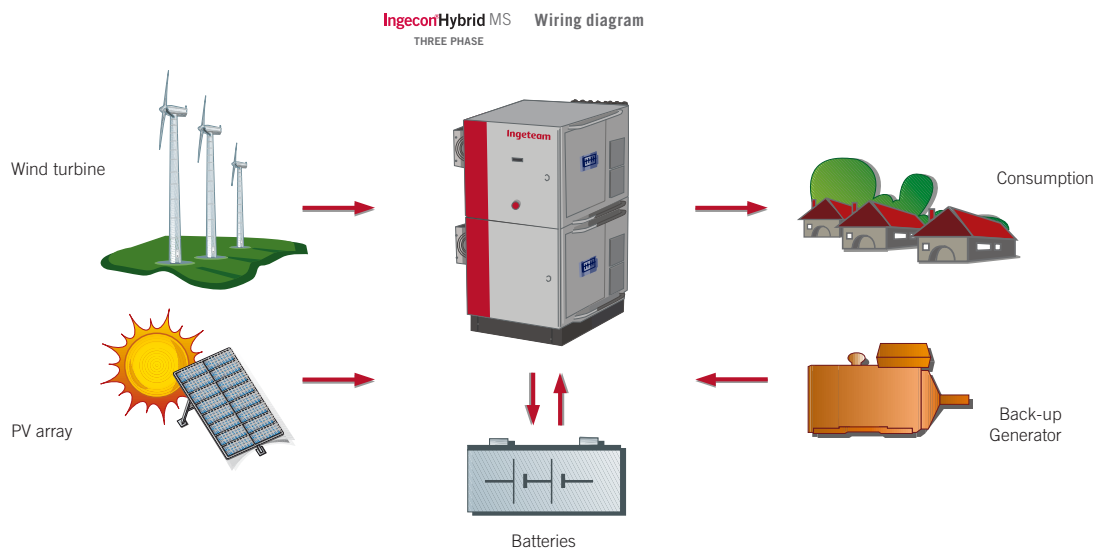


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Technical data

IngeconHybrid MS	1 Module	2 Modules	3 Modules	4 Modules **
PV Module				
Number of inputs	3	6	9	12
Power	3 x 15 kW	6 x 15 kW	9 x 15 kW	12 x 15 kW
Voltage range	150 - 700 Vdc	150 - 700 Vdc	150 - 700 Vdc	150 - 700 Vdc
Maximum current for unit	30 A	30 A	30 A	30 A
Wind Turbine Module				
Number of Inputs	3	6	9	12
Power	3 x 15 kW	6 x 15 kW	9 x 15 kW	12 x 15 kW
Line voltage range	70 - 495 Vac	70 - 495 Vac	70 - 495 Vac	70 - 495 Vac
Maximum line current per input	24 A	24 A	24 A	24 A
Battery Charger Module				
Power	30 kW	60 kW	90 kW	120 kW
Input voltage	200 - 500 Vdc	200 - 500 Vdc	200 - 500 Vdc	200 - 500 Vdc
Maximum current	100 A	200 A	300 A	400 A
PV Input*				
Rated output	1 x 15 kW	1 x 15 kW	1 x 15 kW	1 x 15 kW
Voltage range	150 - 700 Vdc	150 - 700 Vdc	150 - 700 Vdc	150 - 700 Vdc
Maximum current	30 A	30 A	30 A	30 A
Inverter Module				
Rated power	30 kVA	60 kVA	90 kVA	120 kVA
Output voltage	380 - 430 Vac (neutral available)	380 - 430 Vac (neutral available)	380 - 430 Vac (neutral available)	380 - 430 Vac (neutral available)
Output frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
THD	<4%	<4%	<4%	<4%
Phi Cosine	-1 to 1	-1 to 1	-1 to 1	-1 to 1
Efficiency				
Maximum efficiency	> 96%			
General Information				
Ambient temperature	-10°C to +45°C			
Protection class	IP 20			
Compliance with standards	CE Mark			
* Only the first battery charger module has an additional PV array input. ** Maximum number of modules				



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