

SOLAR INVERTERS: 3.4 kW – 7.2 kW

# THEIA™ TL STRING

High Performance, Transformerless String Inverters. With efficiencies up to 98 %, the THEIA™ TL String inverter range maximizes both the energy harvested per hour and the number of working hours per day on an installation.

## PERFORMANCE

- Maximum efficiencies to 98 %
- Energy harvest from very low irradiation levels, with power feed levels of less than 8 W
- Extra wide DC input voltage range (348 – 710 V<sub>dc</sub>)
- Multiple PV string inputs as standard for all models
- Optional DC disconnect switch for isolation

## RELIABILITY

- Top class MPP tracking through the use of Rapid Adaption Control Maximum Power Point tracking (RAC-MPP)
- Extraordinary high yields even under fluctuating irradiation conditions
- Smart thermal design able to withstand environmental extremes
- IP66 protection level

## EASE OF USE

- Simple connection systems for both the AC and DC terminations
- Automatically transfer settings from one inverter to all the others across the inverter network
- Large, backlit, full graphical LCD displays
- Optional integrated DC disconnect switch for isolation

## MONITORING AND COMMUNICATION

- Advanced monitoring software for quick site performance checks at any time
- Built-in datalogger saves measured values, yield and performance data for more than 30 years of operation
- Separate alarm log storage
- EIA485 interface for inverter interconnection and access to THEIA™ String plant monitoring systems



THEIA™ TL STRING

**98.0%**

Maximum efficiency

MODEL	3801 TLD	3800 TLD	4300 TLD	4800 TLD	5300 TLD	6300 TLD	7200 TLD
<b>INPUT DATA</b>							
Nominal DC power	3480 W	3800 W	4300 W	4800 W	5300 W	6300 W	7200 W
Max. PV power	4000 W <sub>P</sub>	4300 W <sub>P</sub>	4900 W <sub>P</sub>	5400 W <sub>P</sub>	6000 W <sub>P</sub>	7100 W <sub>P</sub>	8100 W <sub>P</sub>
Max. DC voltage	880 V <sub>dc</sub>						
Voltage range MPPT	349 to 710 V <sub>dc</sub>	350 to 710 V <sub>dc</sub>	351 to 710 V <sub>dc</sub>	348 to 710 V <sub>dc</sub>	349 to 710 V <sub>dc</sub>	350 to 710 V <sub>dc</sub>	351 to 710 V <sub>dc</sub>
Max. input current	10.5 A	11.5 A	13.0 A	14.5 A	16.0 A	18.5 A	21.0 A
Number of PV string inputs	2	2	2	2	2	3	3
Number of MPP trackers	1						
Input protection	Optional DC switch disconnecter Integrated in the device Reverse voltage protection Isolation control						

<b>OUTPUT DATA</b>							
Nominal output power	3330 W	3680 W	4120 W	4600 W	5000 W	6000 W	6900 W
Max. apparent power	3330 VA	3680 VA	4120 VA	4600 VA	5000 VA	6000 VA	6900 VA
Nominal AC current	14,5 A	16.0 A	17,9 A	20.0 A	21,7 A	26.1 A	30.0 A
Max. AC current	14.5 A	16.0 A	17.9 A	20.0 A	21.7 A	26.1 A	30.0 A
Mains output voltage range	230 V <sub>ac</sub> (+/-20 %) single phase						
Mains frequency	50 Hz (+/-5 %)						
Cos Phi (power factor)	0.7i to 0.7c selectable						
Ground fault monitoring	RCD						
Output protection	Short circuit detection. 1-phase or 3-phase grid monitoring						

<b>PERFORMANCE DATA</b>							
Maximum efficiency	97.7 %	97.7 %	97.7 %	97.7 %	97.7 %	98.0 %	98.0 %
EU efficiency	97.4 %	97.4 %	97.4 %	97.4 %	97.4 %	97.5 %	97.5 %
Power feed starts at	7 W	7 W	7 W	7 W	7 W	8 W	8 W
Night mode power	< 2 W						

<b>MECHANICAL DATA</b>							
Protection degree (EN 60529)	IP 66, excluding digital interface						
Dimensions	720 H x 320 W x 250 D mm						
Weight	27 kg	27 kg	27 kg	28 kg	28 kg	29 kg	29 kg
Cable access	Bottom						
Input cable connection	MC4						
Output cable connection	Spring Clamp Technology						

<b>DESIGN STANDARDS</b>							
EM compatibility	EN 61000-6-2, EN 61000-6-3						
CE marking	Yes						
Other standards	VDE V 0126-1-1, EN 50438, AS 4777, RD 1663, RD 661, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12, VDE AR-N 4105, BDEW-2008, CEI 0-21, C10/11, G83/1, G59/2, ÖNORM E8001-4-712, UTE C15-712-1, AS 3100, IEC 62109						

<b>ENVIRONMENTAL DATA</b>							
Operating temperature	- 20 °C to + 60 °C (output power derating above + 45 °C)						
Storage temperature	- 20 °C to + 80 °C						
Ventilation	Convection cooling (fan assist at high temperature)						

<b>INTERFACE</b>		<b>EFFICIENCY CURVE THEIA 6300 TL STRING</b>
Topology	Transformerless, DIVE RAC-MPP Technology	<p><b>PLATINUM 6300 TLD</b></p> <p>EFFICIENCY (%)</p> <p>% NOMINAL POWER (P<sub>mppt</sub>)</p> <p>— U<sub>dc</sub>=350V — U<sub>dc</sub>=520V - - - U<sub>dc</sub>=710V</p>
Protection class / Overvoltage category	I / III	
Communication	Full graphic LCD: 170 x 76 pixels, EIA 232: 9-pin D-sub female, EIA 485: 2x RJ45 for network components	
Warranty	10 years, 15 years and 20 years	
Volt free contact option	1x Change over contact: 24 V <sub>ac</sub> /2 A rated	