



10TL M / 15TL M / 20TL M / 30TL M

THREE-PHASE HYBRID INVERTER WITH TWO PV MPPTs

THE BEST SOLUTION FOR RESIDENTIAL OR COMMERCIAL SOLAR+STORAGE SYSTEMS

The INGECON® SUN STORAGE 3Play TL M hybrid inverter makes it possible to combine photovoltaic generation and energy storage with no need for any additional PV inverters.

Dual MPPT system

This inverter features a dual maximum power point tracking (MPPT) system, that allows it to draw the maximum power from the PV array, including roof-mounted installations with different orientations or with partial shading.

EMS Inside

The inverter is equipped as standard with an energy management system (EMS). The EMS permits more advanced functionalities, such as self-consumption. Thanks to the built-in EMS, the installation can be monitored at all times via a PC or mobile phone with the free INGECON® SUN Monitor application, available at Play Store and App Store.

Start-up and monitoring

Fast and easy start-up and display of data and graphics through the integrated user interface. Furthermore, users can easily upgrade the inverter firmware from the application, through a PC, tablet or mobile.

5 year warranty, extendible up to 10 years.

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The best solution for residential or commercial solar+storage systems

OPERATING MODES:

Self-consumption mode

This inverter is directed at grid-connected solar + storage hybrid systems. Its main objective is to minimise the amount of energy consumed from the grid. If the energy generated is greater than demand, then any sur-plus energy could either be used to charge the batteries or to be injected into the grid.

Back up mode

During a grid outage, the inverter switches to off-grid mode and generates an AC network in order to feed critical loads. When there is a solar energy surplus, it will be firstly used to feed the loads and secondly to charge the batteries.

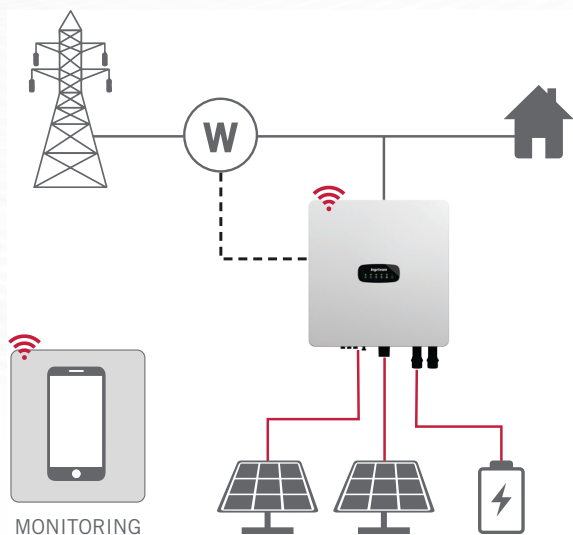
Protections

- AC overvoltages.
- Insulation faults.
- Short-circuits and overloads at the output.
- DC breaker for the PV array.
- Anti-islanding with automatic disconnection.
- Surger Arrester Type 2.

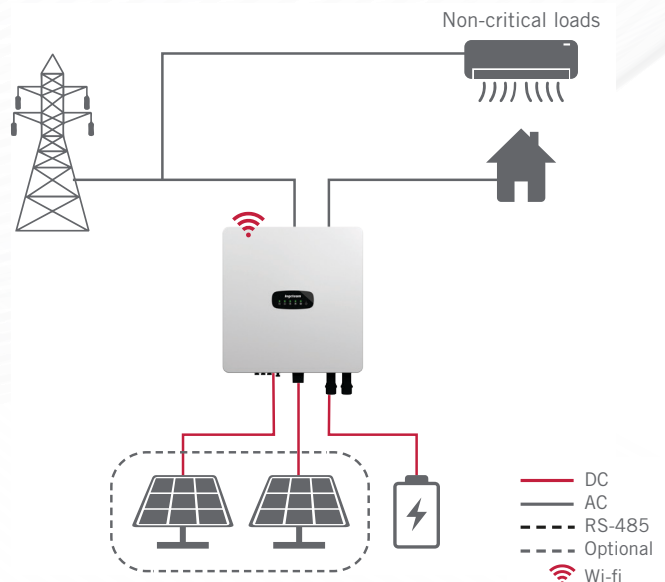
Features

- EMS inside.
- 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).
- Pre-charging system at the battery input.
- Relay for the neutral to earth connection for critical loads in type TT installations.
- Rapid start-up and view of the installation thanks to the INGECON® SUN Monitor user interface.
- Possibility of operating just from the PV array and of adding the storage system at a later date.
- Suitable for indoor and outdoor installations (IP65).
- Back-up functionality available for self-consumption installations.
- DRMO included (for the Australian market).
- PV connection way: MC4/H4.
- Battery connection way: dedicated DC connector.
- AC connector type: OT Terminal.
- Self adaption to BMS.
- Type of battery: Lithium-ion.
- Anti-corrosion with C5 protection class.

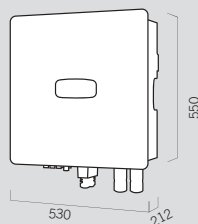
Self-consumption mode



Back up mode



Size and weight (mm)



10TL M
29 kg.

15TL M / 20TL M / 30TL M
35 kg.

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BATTERY INPUT (DC)				
Voltage range	150 - 600 V	150 - 800 V	150 - 800 V	150 - 800 V
Nominal battery voltage	200 - 600 V	200 - 800 V	200 - 800 V	200 - 800 V
Maximum charge / discharge current	50A / 50A			
Maximum charge / discharge power	15,000 / 10,500 W	18,000 / 15,000 W	24,000 / 20,000 W	30,000 / 30,000 W
Maximum voltage	600 V	800 V	800 V	800 V
PV INPUT (DC)				
PV array maximum power	15,000 W	22,500 W	30,000 W	45,000 W
MPPT Voltage range	160 - 950 V			
Maximum input voltage	1,000 V			
Maximum current per MPPT (input 1/input 2)	20A / 30A	30A / 30A	30A / 30A / 30A	30A / 30A / 30A
Maximum short circuit current (input 1/input 2)	30 / 40A	40 / 40A	40 / 40 / 40A	40 / 40 / 40A
Number of MPP trackers	2			
Number of inputs per MPP	1 / 2	2 / 2	2 / 2 / 2	2 / 2 / 2
Full power MPP voltage				
GRID INPUT (AC)				
Rated voltage	400 V			
Voltage range	277 - 520 V (Adjustable)			
Nominal Frequency	50 / 60 Hz			
Network type	TN			
Rated power	10 kW	15 kW	20 kW	30 kW
Max. Temperature for rated power	45°C			
% of rate power @ 50°C	80 %			
Nominal current	3*15.2A	3*22.8A	3*30.4A	3*45.6A
Power Factor	>0.99 Rated power (Adjustable 0.8 LG-0.8 LD)			
Adjustable Power Factor	YES			
THD	<3%			
CRITICAL LOAD OUTPUT (AC)				
Nominal output voltage	400 V			
Nominal output frequency	50 / 60 Hz			
Nominal output power	10 kW	15 kW	20 kW	30 kW
Nominal output current	3*15.2A	3*22.8A	3*30.4A	3*45.6A
THDV	<3% (R Load), 5% (RCD Load)			
FEATURES				
Maximum Efficiency	98.4 %			
Euroefficiency	97.9 %			
Maximum efficiency (BAT)	98.0 %			
GENERAL INFORMATION				
Refrigeration system	Natural ventilation		Forced ventilation	
Stand-by consumption	<20 W			
Consumption at night	<10 W			
Ambient temperature	25°C to 60°C			
Relative humidity (non condensing)				
Protection class	IP65		IP65	
Marking	CE			
Acoustic emissions	<30 dB		45 dB	
Max. altitude - Max. altitude without derating (m)	4,000 m - 2,000 m			
EMC and security standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12, EN 62109-1, EN 62109-2, IEC62103, EN 50178, FCC Part 15, AS3100			
Grid connection standards	RD1699/2011, DIN V VDE V 0126-1-1, EN 50438, CEI 0-16 Ed. III, CEI 0-21, VDE-AR-N 4105:2011-08, G59/2, G83/2(10), P.O.12.3, AS4777.2, AS4777.3, IEC 62116, IEC 61727, UNE 206007-1, ABNT NBR 16149, ABNT NBR 16150, South African Grid code, Chilean Grid Code, Romanian Grid, Code, Ecuadorian Grid Code, Peruvian Grid code, IEEE 929, Thailand MEA & PEA requirements, DEWA (Dubai) Grid Code, Jordan Grid Code			

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