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 theirs 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 SOLAR SWS1000: communications system, parameter display, inverter records control, production, data storage etc, (optional)

Connectivity and options

- **Built-in & integrated Web Server**
- **ZIGOR SOLAR SWS1000: monitoring system (optional)**

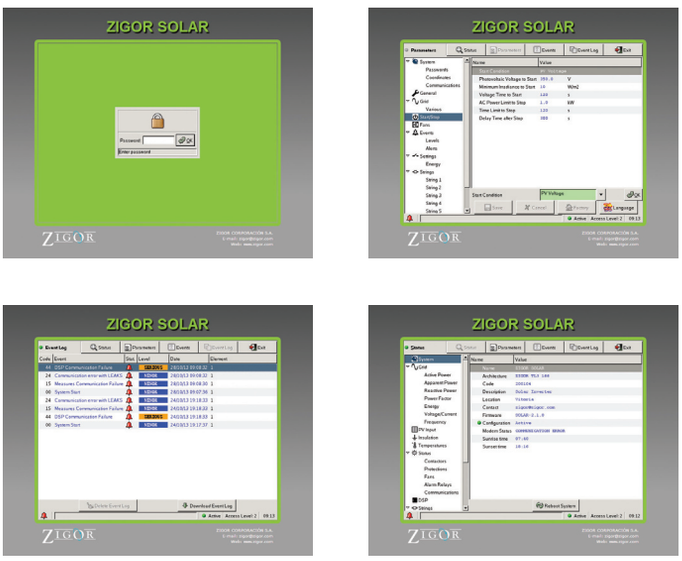
See more information about connectivity and options on page 44

on-grid solar plants | mid voltage solar plants | hybrid generation | energy saving | telecom back up | wind energy

Web server for three-phase ZIGOR SOLAR T3/TL3 inverters

This is a PC-based Web server programme to provide full access to the inverter data and to monitor and communicate with three-phase ZIGOR SOLAR T3/TL3 inverters.
The Web server let the user to communicate with the inverters in different languages and record the following data.

- Status
- Parameters
- Events
- Event Log
- Production



WEBSERVER

ZIGOR SOLAR SWS1000

Monitoring system for SOLAR ZIGOR SOLAR T3/TL3 inverters

The ZIGOR SOLAR SWS1000 system is a platform for monitoring and register variables, check and modify the settings as well as customise all parameters from the three-phase ZIGOR SOLAR T3/TL3 inverters. It can control up to 45 units, which makes the ZIGOR SOLAR SWS1000 a suitable tool to monitor a generation plant through a unique fixed IP address.

The ZIGOR SOLAR SWS1000 has a Web server in several different languages (selectable by the user) where the following functions can be run:

ZIGOR SOLAR SWS1000

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	-10ºC +50ºC						
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						
ZIGOR SOLAR SWS1000 monitoring 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 44º 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	-10ºC a +50ºC							
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							
ZIGOR SOLAR SWS1000 monitoring 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) IEE 1547							
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 THDV< 1% and Nominal Power.

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

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

** Minimum voltage 250V working with thin film solar modules at nominal power.*
** * This units are the ZIGOR SOLAR TL3 30 kW with output power limited by software.*
**** This unit is the ZIGOR SOLAR TL3 100 kW with output power limited by software.*

These specifications may be changed without notice.