

Transformerless



## 2.5TL / 3TL / 3.3TL / 3.68TL / 4.6TL / 5TL / 6TL / 7.5TL / 8.2TL / 8.6TL / 10TL

An inverter family with a wide range of outputs from 2.5 to 10 kW

Singlephase transformerless inverters, intended for the residential sector and for larger, decentralised projects.

### Wide range of AC power outputs

The INGECON® SUN Lite TL single phase inverters offer an extensive range of power outputs from 2.5 to 10 kW. As a new addition, this range of inverters can now be supplied for 7.5 kW, 8.2 kW, 8.6 kW and 10 kW.

### Simple installation and maintenance

Fast-on connectors on the DC side (type 4) and the AC side and RS-485 serial communications. The country-specific configuration and language can be easily selected from the inverter screen.

The INGECON® SUN Lite TL inverters feature an internal datalogger for three months' data storage with control from either a remote PC or on-site from the inverter front keypad through its LCD screen. Status and alarm LED indicators.

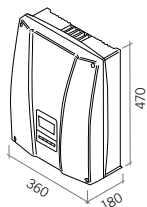
Fans are easily replaceable by the user. Configurable for self-consumption mode.

### Software included

Included at no extra cost are the INGECON® SUN Manager, INGECON® SUN Monitor and its iSun Monitor smartphone version for monitoring and recording the inverter data over the internet.

**Standard 5 year warranty, extendable for up to 25 years**

### Size and weight (mm)



<b>2.5TL / 3TL</b>	18.3 kg.
<b>3.3TL / 3.68TL</b>	19.7 kg.
<b>4.6TL / 5TL / 6TL</b>	23.3 kg.
<b>7.5TL / 8.2TL / 8.6TL / 10TL</b>	25.2 kg.

### PROTECTIONS

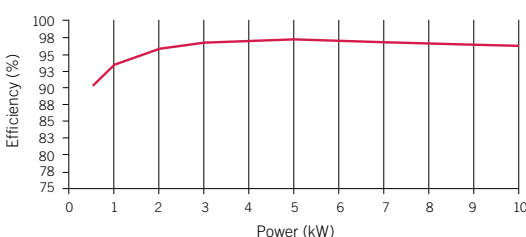
- Reverse polarity.
- Input and output overvoltages, type 3 surge arresters.
- Output short circuits and overloads.
- Insulation failures.
- Anti-islanding with automatic disconnection.

### OPTIONAL ACCESSORIES

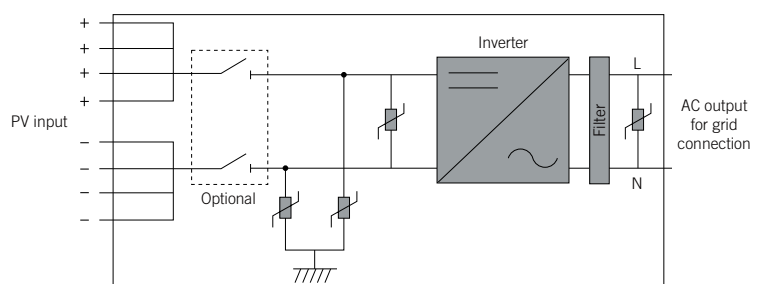
- DC breaker.
- Inter-inverter communication via Bluetooth or Ethernet.
- GSM / GPRS remote communication.
- Potential free contact for insulation fault indication (by default) or inverter connected to the grid (optional).

### EFFICIENCY

INGECON® SUN 10TL  
V<sub>dc</sub> = 330 V



### Lite TL



	2.5TL	3TL	3.3TL	3.68TL	4.6TL	5TL
<b>Input (DC)</b>						
Recommended PV array power range <sup>(1)</sup>	2.8 - 3.3 kWp	3.2 - 4 kWp	3.8 - 4.3 kWp	3.9 - 4.8 kWp	5.2 - 6 kWp	5.7 - 6.5 kWp
Voltage range MPP	100 - 450 V	100 - 450 V	100 - 450 V	100 - 450 V	100 - 450 V	100 - 450 V
Minimum voltage for rated	160 V	195 V	155 V	175 V	145 V	160 V
Maximum voltage <sup>(2)</sup>	550 V	550 V	550 V	550 V	550 V	550 V
Maximum current	17 A	17 A	22 A	22 A	33 A	33 A
Inputs	3	3	3	3	4	4
MPPT	1	1	1	1	1	1
<b>Output (AC)</b>						
Rated power <sup>(3)</sup>	2.7 kW	3 kW	3.63 kW	3.68 kW	5 kW	5.5 kW
Maximum current	13 A	13.5 A	16 A	16 A	24.2 A	26.2 A
Rated voltage	230 / 240 V	230 / 240 V	230 / 240 V	230 / 240 V	230 / 240 V	230 / 240 V
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Phi Cosine	1	1	1	1	1	1
Phi Cosine adjustable	Yes. Smax=2.7 kVA	Yes. Smax=3 kVA	Yes. Smax=3.63 kVA	Yes. Smax=3.68 kVA	Yes. Smax=5 kVA	Yes. Smax=5.5 kVA
THD	<3%	<3%	<3%	<3%	<3%	<3%
<b>Efficiency</b>						
Maximum efficiency	96.6%	96.6%	96.8%	96.8%	97%	97%
Euroefficiency	95%	95.1%	95.2%	95.2%	96%	96.1%
<b>General Information</b>						
Air cooling	30 m <sup>3</sup> /h	30 m <sup>3</sup> /h	45 m <sup>3</sup> /h	45 m <sup>3</sup> /h	90 m <sup>3</sup> /h	90 m <sup>3</sup> /h
Stand-by consumption <sup>(5)</sup>	<10 W	<10 W	<10 W	<10 W	<10 W	<10 W
Consumption at night	0 W	0 W	0 W	0 W	0 W	0 W
Ambient temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Relative humidity (non-condensing)	0 - 100%	0 - 100%	0 - 100%	0 - 100%	0 - 100%	0 - 100%
Protection class	IP65	IP65	IP65	IP65	IP65	IP65

	6TL	7.5TL	8.2TL	8.6TL	10TL
<b>Input (DC)</b>					
Recommended PV array power range <sup>(1)</sup>	6.3 - 7 kWp	8.7 - 10.3 kWp	9.5 - 11.2 kWp	10 - 11.8 kWp	11.6 - 13.7 kWp
Voltage range MPP	100 - 450 V	100 - 450 V	100 - 450 V	100 - 450 V	100 - 450 V
Minimum voltage for Pnom	190 V	215 V	235 V	245 V	300 V
Maximum voltage <sup>(2)</sup>	550 V	550 V	550 V	550 V	550 V
Maximum current	33 A	35 A	35 A	35 A	35 A
Inputs	4	4	4	4	4
MPPT	1	1	1	1	1
<b>Output (AC)</b>					
Rated power <sup>(3)</sup>	6 kW	7.5 kW	8.2 kW	8.6 kW	10 kW
Maximum current	26.2 A	36.1 A	36.1 A	36.1 A	36.1 A
Rated voltage	230 / 240 V	208 / 230 / 240 / 277 V <sup>(4)</sup>	230 / 240 / 277 V <sup>(4)</sup>	240 / 277 V <sup>(4)</sup>	277 V
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz
Phi Cosine	1	1	1	1	1
Phi Cosine adjustable	Yes. Smax=6 kVA	Yes. Smax=7.5 kVA	Yes. Smax=8.2 kVA	Yes. Smax=8.6 kVA	Yes. Smax=10 kVA
THD	<3%	<3%	<3%	<3%	<3%
<b>Efficiency</b>					
Maximum efficiency	97%	97.5%	97.6%	97.7%	98%
Euroefficiency	96.1%	96.5%	96.6%	96.6%	96.8%
<b>General Information</b>					
Air cooling	90 m <sup>3</sup> /h	90 m <sup>3</sup> /h	90 m <sup>3</sup> /h	90 m <sup>3</sup> /h	90 m <sup>3</sup> /h
Stand-by consumption <sup>(5)</sup>	<10 W	<10 W	<10 W	<10 W	<10 W
Consumption at night	0 W	0 W	0 W	0 W	0 W
Ambient temperature	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Relative humidity (non-condensing)	0 - 100%	0 - 100%	0 - 100%	0 - 100%	0 - 100%
Protection class	IP65	IP65	IP65	IP65	IP65

**Marking:** CE. **EMC & Security standards:** EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4, 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, CEI 0-21, VDE-AR-N 4105:2011-08, G59/2, G83/2<sup>(6)</sup>, 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:** <sup>(1)</sup> Depending on the type of installation and geographical location <sup>(2)</sup> Must not be exceeded under any circumstances. Consider the voltage increase of the 'Voc' at low temperatures <sup>(3)</sup> AC Power for 45°C ambient temperature <sup>(4)</sup> Voltage configurable through the display <sup>(5)</sup> Consumption from PV field <sup>(6)</sup> Related only inverters up to 16 A.