



THEIA HE-t

Solar Inverters: 2.0kW – 4.4kW

Setting the Standard in Isolated String Inverters

The THEIA HE-t range defines a new level of efficiency, flexibility and user friendliness for isolated string inverters. Suitable for crystalline as well as thin-film modules, and ready for use all over the world, the THEIA HE-t is the perfect choice for any PV installation.

Product Description

Performance

Using the latest of Eltek Valere's unique, high frequency conversion technology, the *THEIA HE-t* combines galvanic isolation with unprecedented levels of performance. With its extreme efficiency and global design solutions, it defines a new standard when it comes to performance, flexibility and user friendliness, as well as offering superior reliability under all conditions. Allowing the user the ability to ground the positive or the negative terminal on the DC side makes the device suitable for use with either monocrystalline, polycrystalline or thin-film PV modules of any technology, whilst maintaining the highest international safety standards. With early start-up and high efficiency at low irradiation, longer operation time and maximum energy harvest is ensured.

Reliability

The efficiency of the *THEIA HE-t* inverter range is one of the highest amongst inverters of all types, and coupled with bespoke Maximum Power Point Tracking, extraordinary high yields, even under extremely fluctuating and dynamic irradiation conditions, are achieved. With a protection level of IP65 / NEMA 4X and intelligent thermal design, the inverters are able to withstand temperature variations, high humidity and dust levels, and are able to operate with convection cooling only, giving the user confidence that the PV plant will operate consistently over the lifetime of the installation.

Ease of Use

Flexible connection kits make it easy and cost effective to configure for various conditions and country-specific requirements, while multiple PV string inputs as standard provide for easy installation and maintenance. With all connections in an easily accessible front compartment, a multi-language display, and simple country configuration setup, installation occurs in the minimum amount of time. Even in installations containing dozens of inverters, setup is minimized by the use of an automatic transfer of settings from one inverter to the others thanks to master programming across the connected *THEIA HE-t* inverter network.

Monitoring and Communication

Introducing a new level of user friendliness, the *THEIA HE-t* range has an integrated web server, thus eliminating the need for any external web server. A color screen with touch sense buttons provides an intuitive user interface, while displaying operating conditions in clearly arranged graphs and diagrams. For sites with multiple string inverters installed, a single inverter can act as a central monitoring hub, collecting data from all inverters linked on the site network to provide a single point of access, allowing a quick site performance check – either remotely or on-site – at any time.

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Technical Specifications

MODEL	2.0HE-t ¹⁾	2.9HE-t ¹⁾	3.8HE-t ¹⁾	4.4HE-t
Input Data				
Max. DC power	2100 W	3000 W	4000 W	4600 W
Max. DC voltage	600 V _{dc}	600 V _{dc}	600 V _{dc}	600 V _{dc}
Voltage range MPPT	230 to 480 V _{dc}	230 to 480 V _{dc}	230 to 480 V _{dc}	230 to 480 V _{dc}
Max. input current	9.5 A	13.5 A	18.0 A	21.0 A
Number of PV string inputs	3			
Number of MPP trackers	1			
Input features	Reverse polarity protection, Ground fault monitoring, Integral DC switch disconnecter (optional), Integral DC fuses for string inputs (optional) Field configurable for positive or negative grounding, or ungrounded			
Output Data				
Nominal output power	2000 W	2900 W	3800 W	4450 W
Max. AC current	9.0 A	13.0 A	17.0 A	20.0 A
Mains output voltage	185V _{ac} to 276V _{ac} single or split phase ²⁾			
Mains frequency:	50Hz / 60Hz (+/-5%) ²⁾			
Power factor (cos φ)	1			
Performance Data				
Maximum efficiency:	96.9 %	97.0 %	97.1 %	97.3 %
CEC efficiency:	96.1 %	96.4 %	96.7 %	97.0 %
EU efficiency:	96.0 %	96.2 %	96.5 %	96.9 %
Power feed starts at	< 7 W			
Night mode power	< 1 W			
Mechanical Data				
Protection degree	IP 65 / NEMA 4X			
Dimensions	598H x 351W x 157D mm / 23.55H x 13.82W x 6.19D inches			
Weight	<18kg / 40lbs	<18kg / 40lbs	<19kg / 42lbs	<20kg / 44lbs
Cable access	Bottom and Sides			
Input cable connection	MC3, MC4, Tyco, Screw terminals, Cable clamp, Others on request			
Output cable connection	Screw terminals, Cable clamp			
Design Standards				
EM compatibility:	EN 61000-6-2, EN 61000-6-3, FCC Level B			
CE / UL marking:	Yes			
Other standards:	UL 1741, DIN VDE V 0126-1-1, G83/1, EN 50438, AS 4777, ENEL Guidelines (DK 5940), EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12			
Environmental Data				
Operating temperature:	-25 to +65 °C / -13 to +149 °F (possible power derating above +45°C / +113°C)			
Storage temperature:	-30 to +80 °C / -22 to +176 °F			
Ventilation	Convection cooling (fan assist at high temperatures)			
Additional Features				
Topology	High frequency transformer, galvanic isolation			
Noise Emission	≤ 40 dB (A)			
Communication	Graphical, color display with touch sense buttons, Embedded web-server, Ethernet, CAN and RS485 bus interface, 3x LEDs for visual status indication			
Warranty	5 years, 10 years, 15 years, and 20 years options			

¹⁾ Preliminary data for THEIA models

²⁾ Voltage and frequency range adjusted to specific country settings