



110TL M9

THREE-PHASE PV INVERTER WITH NINE MPPTs

THE BEST SOLUTION FOR INDUSTRIAL SELF-CONSUMPTION SYSTEMS

A three-phase inverter family for industrial PV systems.

Maximum efficiency with nine independent MPPT inputs

It has 9 independent maximum power point trackers (MPPT), plus a DC/AC power conversion stage. This ensures that the energy of the PV module is optimized at all times, even in difficult situations of scattered clouds and partial shading. Moreover, the inverter offers great flexibility for configuring solar array, thanks to the nine independent inputs and a wide range of input voltages, as well as connecting 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 or with a PC by connecting via a web browser to the server integrated in the inverter itself.

Rugged design

Specially designed for indoor and outdoor applications (IP66). INGECON® SUN 110TL M9 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 5 year warranty, extendable for up to 10 years.

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The best solution for industrial self-consumption systems

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

Main features

- EMS inside.
- Multi-MPPT system.
- 98.2% maximum efficiency.
- Digital inputs.
- Ethernet and Wi-Fi 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 (IP66).
- High temperature performance.
- Compact design.
- Language, rated voltage and Country Code, configurable by App.
- Compatible with High Power Modules (500W-600W+).

Protections

- Reverse polarity.
- Shortcircuits and overloads at the output.
- Anti-islanding with automatic disconnection.
- Insulation faults.
- Input and output overvoltages with type II surge arresters.

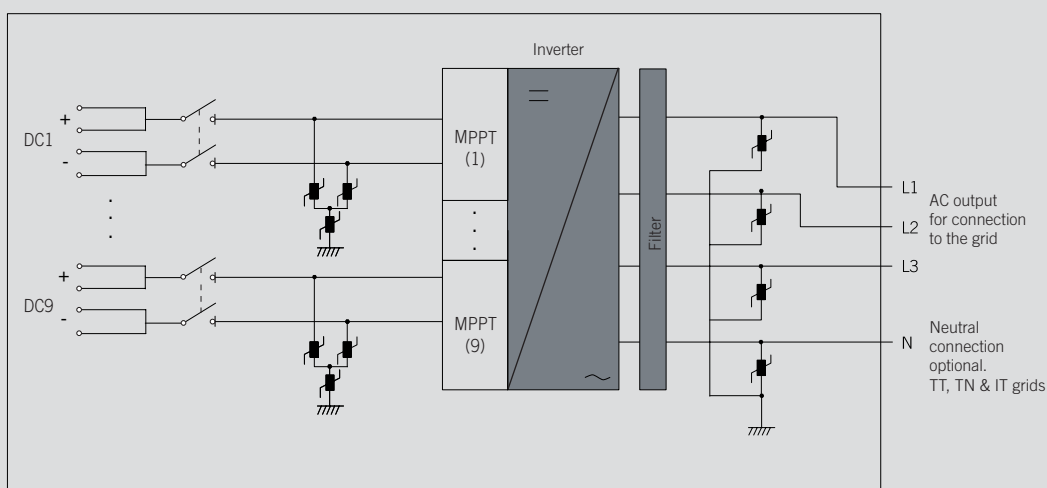
Optional accessories

- Self-consumption kit.

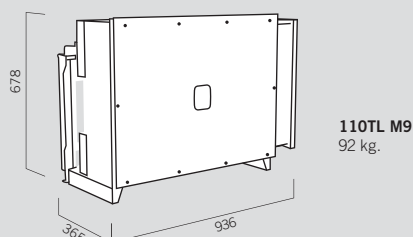
Benefits

- Greater performance thanks to the multi MPPT system.
- Easy maintenance.
- Higher inverter life expectancy.
- Waterproof and dustproof with IP66 protection class.
- Anti-corrosion with C5 protection class.

INGECON SUN 110TL M9



Size and weight (mm)



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INPUT (DC)

Recommended PV array power range	113.3 - 165 kWp
Voltage range MPPT	200 - 1,000 V
Maximum voltage ⁽¹⁾	1,100 V
Rated input voltage	600 V
Start input voltage / Min. operating voltage	250 V / 200 V
Max. Short circuit current	3*50A + 6*45A
Maximum current	3*40 A + 6*32 A
Inputs with PV connectors	18 (9*2)
Number of MPPTs	9

OUTPUT (AC)

Rated power	110 kW
Max. apparent power ⁽²⁾	123 kVA
Max. active power (PF = 1) ⁽²⁾	121 kW
Max. output current	187A
Rated voltage	400 V
Voltage range ⁽³⁾	322 V - 520 V (Adjustable)
Frequency	50 / 60 Hz
Type of grid	TT / TN / IT
Power Factor adjustable	Yes, 0 - 1 (leading / lagging)

EFFICIENCY

Maximum efficiency	98.2%
Euroefficiency	97.8%

GENERAL INFORMATION

Refrigeration system	Forced ventilation
Consumption at night	< 10 W
Ambient temperature	-25°C to 60°C
Relative humidity (non-condensing)	0 - 100 %
Protection class	IP66
Marking	CE
Acoustic emissions	< 65 dB
Max. Operating altitude	4,000 m
EMC and security standards	EN 61000-6-2, EN 61000-6-4, EN 62109-1, EN 62109-2
Grid connection standards	IEC 61727:2004, IEC 62116:2014, EN 50549-1:2019, EN 50549-2:2019, UNE 217002:2020, UNE 217001:2020, NTS SEPE 2.1 type B, CEI 0-21 v1 November 2022 (including Allegato B), CEI 0-16 v1 November 2022 (including Allegato N), VDE-AR-N 4105:2018, DIN VDE V 0124-100/06.20

Notes

⁽¹⁾ Maximum voltage the inverter withstand without any damage. Input DC voltage range for grid connection is MPPT range voltage.

⁽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 II	✓
Insulation detection	✓
Leakage current protection	✓
PV String monitoring	✓
Night load consumption monitoring	✓

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