

ZIGOR SOLAR T3/TL3

Three-phase central inverters range with and without transformer

Description



The ZIGOR SOLAR T3/TL3 three-phase central inverters range goes from 20 to 166 KW and combines design and versatility with easy operation and modularity.

An outstanding feature of these inverters is their 96% efficiency with transformer (T model) and 98% (TL model) without it. ZIGOR SOLAR T3/TL3 inverters provide high reliability and guaranteed operation. Another outstanding function is the high-energy efficiency of its MPPT, which is over 99%. As an important feature, its automatic regulation of reactive power and built in communications tools. All their parameters are configurable both locally and remotely. All these inverters operate with an output voltage of 3x400 V and comply with most European regulations concerning the support of voltage sags without disconnection. Due to their double-conversion architecture they never generate dangerous overvoltages when disconnecting from mains.



ZIGOR SOLAR T3/TL3 inverters

Features

- > Range of input DC voltage (300-700 VDC)
- > Maximum power point tracking (MPPT)
- > High energy efficiency MPPT > 99%
- > Very low harmonic distortion, THD < 3%
- > Selectable power factor
- > Direct mains connection (T & TL model)
- > Unlimited parallel connection
- > Anti-islanding protection with automatic shut down
- > Monitoring from the unit with LCD
- > Galvanic isolation through the transformer (T model)
- > Strings current monitoring (with option ZIGOR SOLAR SB16)
- > IP21 protection level
- > Protection against: inverse polarity, short-circuits, overvoltages, insulation failure with output to relay
- > Service life of more than 20 years
- > Automatic reactive energy regulation
- > PC-based Web server programme for full access to inverter data
- > Maximum yield of solar plants
- > Modularity
- > Output voltage 3x 400 V (T & TL model)
- > DC and AC surge protections included
- > Compatible with thin film modules
- > ETHERNET communication ports
- > Easy access through any web browser
- > Remote monitoring system ZIGOR SWS1000: communications system, parameter display, inverter records control, production, data storage etc, (optional)

on-grid solar plants

mid voltage solar plants

hybrid generation

energy saving

telecom back up

wind energy



> ZIGOR SOLAR T3 - inverters with transformer

ELECTRICAL CHARACTERISTICS							
Model	ZIGOR SOLAR						
	T3 20 kW	T3 25 kW	T3 30 kW	T3 50 kW	T3 75 kW	T3 100 kW	T3 133 kW
Reference	16112	13038	17698	17173	16113	17038	301206
Continuous output power	20 KW **	25 KW **	30 KW	50 KW	75 KW ***	100 KW	133 KW
Nominal DC power	≥ 21 KW	≥ 27 KW	≥ 31 KW	≥ 52 KW	≥ 78 KW	≥ 105 KW	≥ 140 KW
Nominal AC voltage AC	380-400 V 3P+N						
Nominal frequency	50 Hz						
Power factor	1 adjustable ± 0.8						
Nominal line current AC	30 A	37 A	44 A	73 A	109 A	145 A	193 A
Current distortion AC ⁽¹⁾	< 3% THD of nominal power						
Maximum open circuit voltage DC ⁽²⁾	880 V						
Power tracking range (MPPT) DC *	300 to 720 V						
Maximum input current DC	70 A	90 A	103 A	173 A	260 A	350 A	462 A
Maximum efficiency	96%						
European efficiency	94.95%						

ENVIRONMENTAL AND MECHANICAL FEATURES							
Range of ambient temperatures	-10°C +50°C						
Type and grade of environmental protection	IP21						
Estimated weight	270 Kg	290 Kg	310 Kg	390 kg	1020 Kg	950 Kg	
Dimensions (HxWxD)	2150 X 800 x 600				2150 x 1200 x 600		
Operating height ⁽³⁾	<1000 m						
Relative humidity	0 a 95% without condensation						

GENERAL FEATURES	
Cooling method	Internal forced ventilation External fan control (6 A max.)
Protection functions	Inverse polarity / Over/Sub-voltage AC / Over/Sub-frequency / Over-voltage DC
User interface	LCD screen
Breakers (AC and DC)	Integrated in the system
Communication software	Web server through Ethernet connection
Equipment supervision: self diagnostic	Yes
Data acquisition	SNMP
SWS 1000 scada system (option)	Ethernet / GSM modem (option) / Data logger / Monitoring programme
External measurements	2 analogue inputs for monitoring (option) Digital Inputs/Outputs

STANDARDS	
Certificates	CE Marking, VDE, ENEL
Directives	2004/108/CE (UNE-EN 61000-6-2 / UNE-EN 61000-6-3) 2006/95/CE (EN 50178)
Standards	IEC 62116 (2008) - Anti-islanding protection

Countries standards	
Spain	PO 12.3
Germany	VDE 0126-1-1
Italy	DK5940 (Chapter 8.2 Allegato 17. TERNA Regolazione)
UK	G83
France	Decret: Arrête du 23 avril 2008

(1) For THD V< 1% and Nominal Power.

(2) This voltage must not be exceeded under any circumstances.

(3) No power derating for ambient temperatures under 44° C.

* Minimum voltage 250V working with thin film solar modules at nominal power.

** This units are the ZIGOR SOLAR T3 30 kW with output power limited by software.

*** This unit is the ZIGOR SOLAR T3 100 kW with output power limited by software.

These specifications may be changed without notice.

> ZIGOR SOLAR TL3: transformerless inverters

ELECTRICAL CHARACTERISTICS								
Model	ZIGOR SOLAR							
	TL3 20 kW	TL3 25 kW	TL3 30 kW	TL3 50 kW	TL3 75 kW	TL3 100 kW	TL3 150 kW	TL3 166 kW
Reference	16114	16115	16116	17174	16117	15754	200186	200104
Continuous output power	20 KW **	25 KW **	30 KW	50 KW	75 KW ***	100 KW	150 KW	166 KW
Nominal DC power	≥ 20.4 KW	≥ 25.5 KW	≥ 30.6 KW	≥ 51 KW	≥ 76.5 KW	≥ 102 KW	≥ 160 KW	≥ 170 KW
Nominal AC voltage AC	400 V AC 3P							
Nominal frequency	50 Hz							
Power factor	1 adjustable ± 0.8							
Nominal line current AC	30 A	37 A	44 A	73 A	109 A	145 A	218 A	241 A
Current distortion AC ⁽¹⁾	< 3% THD of nominal power							
Maximum open circuit voltage DC ⁽²⁾	880 V DC							
Power tracking range (MPPT) DC *	300 to 720 V							
Maximum input current DC	66.6 A	83.3 A	102 A	170 A	255 A	340 A	533 A	475 A
Maximum efficiency	98 %						97,60 %	97,13 %
European efficiency	96,78%						96,27 %	95,79 %
ENVIRONMENTAL AND MECHANICAL FEATURES								
Range of ambient temperatures	-10°C a +50°C							
Type and grade of environmental protection	IP21							
Estimated weight	230 Kg	250 Kg	270 Kg	320 Kg	490 Kg	450 Kg	580 Kg	
Dimensions (HxWxD)	2150 X 800 x 600							
Operating height ⁽³⁾	<1000 m							
Relative humidity	0 a 95% without condensation							
GENERAL FEATURES								
Cooling method	Internal forced ventilation External fan control (6 A max.)							
Protection functions	Inverse polarity / Over/Sub-voltage AC / Over/Sub-frequency / Over-voltage DC							
User interface	LCD screen							
Breakers (AC and DC)	Integrated in the system							
Communication software	Web server through Ethernet connection							
Equipment supervision: self diagnostic	Yes							
Data acquisition	SNMP							
SWS 1000 scada system (option)	Ethernet / GSM modem (option) / Data logger / Monitoring programme							
External measurements	2 analogue inputs for monitoring (option) Digital Inputs/Outputs							
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Standards	IEC 62116 (2008) IEE 1547							
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