

THREE-PHASE TL INVERTERS WITH THE MAXIMUM EFFICIENCY AT THE BEST PRICE

10TL / 12.5TL / 15TL / 20TL

A three-phase inverter family for domestic, industrial and large-scale PV plants.

Maximum efficiency at the best price

A single DC-to-AC power conversion stage with an advanced single maximum power point tracking system (MPPT), that makes it possible to harness the maximum energy from the PV array at the most competitive price.

Plug & Play technology

Extremely easy to install. The inverter connection is fast and simple. The country-specific configuration and language can be easily selected from the inverter screen.

Rugged design

Steel casing, especially designed for indoor and outdoor applications (IP65). Able to withstand extreme temperatures. The INGECON® SUN 3Play inverters have been designed to guarantee a service life of more than 20 years, as demonstrated by the stress tests they are subjected to.

Ease of maintenance

Internal datalogger for up to 3 months data storage. Control either from a remote PC or on-site from the inverter front keypad. Status and alarm LED indicators. LCD screen. The inverter's fan is easily replaceable by the user.

Easy to operate

The INGECON® SUN 3Play TL inverters feature a LCD screen for the simple and convenient monitoring of the inverter status and a range of internal variables. The display also includes three LEDs to show the inverter operating status. All this helps to simplify and facilitate maintenance tasks.

Software included

Included at no extra cost are the INGECON® SUN Manager, INGECON® SUN Monitor and its smartphone version iSun Monitor for monitoring and recording the inverter data over the internet. RS-485 communications are supplied as standard. In addition, users can download the latest version of the firmware from the Ingeteam website: www.ingeteam.com, and update it using a simple SD memory card.

Standard 5 year warranty, extendable for up to 25 years



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Different versions to choose from

In order to satisfy its clients' needs, Ingeteam has created four different versions for the INGECON® SUN 3Play TL family:

- "S": Standard version
- "S+": Advanced Standard version
- "S++": Advanced Standard version
- "P": Premium version
- "P+": Advanced Premium version

All the versions are supplied with DC and AC varistors. The "S" version represents the most basic model of all. It features a single MPPT input with terminal blocks. The Improved Standard version "S+" also features DC and AC breakers. The Advanced Standard version "S++" presents all these things and also DC and AC surge arresters, type 2.

On the other hand, the Premium version features several multi-contact inputs (type 4). Moreover, it also features DC fu-

ses, the input current measurement kit and the DC and AC breakers. The Advanced Premium version "P+" is supplied with DC and AC surge arresters, type 2.

MAIN FEATURES

- 98.5% maximum efficiency.
- Digital inputs.
- Inverter updating by the user through a SD memory card.
- Software INGECON® SUN Manager for PV plant access and data registration.
- Software INGECON® SUN Monitor for PV plant monitoring.
- LCD display.
- Easy maintenance.
- Display-configurable potential-free contact, to indicate insulation fault or grid connection.
- Plug & Play technology.
- Suitable for indoor and outdoor installations (IP65).
- High temperature performance.
- Different versions to satisfy every project needs.
- Compact design.

PROTECTIONS

- Reverse polarity.
- Shortcircuits and overloads at the output.
- Anti-islanding with automatic disconnection.
- Insulation faults.

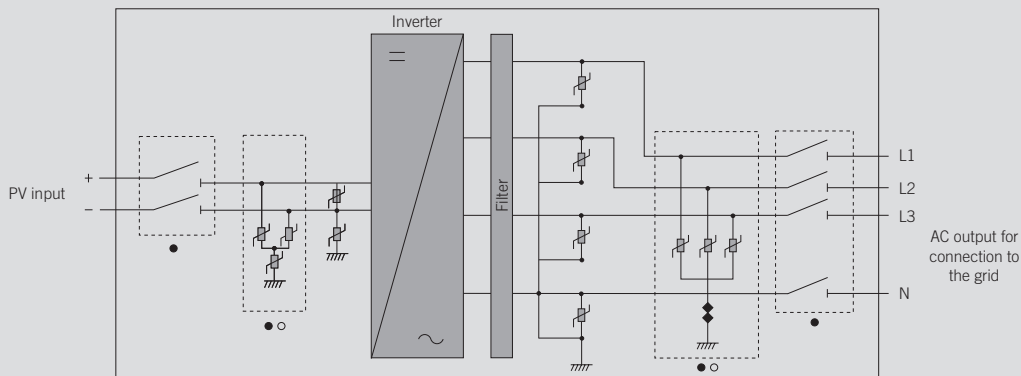
OPTIONAL ACCESSORIES

- Inverter communication via Ethernet, Bluetooth or GSM / GPRS.
- Display-configurable potential free contact, to indicate insulation fault or grid connection.
- DC fast-on connectors.
- Self-consumption kit.

BENEFITS

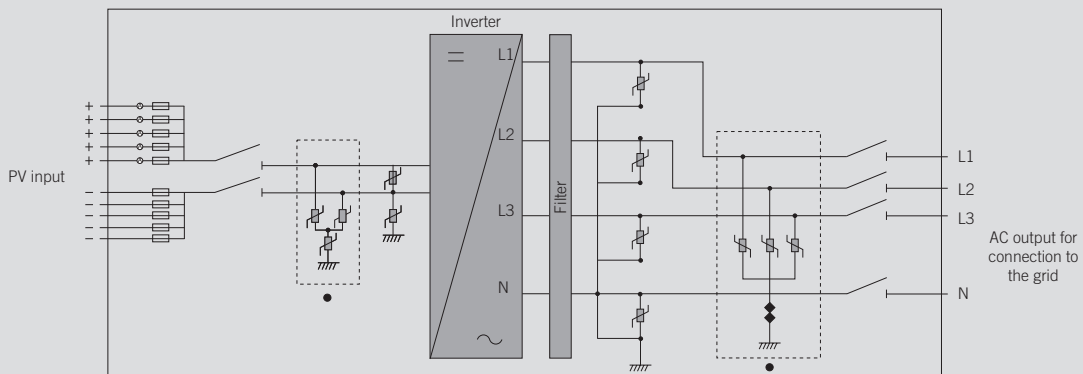
- The best possible price.
- High efficiency rates.
- Easy maintenance.

3Play TL (S++ version)



● Not available in S version ○ Not available in S+ version

3Play TL (P+ version)

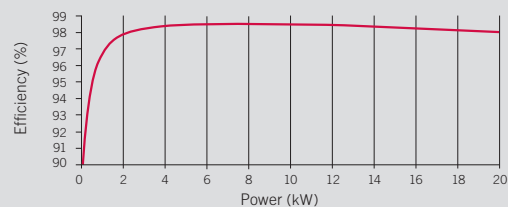


● Not available in P version

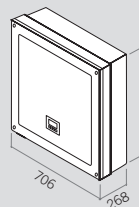
	10TL	12.5TL	15TL	20TL
Input (DC)				
Recommended PV array power range ⁽¹⁾	10.3 - 13.4 kW	12.9 - 16.8 kW	15.5 - 20.1 kW	20.6 - 26.8 kW
Voltage range MPP	580 - 820 V	580 - 820 V	580 - 820 V	580 - 820 V
Min. voltage for P _{nom} at rated Vac	580 V	580 V	580 V	580 V
Maximum voltage ⁽²⁾	1,000 V	1,000 V	1,000 V	1,000 V
Maximum current ⁽³⁾	18 A	22.5 A	27 A	36 A
Inputs for the S, S+ and S++ versions	1	1	1	1
Inputs for the P and P+ versions	4	4	5	5
MPPT	1	1	1	1
Output (AC)				
Rated power	10 kW	12.5 kW	15 kW	20 kW
Max. temperature at rated power ⁽⁴⁾	45°C	55°C	55°C	45°C
Maximum current	15 A	19 A	22 A	29 A
Rated voltage	277 - 528 V	277 - 528 V	277 - 528 V	277 - 528 V
Frecuencia nominal	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Phi Cosine ⁽⁵⁾	1	1	1	1
Phi Cosine adjustable	Yes. S _{max} =10 kVA	Yes. S _{max} =12.5 kVA	Yes. S _{max} =15 kVA	Yes. S _{max} =20 kVA
THD	<3%	<3%	<3%	<3%
Efficiency				
Maximum efficiency	98.5%	98.5%	98.5%	98.5%
Euroefficiency	98.3%	98.3%	98.4%	98.3%
General Information				
Refrigeration system	Forced ventilation			
Air flow	150 m ³ /h	150 m ³ /h	300 m ³ /h	300 m ³ /h
Stand-by consumption ⁽⁶⁾	10 W	10 W	10 W	10 W
Consumption at night	1 W	1 W	1 W	1 W
Ambient temperature	-20°C to 65°C	-20°C to 65°C	-20°C to 65°C	-20°C to 65°C
Relative humidity (non-condensing)	0 - 95%	0 - 95%	0 - 95%	0 - 95%
Protection class	IP65	IP65	IP65	IP65
Marking	CE			
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 0-21, VDE-AR-N 4105:2011-08, G83/2, G59/2, 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 (ver2.6), Chilean Grid Code, Romanian Grid Code, Ecuadorian Grid Code, Peruan Grid code, IEEE 929, Thailand MEA & PEA requirements			

Notes: ⁽¹⁾ Depending on the type of installation and geographical location ⁽²⁾ Must not be exceeded under any circumstances. Consider the voltage increase of the 'V_{oc}' at low temperatures ⁽³⁾ The maximum current per PV connector is 11 A ⁽⁴⁾ For each °C of increase, the output power will be reduced at the rate of 1.8% ⁽⁵⁾ For P_{out}>25% of the rated power ⁽⁶⁾ Consumption from PV field.

Efficiency INGECON® SUN 20TL V_{dc} = 650 V



Size and weight (mm)



10TL / 12.5TL / 15TL / 20TL
60 kg.



Ingeteam

Ingeteam Power Technology, S.A.
Avda. Ciudad de la Innovación, 13
31621 SARRIGUREN (Navarra) - Spain
Tel.: +34 948 288 000 / Fax: +34 948 288 001
e-mail: solar.energy@ingeteam.com

Ingeteam S.r.l.
Via Emilia Ponente, 232
48014 CASTEL BOLOGNESE (RA) - Italy
Tel.: +39 0546 651 490 / Fax: +39 054 665 5391
e-mail: italia.energy@ingeteam.com

Ingeteam GmbH
Herzog-Heinrich-Str. 10
80336 MUNICH - Germany
Tel.: +49 89 99 65 38 0 / Fax: +49 89 99 65 38 99
e-mail: solar.de@ingeteam.com

Ingeteam SAS
La Naurouze C - 140 rue Carmin
31670 Labège - France
Tel: +33 (0)5 61 25 00 00 / Fax: +33 (0)5 61 25 00 11
e-mail: france@ingeteam.com

Ingeteam INC.
5201 Great American Parkway, Suite 320
SANTA CLARA, CA 95054 - USA
Tel.: +1 (415) 450 1869 / +1 (408) 524 2929 / Fax: +1 (408) 824 1327
e-mail: solar.us@ingeteam.com

Ingeteam INC.
3550 W. Canal St.
MILWAUKEE, WI 53208 - USA
Tel.: +1 (414) 934 4100 / +1 (855) 821 7190 / Fax: +1 (414) 342 0736
e-mail: solar.us@ingeteam.com

Ingeteam, a.s.
Technologická 371/1
70800 OSTRAVA - PUSTKOVEC
Czech Republic
Tel.: +420 59 732 6800 / Fax: +420 59 732 6899
e-mail: czech@ingeteam.com

Ingeteam Shanghai, Co. Ltd.
Shanghai Trade Square, 1105
188 Si Ping Road
200086 SHANGHAI - P.R. China
Tel.: +86 21 65 07 76 36 / Fax: +86 21 65 07 76 38
e-mail: shanghai@ingeteam.com

Ingeteam, S.A. de C.V.
Ave. Revolución, n° 643, Local 9
Colonia Jardín Español - MONTERREY
64820 - NUEVO LEÓN - México
Tel.: +52 81 8311 4858 / Fax: +52 81 8311 4859
e-mail: northamerica@ingeteam.com

Ingeteam Ltda.
Estrada Duílio Beltrami, 6975
Chácara Sao Bento
13278-078 VALINHOS SP - Brazil
Tel.: +55 19 3037 3773 / Fax: +55 19 3037 3774
e-mail: brazil@ingeteam.com

Ingeteam Pty Ltd.
Unit 2 Alphen Square South
16th Road, Randjiespark, Midrand 1682 - South Africa
Tel.: +2711 314 3190 / Fax: +2711 314 2420
e-mail: southafrica@ingeteam.com

Ingeteam SpA
Bandera, 883 Piso 211
8340743 Santiago de Chile - Chile
Tel.: +56 2 738 01 44
e-mail: chile@ingeteam.com

Ingeteam Power Technology India Pvt. Ltd.
2nd Floor, 431
Udyog Vihar, Phase III
122016 Gurgaon (Haryana) - India
Tel.: +91 124 420 6492 / Fax: +91 124 420 6493
e-mail: india@ingeteam.com

Ingeteam Sp. z o.o.
Ul. Koszykowa 60/62 m 39
00-673 Warszawa - Poland
Tel.: +48 22 821 9930 / Fax: +48 22 821 9931
e-mail: polska@ingeteam.com