



3TL / 6TL M2

SINGLE-PHASE PV INVERTER WITH ONE OR TWO MPPTs

THE BEST SOLUTION FOR RESIDENTIAL SELF-CONSUMPTION SYSTEMS

A single-phase inverter family for residential PV systems.

Maximum efficiency with one or two independent MPPT inputs

A single DC-to-AC power conversion stage with an advanced maximum power point tracking system (MPPT), making it possible to harness the maximum energy from the PV array at all times, including difficult situations such as scattered clouds and partial shading. Great flexibility for configuring the solar array, thanks to the two independent MPP trackers (6-kW inverter model), with a wide input voltage range. Moreover, it enables to connect different DC input powers to each MPP tracker (asymmetric configuration).

Plug & Play technology

The inverter connection is fast, simple and extremely easy to install.

The country specific configuration and language can be easily selected from the inverter App.

Rugged design

Die cast aluminum casing, especially designed for indoor and outdoor applications (IP65). The INGECON® SUN 1Play TL M inverters have been designed to guarantee a long life expectancy and to withstand extreme temperatures.

Ease of maintenance

Internal datalogger for data storage.

Control either from a remote PC or on-site setting. Status and alarm LED indicators.

Software included

Included at no extra cost are the INGECON® SUN Monitor and its smartphone version iSun Monitor for monitoring and recording the inverter data over the internet. In addition, users can download the latest version of the firmware from the Ingeteam website www.ingeteam.com, and update it using a simple remote connection. Ethernet and Wi-Fi communications are supplied as standard.

Standard 10 year warranty.

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The best solution for residential self-consumption systems

All the models feature DC and AC surge arresters type III and an integrated DC switch.

Main features

- EMS inside.
- Single or double MPPT system.
- Ethernet, Wi-Fi and RS-485 communications supplied as standard.
- Remote configuration and upgrade.
- Software INGECON® SUN Monitor for PV plant monitoring.
- LED Status.
- Easy maintenance.
- Plug & Play technology.
- Suitable for indoor and outdoor installations (IP65).
- High temperature performance.
- Compact design.
- Language and country network code configuration through the application.
- Compatible with High Power Modules.
- Nominal voltage configuration via after-sales service.
- The IS 1Play 6TL M2 inverter automatically detects the parallel connection of its inputs to a single photovoltaic field. However, to maintain the warranty, the safety standards of the installation must be observed. See document ACL2010IMC10, Ingecon Sun 1Play 3Play, parallel string connection.

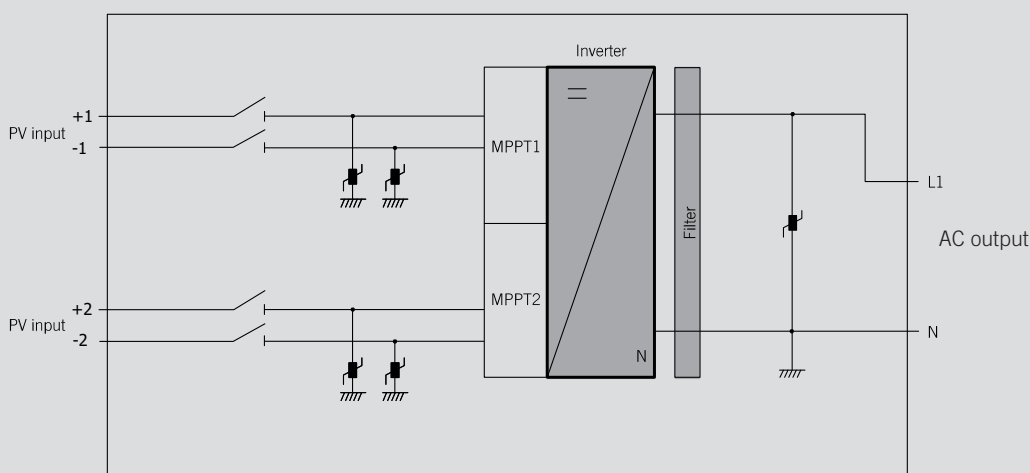
Protections

- Reverse polarity.
- Shortcircuits and overloads at the output.
- Anti-islanding with automatic disconnection.
- Insulation faults.
- Output overvoltages with type III surge arresters.
- Electric arc fault detection safety device.

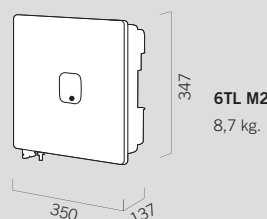
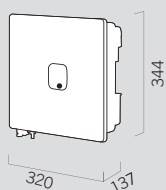
Benefits

- Greater performance thanks to the MPPT system.
- Easy maintenance.
- Higher inverter life expectancy.
- Waterproof and dustproof with IP65 protection class.
- Anti-corrosion with C5 protection class.

INGECON SUN 6TL M2 (6 kW)



Size (mm) and weight



3TL

6TL M2

INPUT (DC)

Recommended PV array power range	3.09 - 4.5 kWp	6.18 - 9 kWp
Voltage range MPPT	50 - 490 V	70 - 540 V
Start input voltage	70 V	90 V
Maximum voltage ⁽¹⁾	490 V	540 V
Rated input voltage	360 V	
Max. Short circuit current	20 A	40 A (2*20 A)
Maximum current	15 A	30 A (2*15 A)
Inputs with PV connectors	1	2 (1 / 1)
Number of MPPTs	1	2

OUTPUT (AC)

Rated power	3 kW	6 kW
Max. apparent power ⁽²⁾	3.3 kVA	6 kVA
Max. active power (PF = 1) ⁽²⁾	3.3 kW	6 kW
Max. output current	15 A	27.3 A
Rated voltage	220 / 230 V	
Voltage range ⁽³⁾	160 - 300 V (Adjustable)	
Frequency	50 / 60 Hz	
Type of grid	TT / TN	
Power Factor	> 0.99 Rated power (Adjustable 0.8 LD - 0.8 LG)	
THD	< 3% @ Rated power	

EFFICIENCY

Maximum efficiency	97.4%	97.2%
Maximum euroefficiency	96.4%	96.4%

GENERAL INFORMATION

Refrigeration system	Natural ventilation
Consumption at night	10 W
Ambient temperature	-25°C to 60°C
Relative humidity (non-condensing)	0 - 100 %
Protection class	IP65
Marking	CE
Acoustic emissions	30 dB
Max. Operating altitude	4,000 m
EMC and security standards	EN 62109-1:2010, EN62109-2:2011, EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019, EN IEC 61000-3-12:2011, EN IEC 61000-3-11:2019, EN IEC 61000-3-2:2019/A1:2021, EN 61000-3-3:2013/A2:2021

Grid connection standards

ES: NTS SEPE 2.1 Type A, ES: UNE 217002:2020, IT: CEI 021 (allegato A&B), P.O.12.3 (6 KW model), EN 50549-1:2019/AC:2019, IEC 61727:2004, IEC 62116:2014, RD647:2020, DE: VDE-AR-N 4105:2018, DE: DIN VDE V 0124-100 (VDE V 0124-100):2020

Notes

⁽¹⁾ The maximum voltage that the IS 1Play 3TL device can withstand without damage is 500V. The maximum voltage that the IS 1Play 6TL M2 device can withstand is 550V.

⁽²⁾ In Spain, according to the Spanish standards, the maximum active power will be the same as the rated power.

⁽³⁾ The range of output voltage and frequency may vary depending upon different grid codes.

Integrated elements

DC switch	✓
Anti-islanding protection	✓
AC overcurrent protection	✓
AC short-circuit protection	✓
DC reverse connection	✓
DC & AC surge arresters, type III	✓
Insulation detection	✓
Leakage current protection	✓

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