



*From the new
life of
nature*

PV MODULE & SOLAR LIGHTING

A Gift From Natural Energy

AC STORAGE

HYBRID SOLUTIONS

AND STRING INVERTERS



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ARYAM AUSTRALIA GROUP  **ARYAM**

Znergy – Driven By Innovation!

Professional photovoltaic solar solutions



About US

- Znergy is a global electrical component, electrical cable, solar & renewable energy component manufacturer. It is proudly a part of the Aryam Australia Group.
- Boasting advanced capabilities in technology, Znergy manufactures cables for nuclear plants, space agency projects and boasts HV capabilities up to 512KV. The plants manufacture cables for many Australian, European and American cable manufactures under an OEM agreement.
- Our Znergy® design for electrical components is driven by our belief in technology for people. It is engineered with innovation to provide quality and benefit for an industry driven economy. We design and manufacture distribution boards, protection and switching devices, signaling & power interface, energy and lighting control components, circuit breakers and high voltage transformer.
- *Znergy® design and manufacture distribution boards, protection and switching devices, signaling & power interface, energy and lighting control components, circuit breakers and high voltage transformer.

* All products tested and certified to AS/NZS and IEC Standards



ON-GRID SOLAR POWER SYSTEM

Effective utilization of generated power
with no storage losses

By connecting solar panels with an inverter to the electricity grid you will use a clean energy and will not need heavy batteries. The on-grid system is straightforward and will lead to savings on your electricity bill immediately.

OFF-GRID SOLAR POWER SYSTEM

Off-grid system can be used to power water pump, household or even hotel.

Become completely independent from external energy supplies. Avoiding spiraling diesel generation costs.





Part One

PV Solar Modules

**YOUR BEST CHOICE FOR
Znergy Solar**

HIGHLIGHT

ZS60P 270-290W

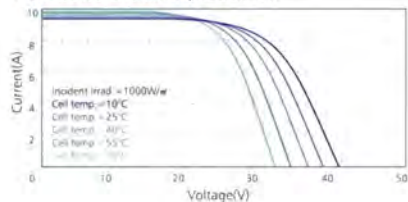
Polycrystalline PV Module



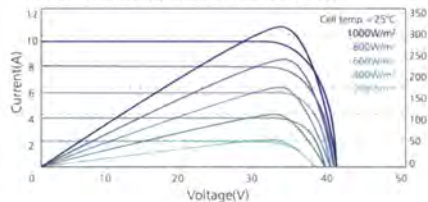
Cell Type 5BB
Poly-Crystalline 60 Pcs (6 × 10)

-  Superior silicon cells, High efficiency solar panel. Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Reinforced frame with more remarkable loading capacity.
-  High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(290W)



I-V curves/P-V curves under different irradiation (290W)



SPECIFICATIONS

ZS60P 270-290W

Technical data

Electrical Performance		270	275	280	285	290
Parameter STC	Power Output (P _{max}) (W)	270	275	280	285	290
* IEC Standard Testing Condition Value (Mass of the Air: AMT 1.5, Solar Irradiation: 1000W/m ² , Solar Cell Temperature: 25°C) * Power Tolerance 0~+5W	Rated Power Maximum Voltage (V _{mp}) (V)	31.7	32.0	32.3	32.5	32.8
	Rated Power Maximum Current (I _{mp}) (A)	8.52	8.61	8.71	8.79	8.85
	Open Circuit Voltage (V _{oc}) (V)	38.8	39.1	39.4	39.6	39.9
	Short Circuit Current (I _{sc}) (A)	9.09	9.15	9.26	9.31	9.45
	Module Efficiency (%)	16.6	16.9	17.2	17.5	17.8
Electrical Performance		201.02	204.45	207.90	211.39	215.92
Parameter NMOT	Maximum Power (P _{max}) (W)	201.02	204.45	207.90	211.39	215.92
* NMOT Testing Condition: Solar Irradiation 800W/m ² , Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (V _{mp}) (V)	28.80	29.00	29.20	29.40	29.70
	Rated Power Maximum Current (I _{mp}) (A)	6.98	7.05	7.12	7.19	7.27
	Open Circuit Voltage (V _{oc}) (V)	35.60	35.80	36.00	36.10	36.90
	Short Circuit Current (I _{sc}) (A)	7.50	7.57	7.64	7.70	7.83
Structure Features		Solar Cell: 156.75 × 156.75 mm Poly-crystalline Front Side Glass: 3.2 mm highly transparent anti-reflection coating tempered glass Packaging Film: Highly transparent/fully transparent EVA Junction Box: IP68 Cable: 4 mm ² , 900 mm Photovoltaic cable Wind Pressure/Snow Pressure: 2400Pa/5400Pa Connector: MC4Compatible				
Packaging		Module Dimension: 1640x992x35 mm Weight: 17.7 KGS Qty/Ctn: 30Pcs 20GP: 180Pcs 40GP: 420Pcs 40HQ: 840Pcs				
Application Parameters		Working Temperature: -40~+85 °C Maximum System Voltage: 1500V DC Maximum Fuse Rated Current: 15 A Solar Cells Rated Working Temperature: 45 ± 2 °C Temperature Coefficient (I _{sc}): +0.0577%/°C Temperature Coefficient (V _{oc}): -0.317%/°C Temperature Coefficient (P _{max}): -0.395%/°C				



19.4% Maximum Module Efficiency	0~+5W Power Tolerance	30 Years Linear Power Guarantee	10 Years Product Warranty
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HIGHLIGHT

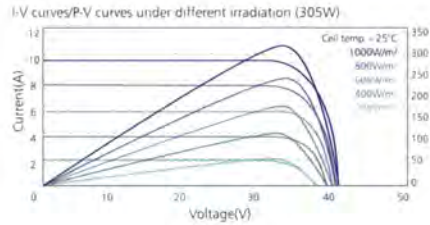
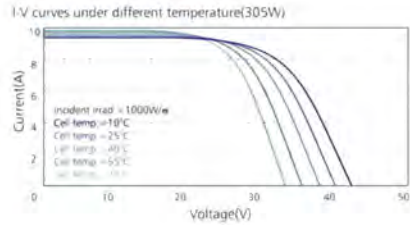
ZS60M 280-315W

Monocrystalline PV Module



Cell Type 5BB
Mono-Crystalline 60 Pcs (6x10)

-  Superior silicon cells, High efficiency solar panel, Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Reinforced frame with more remarkable loading capacity.
-  High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.



SPECIFICATIONS

ZS60M 280-315W

Technical data

Electrical Performance		280	285	290	295	300	305	310	315	
Parameter STC	Power Output (P _{max} (W))	31.8	32.0	32.1	32.2	32.4	32.6	32.8	33.0	
* (STC) Standard Testing Condition Value (Mass of the Air: 1.21 kg/m ³ ; Solar Irradiation: 1000W/m ² ; Solar Cell Temperature: 25°C) * Power Tolerance 0~+5W	Rated Power Maximum Voltage (V _{mp} (V))	8.81	8.91	9.06	9.16	9.26	9.36	9.46	9.55	
	Rated Power Maximum Current (I _{mp} (A))	38.6	38.7	39.1	39.3	39.5	39.7	39.9	40.1	
	Open Circuit Voltage (V _{oc} (V))	9.49	9.51	9.63	9.69	9.78	9.87	9.96	10.04	
	Short Circuit Current (I _{sc} (A))	17.2	17.5	17.8	18.1	18.4	18.7	19.1	19.4	
Electrical Performance	Module Efficiency (%)	208.20	211.68	215.78	219.03	222.60	226.50	230.43	233.78	
Parameter NMOT	Maximum Power (P _{max} (W))	29.20	29.40	29.60	29.80	30.00	30.20	30.40	30.60	
* NMOT Testing Condition: Solar Irradiation: 800W/m ² ; Solar Cell Temperature: 20°C; Wind Speed: 1m/s	Rated Power Maximum Voltage (V _{mp} (V))	7.13	7.20	7.29	7.35	7.42	7.50	7.58	7.64	
	Rated Power Maximum Current (I _{mp} (A))	35.90	36.10	36.30	36.50	36.60	36.80	37.00	37.20	
	Open Circuit Voltage (V _{oc} (V))	7.65	7.72	7.79	7.84	7.91	7.98	8.05	8.12	
	Short Circuit Current (I _{sc} (A))	Structure Features		Solar Cell: 156.75 × 156.75 mm Mono-crystalline						
Front Side Glass		3.2 mm highly transparent anti-reflection coating tempered glass								
Packaging Film		Highly transparent/fully transparent EVA								
Junction Box		IP68								
Cable		4 mm ² , 900 mm Photovoltaic cable								
Wind Pressure/Snow Pressure		2400Pa/5400Pa								
Connector		MC4Compatible								
Packaging		Module Dimension		1640x992x35 mm						
Weight		17.7 KGS								
Qty/Ctn		30Pcs								
20GP		180Pcs								
40GP		420Pcs								
40HQ		840Pcs								
Application Parameters		Working Temperature		-40 ~ +85 °C						
Maximum System Voltage		1500V DC								
Maximum Fuse Rated Current		15 A								
Solar Cells Rated Working Temperature		45 ± 2 °C								
Temperature Coefficient (I _{sc})		+ 0.0577%/°C								
Temperature Coefficient (V _{oc})		- 0.317%/°C								
Temperature Coefficient (P _{max})		- 0.395%/°C								



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

HIGHLIGHT

ZS72P 325-350W

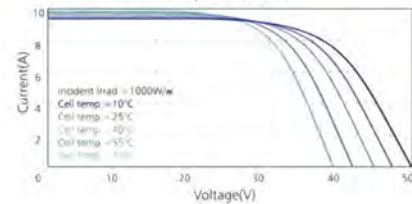
Polycrystalline PV Module



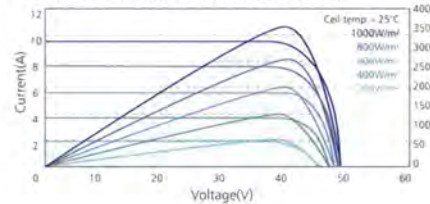
Cell Type 5BB
Poly-Crystalline 72 Pcs (6 × 12)

-  Superior silicon cells, High efficiency solar panel, Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Reinforced frame with more remarkable loading capacity.
-  High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(350W)



I-V curves/P-V curves under different irradiation (350W)



SPECIFICATIONS

ZS72P 325-350W

Technical data

Electrical Performance		325	330	335	340	345	350
Parameter STC	Power Output (Pmax (W))	325	330	335	340	345	350
* (STC Standard Testing Condition Value (Mass of the Air: AM1.5, Solar Irradiation: 1000W/m², Solar Cell Temperature: 25°C)	Rated Power Maximum Voltage (Vmp (V))	37.6	37.8	38.0	38.2	38.4	38.6
* Power Tolerance 0 ~ +5W	Rated Power Maximum Current (Imp (A))	8.65	8.75	8.85	8.94	9.02	9.07
	Open Circuit Voltage (Voc (V))	45.7	45.9	46.2	46.4	46.6	47.0
	Short Circuit Current (Isc (A))	9.13	9.24	9.33	9.43	9.52	9.55
	Module Efficiency (%)	16.7	17.0	17.3	17.5	17.8	18.0
Electrical Performance		241.17	245.00	248.86	252.75	256.68	260.99
Parameter NMOT	Maximum Power (Pmax (W))	241.17	245.00	248.86	252.75	256.68	260.99
* NMOT Testing Condition: Solar Irradiation 800W/m², Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (Vmp (V))	34.70	34.90	35.10	35.30	35.60	35.90
	Rated Power Maximum Current (Imp (A))	6.95	7.02	7.09	7.16	7.21	7.27
	Open Circuit Voltage (Voc (V))	42.80	42.90	43.10	43.30	44.00	44.20
	Short Circuit Current (Isc (A))	7.46	7.53	7.60	7.66	7.76	7.81
Structure Features		Solar Cell: 156.75 × 156.75 mm Poly-crystalline Front Side Glass: 3.2 mm highly transparent anti-reflection coating tempered glass Packaging Film: Highly transparent/fully transparent EVA Junction Box: IP68 Cable: 4 mm², 900 mm Photovoltaic cable Wind Pressure/Snow Pressure: 2400Pa/5400Pa Connector: MC4Compatible					
Packaging		Module Dimension: 1956x992x35 mm Weight: 21.0 KGS Qty/Ctn: 31Pcs 20GP: 155Pcs 40GP: 372Pcs 40HQ: 744Pcs					
Application Parameters		Working Temperature: -40 ~ +85 °C Maximum System Voltage: 1500V DC Maximum Fuse Rated Current: 15 A Solar Cells Rated Working Temperature: 45 ± 2 °C Temperature Coefficient (isc): +0.0577%/°C Temperature Coefficient (Isc): -0.317%/°C Temperature Coefficient (Pmax): -0.395%/°C					



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

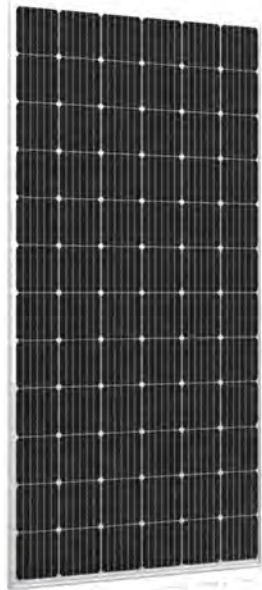
30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

HIGHLIGHT

ZS72M 340-380W

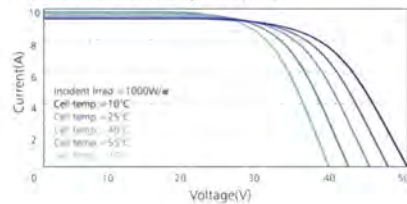
Monocrystalline PV Module



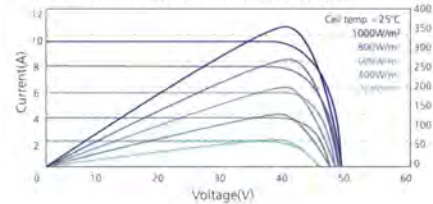
Cell Type 5BB
Mono-Crystalline 72 Pcs (6x12)

-  Superior silicon cells, High efficiency solar panel, Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Reinforced frame with more remarkable loading capacity.
-  High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(370W)



I-V curves/P-V curves under different irradiation (370W)



SPECIFICATIONS

ZS72M 340-380W

Technical data

Electrical Performance		340	345	350	360	365	370	375	380
Parameter STC									
Power Output (P _{max}) (W)		340	345	350	360	365	370	375	380
Rated Power Maximum Voltage (V _{mp}) (V)		38.8	38.9	38.7	39.0	39.1	39.2	39.4	39.6
Rated Power Maximum Current (I _{mp}) (A)		8.79	8.87	9.08	9.24	9.35	9.45	9.54	9.60
Open Circuit Voltage (V _{oc}) (V)		47.1	47.3	47.7	48.3	48.5	48.7	48.9	49.1
Short Circuit Current (I _{sc}) (A)		9.24	9.31	9.55	9.81	9.82	9.88	9.90	9.92
Module Efficiency (%)		17.5	17.8	18.0	18.6	18.8	19.1	19.3	19.6
Electrical Performance									
Parameter NMOT									
Maximum Power (P _{max}) (W)		252.38	256.30	260.24	267.48	270.75	274.43	278.50	282.22
Rated Power Maximum Voltage (V _{mp}) (V)		35.20	35.40	35.60	36.00	36.10	36.30	36.50	36.70
Rated Power Maximum Current (I _{mp}) (A)		7.17	7.24	7.31	7.43	7.50	7.56	7.63	7.69
Open Circuit Voltage (V _{oc}) (V)		43.20	43.40	43.60	44.00	44.20	44.30	44.50	44.70
Short Circuit Current (I _{sc}) (A)		7.68	7.74	7.80	7.93	8.00	8.06	8.12	8.19
Structure Features									
Solar Cell	156.75 × 156.75 mm Mono-crystalline								
Front Side Glass	3.2 mm highly transparent anti-reflection coating tempered glass								
Packaging Film	Highly transparent/fully transparent EVA								
Junction Box	IP68								
Cable	4 mm ² , 1000 mm Photovoltaic cable								
Wind Pressure/Snow Pressure	2400Pa/5400Pa								
Connector	MC4Compatible								
Packaging									
Module Dimension	1956×992×35 mm								
Weight	21.0 KGS								
Qty/Ctn	31Pcs								
20GP	155Pcs								
40GP	372Pcs								
40HQ	744Pcs								
Application Parameters									
Working Temperature	-40 ~ +85 °C								
Maximum System Voltage	1500V DC								
Maximum Fuse Rated Current	15 A								
Solar Cells Rated Working Temperature	45 ± 2 °C								
Temperature Coefficient (I _{sc})	+ 0.0577%/°C								
Temperature Coefficient (V _{oc})	- 0.317%/°C								
Temperature Coefficient (P _{max})	- 0.395%/°C								



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

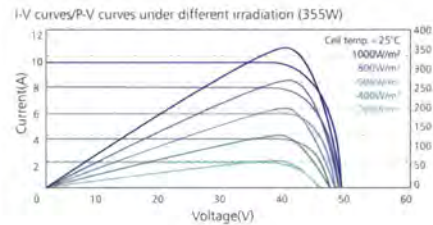
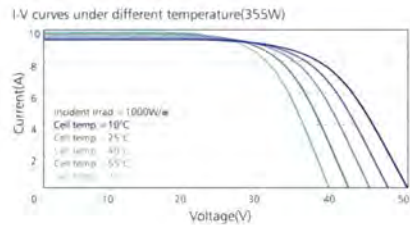
HIGHLIGHT

ZS72P 330-365W

Polycrystalline Half-Cut PV Module



-  Superior silicon cells, High efficiency solar panel. Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Series-parallel design to bring down the resistance(Rs) of series connection, decrease the inner electrical loss and to increase the power generating capacity of the system.
-  Innovative solar cell cutting technology, significantly reduce the series current and the inner loss of the module, ideal option for regions with high temperature.
-  Unique array and circuit design to bring the influence of shadow to the lowest.



SPECIFICATIONS

ZS72P 330-365W

Technical data

Electrical Performance		335	340	345	350	355
Parameter STC	Power Output (P _{max}) (W)	335	340	345	350	355
* IEC Standard Testing Condition Value (Mass of the Air: 1.017 kg/m ³ , Solar Irradiation: 1000W/m ² , Solar Cell Temperature: 25°C)	Rated Power Maximum Voltage (V _{mp}) (V)	38.0	38.3	38.5	38.7	38.9
* Power Tolerance 0~+5W	Rated Power Maximum Current (I _{mp}) (A)	8.85	8.87	9.01	9.11	9.13
	Open Circuit Voltage (V _{oc}) (V)	46.0	46.2	46.6	47.0	47.3
	Short Circuit Current (I _{sc}) (A)	9.34	9.36	9.52	9.68	9.70
	Module Efficiency (%)	17.0	17.3	17.5	17.8	18.0
Electrical Performance		250.28	254.18	256.69	260.64	264.62
Parameter NMOT	Maximum Power (P _{max}) (W)	250.28	254.18	256.69	260.64	264.62
* NMOT Testing Condition: Solar Irradiation 800W/m ² , Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (V _{mp}) (V)	35.50	35.70	35.80	36.00	36.20
	Rated Power Maximum Current (I _{mp}) (A)	7.05	7.12	7.17	7.24	7.31
	Open Circuit Voltage (V _{oc}) (V)	43.30	43.60	43.70	43.90	44.10
	Short Circuit Current (I _{sc}) (A)	7.51	7.59	7.59	7.66	7.80
Structure Features		78.38×156.75 mm Poly-crystalline				
	Solar Cell	3.2 mm highly transparent anti-reflection coating tempered glass				
	Front Side Glass	Highly transparent/fully transparent EVA				
	Packaging Film	IP68				
	Junction Box	4 mm ² , 300 mm Photovoltaic cable				
	Cable	2400Pa/5400Pa				
	Wind Pressure/Snow Pressure	MC4Compatible				
	Connector					
Packaging		1993x992x35 mm				
	Module Dimension	21.4 KGS				
	Weight	30Pcs				
	Qty/Ctn	150Pcs				
	20GP	330Pcs				
	40GP	660Pcs				
	40HQ					
Application Parameters		-40~+85 °C				
	Working Temperature	1500V DC				
	Maximum System Voltage	15 A				
	Maximum Fuse Rated Current	44 ± 2 °C				
	Solar Cells Rated Working Temperature	+0.0577%/°C				
	Temperature Coefficient (I _{sc})	-0.30%/°C				
	Temperature Coefficient (I _{mp})	-0.38%/°C				
	Temperature Coefficient (P _{max})					



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

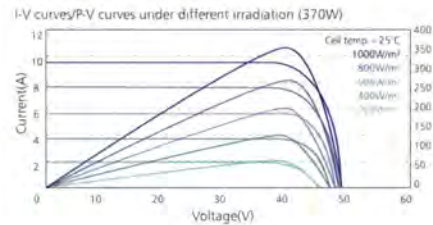
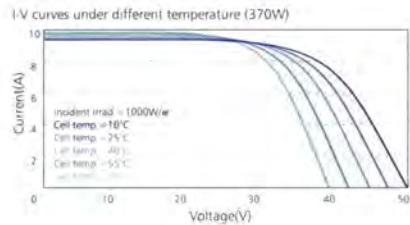
HIGHLIGHT

ZS72M-H 345-380W

Monocrystalline Half-Cut PV Module



-  Superior silicon cells, High efficiency solar panel, Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Series-parallel design to bring down the resistance(Rs) of series connection, decrease the inner electrical loss and to increase the power generating capacity of the system.
-  Innovative solar cell cutting technology, significantly reduce the series current and the inner loss of the module, ideal option for regions with high temperature.
-  Unique array and circuit design to bring the influence of shadow to the lowest.



SPECIFICATIONS

ZS72M-H 345-380W

Technical data

Electrical Performance		350	355	360	365	370	375	380
Parameter STC	Power Output (P _{max} (W))	39.2	39.5	39.7	40.0	40.3	40.5	40.7
* (STC Standard Testing Condition Value (Mass of the Air: AM1.5, Solar Irradiation: 1000W/m ² , Solar Cell Temperature: 25°C)	Rated Power Maximum Voltage (V _{mp} (V))	8.96	9.02	9.08	9.13	9.23	9.29	9.37
* Power Tolerance 0 ~ +5W	Rated Power Maximum Current (I _{mp} (A))	47.1	47.3	47.5	47.7	47.9	48.4	48.6
	Open Circuit Voltage (V _{oc} (V))	9.56	9.67	9.72	9.83	9.84	9.85	9.86
	Short Circuit Current (I _{sc} (A))	17.8	18.0	18.3	18.5	18.8	19.0	19.3
	Module Efficiency (%)							
Electrical Performance		261.36	264.99	268.64	272.31	276.01	279.73	283.48
Parameter NMOT	Maximum Power (P _{max} (W))	36.10	36.30	36.50	36.70	36.90	37.10	37.30
* NMOT Testing Condition: Solar Irradiation 800W/m ² , Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (V _{mp} (V))	7.24	7.30	7.36	7.42	7.48	7.54	7.60
	Rated Power Maximum Current (I _{mp} (A))	43.90	44.10	44.30	44.50	44.70	44.90	45.10
	Open Circuit Voltage (V _{oc} (V))	7.71	7.75	7.79	7.83	7.87	7.91	7.95
	Short Circuit Current (I _{sc} (A))							
Structure Features		78.38 × 156.75 mm Mono-crystalline						
	Solar Cell	3.2 mm highly transparent anti-reflection coating tempered glass						
	Front Side Glass	Highly transparent/fully transparent EVA						
	Packaging Film	IP68						
	Junction Box	4 mm ² , 300 mm Photovoltaic cable						
	Cable	2400Pa/5400Pa						
	Wind Pressure/Snow Pressure	MC4Compatible						
	Connector							
Packaging		1993x992x35 mm						
	Module Dimension	21.4 KGS						
	Weight	30Pcs						
	Qty/Ctn	150Pcs						
	20GP	330Pcs						
	40GP	660Pcs						
	40HQ							
Application Parameters		-40 ~ +85 °C						
	Working Temperature	1500V DC						
	Maximum System Voltage	15 A						
	Maximum Fuse Rated Current	44 ± 2 °C						
	Solar Cells Rated Working Temperature	+0.0577%/°C						
	Temperature Coefficient (I _{sc})	-0.30%/°C						
	Temperature Coefficient (I _{mp})	-0.38%/°C						
	Temperature Coefficient (P _{max})							



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

HIGHLIGHT

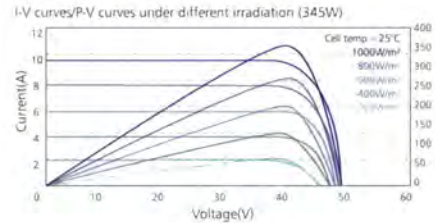
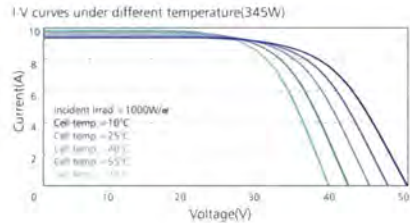
ZS72P-DG 325-350W

Dual Glass Polycrystalline PV Module



Cell Type 5BB
Poly-Crystalline 72 Pcs (6×12)

-  Superior silicon cells, High efficiency solar panel. Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  High security with A grade fire rating.
-  High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.



SPECIFICATIONS

ZS72P-DG 325-350W

Technical data

Electrical Performance		325	330	335	340	345	350																
Parameter STC	Power Output (P _{max} (W))	325	330	335	340	345	350																
* IEC Standard Testing Condition Value (Mass of the Air: 1.215, Solar Irradiation: 1000W/m ² , Solar Cell Temperature: 25°C) * Power Tolerance 0~+5W	Rated Power Maximum Voltage (V _{mp} (V))	37.60	37.80	38.00	38.20	38.90	39.20																
	Rated Power Maximum Current (I _{mp} (A))	8.64	8.73	8.82	8.90	8.87	8.93																
	Open Circuit Voltage (V _{oc} (V))	46.00	46.20	46.40	46.60	47.30	47.60																
	Short Circuit Current (I _{sc} (A))	9.24	9.33	9.41	9.49	9.61	9.68																
	Module Efficiency (%)	16.6	16.9	17.2	17.4	17.7	17.9																
Electrical Performance		242.56	246.40	250.28	254.18	258.12	261.36																
Parameter NMOT	Maximum Power (P _{max} (W))	242.56	246.40	250.28	254.18	258.12	261.36																
* NMOT Testing Condition: Solar Irradiation 800W/m ² , Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (V _{mp} (V))	34.90	35.10	35.30	35.50	35.80	36.00																
	Rated Power Maximum Current (I _{mp} (A))	6.95	7.02	7.09	7.16	7.21	7.26																
	Open Circuit Voltage (V _{oc} (V))	42.90	43.10	43.30	43.50	44.10	44.40																
	Short Circuit Current (I _{sc} (A))	7.46	7.53	7.59	7.66	7.75	7.81																
Structure Features		<table border="0"> <tr> <td>Solar Cell</td> <td>156.75 × 156.75 mm Poly-crystalline</td> </tr> <tr> <td>Front Side Glass</td> <td>2.5 mm highly transparent anti-reflection coating tempered glass</td> </tr> <tr> <td>Back Side Glass</td> <td>2.5 mm float tempered glass</td> </tr> <tr> <td>Packaging Film</td> <td>Highly transparent/fully transparent EVA</td> </tr> <tr> <td>Junction Box</td> <td>IP68</td> </tr> <tr> <td>Cable</td> <td>4 mm², 300 mm Photovoltaic cable</td> </tr> <tr> <td>Wind Pressure/Snow Pressure</td> <td>2400Pa/5400Pa</td> </tr> <tr> <td>Connector</td> <td>MC4Compatible</td> </tr> </table>						Solar Cell	156.75 × 156.75 mm Poly-crystalline	Front Side Glass	2.5 mm highly transparent anti-reflection coating tempered glass	Back Side Glass	2.5 mm float tempered glass	Packaging Film	Highly transparent/fully transparent EVA	Junction Box	IP68	Cable	4 mm ² , 300 mm Photovoltaic cable	Wind Pressure/Snow Pressure	2400Pa/5400Pa	Connector	MC4Compatible
Solar Cell	156.75 × 156.75 mm Poly-crystalline																						
Front Side Glass	2.5 mm highly transparent anti-reflection coating tempered glass																						
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Cable	4 mm ² , 300 mm Photovoltaic cable																						
Wind Pressure/Snow Pressure	2400Pa/5400Pa																						
Connector	MC4Compatible																						
Packaging		<table border="0"> <tr> <td>Module Dimension</td> <td>1968x992x6 mm</td> </tr> <tr> <td>Weight</td> <td>27 KGS</td> </tr> <tr> <td>Qty/Ctn</td> <td>30Pcs</td> </tr> <tr> <td>20GP</td> <td>150Pcs</td> </tr> <tr> <td>40GP</td> <td>330Pcs</td> </tr> <tr> <td>40HQ</td> <td>660Pcs</td> </tr> </table>						Module Dimension	1968x992x6 mm	Weight	27 KGS	Qty/Ctn	30Pcs	20GP	150Pcs	40GP	330Pcs	40HQ	660Pcs				
Module Dimension	1968x992x6 mm																						
Weight	27 KGS																						
Qty/Ctn	30Pcs																						
20GP	150Pcs																						
40GP	330Pcs																						
40HQ	660Pcs																						
Application Parameters		<table border="0"> <tr> <td>Working Temperature</td> <td>-40~+85 °C</td> </tr> <tr> <td>Maximum System Voltage</td> <td>1500V DC</td> </tr> <tr> <td>Maximum Fuse Rated Current</td> <td>20 A</td> </tr> <tr> <td>Solar Cells Rated Working Temperature</td> <td>44 ± 2 °C</td> </tr> <tr> <td>Temperature Coefficient (V_{oc})</td> <td>-0.0577%/°C</td> </tr> <tr> <td>Temperature Coefficient (V_{mp})</td> <td>-0.30%/°C</td> </tr> <tr> <td>Temperature Coefficient (P_{max})</td> <td>-0.39%/°C</td> </tr> </table>						Working Temperature	-40~+85 °C	Maximum System Voltage	1500V DC	Maximum Fuse Rated Current	20 A	Solar Cells Rated Working Temperature	44 ± 2 °C	Temperature Coefficient (V _{oc})	-0.0577%/°C	Temperature Coefficient (V _{mp})	-0.30%/°C	Temperature Coefficient (P _{max})	-0.39%/°C		
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19.4% Maximum Module Efficiency	0~+5W Power Tolerance	30 Years Linear Power Guarantee	10 Years Product Warranty
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HIGHLIGHT

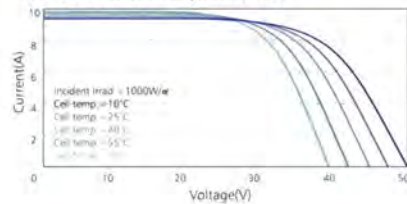
ZS72M-DG 340-380W

Dual Glass Monocrystalline PV Module

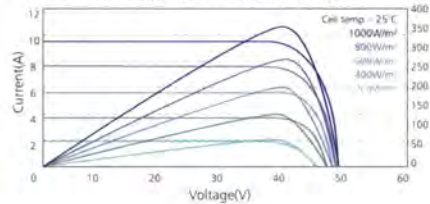


- Superior silicon cells, High efficiency solar panel, Most cost-effective and ideal option for residential, commercial photovoltaic as well as power station.
- Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
- Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
- High security with A grade fire rating.
- High transparent self-clean tempered glass to increase the light adoption and effectively reduce the power loss which is caused by dust.
- 1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(370W)



I-V curves/P-V curves under different irradiation (370W)



SPECIFICATIONS

ZS72M-DG 340-380W

Technical data

Electrical Performance		340	345	350	360	365	370	375	380
Parameter STC	Power Output (P _{max} (W))	34.20	38.40	38.60	39.00	39.20	39.40	39.60	39.80
* (STC Standard Testing Condition Value (Mass of the Air: 1.025, Solar Irradiation: 1000W/m ² , Solar Cell Temperature: 25°C) * Power Tolerance 0~+5W	Rated Power Maximum Voltage (V _{mp} (V))	8.90	8.99	9.07	9.23	9.31	9.39	9.47	9.55
	Rated Power Maximum Current (I _{mp} (A))	46.60	46.80	47.00	47.40	47.60	47.80	48.00	48.20
	Open Circuit Voltage (V _{oc} (V))	9.49	9.57	9.65	9.81	9.89	9.97	10.05	10.13
	Short Circuit Current (I _{sc} (A))	17.4	17.7	17.9	18.4	18.7	19.0	19.2	19.5
Module Efficiency (%)									
Electrical Performance		253.82	257.74	261.34	268.22	272.25	275.94	280.02	283.76
Parameter NMOT	Maximum Power (P _{max} (W))	35.40	35.60	35.80	36.10	36.30	36.50	36.70	36.90
* NMOT Testing Condition: Solar Irradiation 800W/m ² , Solar Cell Temperature 20°C, Wind Speed 1m/s	Rated Power Maximum Voltage (V _{mp} (V))	7.17	7.24	7.30	7.43	7.50	7.56	7.63	7.69
	Rated Power Maximum Current (I _{mp} (A))	43.40	43.60	43.80	44.10	44.30	44.50	44.70	44.90
	Open Circuit Voltage (V _{oc} (V))	7.67	7.74	7.80	7.93	7.99	8.06	8.12	8.18
	Short Circuit Current (I _{sc} (A))								
Structure Features		Solar Cell: 156.75 × 156.75 mm Mono-crystalline Front Side Glass: 2.5 mm highly transparent anti-reflection coating tempered glass Back Side Glass: 2.5 mm float tempered glass Packaging Film: Highly transparent/fully transparent EVA Junction Box: IP68 Cable: 4 mm ² , 300 mm Photovoltaic cable Wind Pressure/Snow Pressure: 2400Pa/5400Pa Connector: MC4Compatible							
Packaging		Module Dimension: 1968x992x6 mm Weight: 27 KGS Qty/Ctn: 30Pcs 20GP: 150Pcs 40GP: 330Pcs 40HQ: 660Pcs							
Application Parameters		Working Temperature: -40 ~ +85 °C Maximum System Voltage: 1500V DC Maximum Fuse Rated Current: 20 A Solar Cells Rated Working Temperature: 44 ± 2 °C Temperature Coefficient (I _{sc}): +0.0577%/°C Temperature Coefficient (V _{oc}): -0.30%/°C Temperature Coefficient (P _{max}): -0.39%/°C							



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

HIGHLIGHT

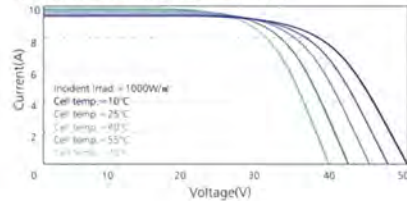
ZS72N-DG 360-380W

N-type Monocrystalline Bi-facial Dual Glass Series PV Module

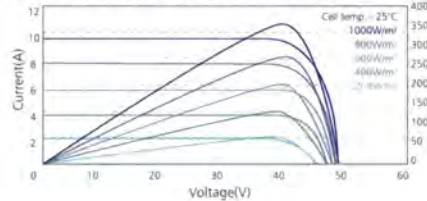


-  High security with A grade fire rating.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Advanced Mono PERC double sides battery technology, generating power from both sides with lower LCOE.
-  POE encapsulation with dual glass to withstand all kinds of harsh outdoor environment.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(365W)



I-V curves/P-V curves under different irradiation (365W)



SPECIFICATIONS

ZS72N-DG 360-380W

Technical data

Electrical Performance Parameter STC	Testing condition		Front	Back	Front	Back	Front	Back	Front	Back
	Power Output (P _{max} (W))	360	255	365	258	370	262	375	265	380
Rated Power Maximum Voltage (V _{mp} (V))	38.92	39.32	39.13	39.53	39.32	39.72	39.52	39.92	39.72	40.12
Rated Power Maximum Current (I _{mp} (A))	9.25	6.48	9.33	6.53	9.41	6.59	9.49	6.64	9.57	6.70
Open Circuit Voltage (V _{oc} (V))	47.73	47.03	47.93	47.23	48.13	47.43	48.33	47.63	48.53	47.83
Short Circuit Current (I _{sc} (A))	9.72	6.82	9.80	6.88	9.88	6.94	9.96	6.99	10.04	7.05
Module Efficiency (%)	18.4	13.0	18.7	13.2	19.0	13.4	19.2	13.6	19.5	13.8

Electrical Performance Parameter NMOT	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Maximum Power (P _{max} (W))	268.63	188.92	272.30	191.42	276.37	194.30	280.09	196.84	283.84	199.39
Rated Power Maximum Voltage (V _{mp} (V))	36.40	36.40	36.60	36.60	36.80	36.80	37.00	37.00	37.20	37.20
Rated Power Maximum Current (I _{mp} (A))	7.38	5.19	7.44	5.23	7.51	5.28	7.57	5.32	7.63	5.36
Open Circuit Voltage (V _{oc} (V))	44.40	43.70	44.60	43.90	44.80	44.10	45.00	44.30	45.20	44.50
Short Circuit Current (I _{sc} (A))	7.86	5.51	7.92	5.56	7.99	5.61	8.05	5.65	8.11	5.69

Structure Features	Value
Solar Cell	156.75x156.75 mm Mono-crystalline N/P Type Bi-facial Solar Cell
Front Side Glass	2.5 mm highly transparent anti-reflection coating tempered glass
Back Side Glass	2.5 mm float tempered glass
Packaging Film	Highly transparent/fully transparent EVA
Junction Box	IP68
Cable	4 mm ² /300 mm Photovoltaic cable
Wind Pressure/Snow Pressure	2400Pa/5400Pa
Connector	MC4Compatible

Packaging	Value
Module Dimension	1978x992x6 mm
Weight	26.5 KGS
Qty/Ctn	30Pcs
20GP	150Pcs
40GP	330Pcs
40HQ	660Pcs

Application Parameters	Value
Working Temperature	-40 ~ +85 °C
Maximum System Voltage	1500V DC
Maximum Fuse Rated Current	20 A
Solar Cells Rated Working Temperature	44 ± 2 °C
Temperature Coefficient (I _{sc})	+0.057%/°C
Temperature Coefficient (I _{mp})	-0.30%/°C
Temperature Coefficient (P _{max})	-0.39%/°C



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty

HIGHLIGHT

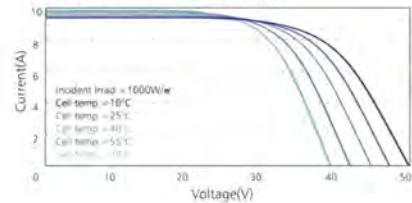
ZS72N-DG-H 365-390W

N-type Half-Cut MONOCRYSTALLINE Bi-facial
Dual Glass Series PV Module

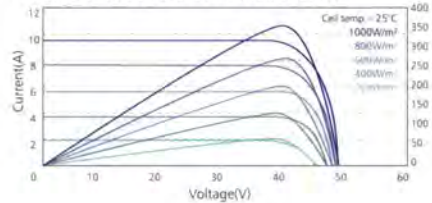


-  High security with A grade fire rating.
-  Pass the weather resistance tests like sand, salt mist and ammonia corrosion for application in harsh outdoor environment.
-  Excellent encapsulating materials and strict production process to ensure the high anti-PID ability.
-  Advanced Mono PERC double sides battery technology, generating power from both sides with lower LCOE.
-  POE encapsulation with dual glass to withstand all kinds of harsh outdoor environment.
-  1500V highest affordable system voltage to effectively reduce the BOS cost.

I-V curves under different temperature(365W)



I-V curves/P-V curves under different irradiation (365W)



SPECIFICATIONS

ZS72N-DG-H 365-390W

Technical data

Electrical Performance Parameter I_{STC}	Testing condition		Front		Back		Front		Back		Front		Back	
	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Power Output (Pmax (W))	365	258	370	262	375	265	380	269	385	272	390	275	390	275
Rated Power Maximum Voltage (Vmp (V))	39.13	39.53	39.32	39.72	39.52	39.92	39.72	40.12	39.72	40.32	40.12	40.52	40.12	40.52
Rated Power Maximum Current (Imp (A))	9.33	6.53	9.41	6.59	9.49	6.64	9.57	6.70	9.65	6.75	9.73	6.80	9.73	6.80
Open Circuit Voltage (Voc (V))	47.93	47.23	48.13	47.43	48.33	47.63	48.53	47.83	48.73	48.03	48.93	48.23	48.93	48.23
Short Circuit Current (Isc (A))	9.80	6.88	9.88	6.94	9.96	6.99	10.04	7.05	10.12	7.11	10.20	7.16	10.20	7.16
Module Efficiency (%)	18.7	13.2	19.0	13.4	19.2	13.6	19.5	13.8	19.8	14.0	20.1	14.2	20.1	14.2

Electrical Performance Parameter I_{NMOT}	Testing condition		Front		Back		Front		Back		Front		Back	
	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back	Front	Back
Maximum Power (Pmax (W))	268.63	188.92	272.30	191.42	276.37	194.30	280.09	196.84	283.84	199.39	287.59	201.89	287.59	201.89
Rated Power Maximum Voltage (Vmp (V))	36.40	36.40	36.60	36.60	36.80	36.80	37.00	37.00	37.20	37.20	37.40	37.40	37.40	37.40
Rated Power Maximum Current (Imp (A))	7.38	5.19	7.44	5.23	7.51	5.28	7.57	5.32	7.63	5.36	7.69	5.40	7.69	5.40
Open Circuit Voltage (Voc (V))	44.40	43.70	44.60	43.90	44.80	44.10	45.00	44.30	45.20	44.50	45.40	44.70	45.40	44.70
Short Circuit Current (Isc (A))	7.86	5.51	7.92	5.56	7.99	5.61	8.05	5.65	8.11	5.69	8.17	5.73	8.17	5.73

Structure Features	Solar Cell	78.38x156.75 mm Mono-crystalline N/P Type Bi-facial Solar Cell
Front Side Glass	Back Side Glass	2.5 mm highly transparent anti-reflection coating tempered glass
Packaging Film	Junction Box	Highly transparent/fully transparent EVA IP68
Cable	Connector	4 mm ² , 300 mm Photovoltaic cable 2400Pa/5400Pa MC4Compatible

Packaging	Module Dimension	2000x992x6 mm
Weight	Qty/Ctn	27.5 KGS 30Pcs
20GP	40GP	150Pcs 330Pcs
40HQ		660Pcs

Application Parameters	Working Temperature	-40~ +85 °C
Maximum System Voltage	Maximum Fuse Rated Current	1500V DC 20 A
Solar Cells Rated Working Temperature	Temperature Coefficient (Isc)	44 ± 2 °C + 0.0577%/°C
Temperature Coefficient (Isc)	Temperature Coefficient (Imp)	-0.30%/°C -0.39%/°C



19.4%
Maximum
Module
Efficiency

0~+5W
Power
Tolerance

30
Years
Linear Power
Guarantee

10
Years
Product
Warranty



Part Two



INVERTER PORTFOLIO

**YOUR BEST CHOICE FOR
Zenergy Solar**



ZENERGY 1.1k~3.3kTL-G3

1100/1600/2200/2700/3000/3300



Single-Phase Single-MPPT

- 1.4** 1.4 DC overload
- IP65** IP65 ingress protection
- 97.7%** Max. efficiency up to 97.7%
- Light weight, quick and easy to install
- 0** Built-in zero export function
- Smart monitoring, RS485, Wifi/Ethernet/GPRS(optional)

Datasheet	Znergy 1100TL-G3	Znergy 1600TL-G3	Znergy 2200TL-G3	Znergy 2700TL-G3	Znergy 3000TL-G3	Znergy 3300TL-G3
Input (DC)						
Recommended Max. PV input power	1500Wp	2200Wp	3000Wp	3700Wp	4100Wp	4500Wp
Max. Input voltage	500V	500V	500V	550V	550V	550V
Start-up voltage	70V					
Rated input voltage	360V					
MPPT operating voltage range	50-500V	50-500V	50-500V	50-550V	50-550V	50-550V
Full power MPPT voltage range	110-450V	150-450V	200-450V	250-500V	275-500V	300-500V
Max. Input current MPPT	12A					
Maximum DC input short circuit current per MPPT	15A					
Number of MPPT/ String per MPPT	1/1					
Input terminal type	MC4/H4					
Output (AC)						
Rated power	1100W	1600W	2200W	2700W	3000W	3300W
Max. AC power	1100VA	1600VA	2200VA	2700VA	3000VA	3300VA
Rated Output current	4.8A	7A	9.6A	11.8A	13A	14.3A
Max. Output current	5.3A	7.7A	10.6A	13A	14.5A	16A
Nominal grid voltage	L/N/PE, 220Vac, 230Vac, 240Vac					
Grid voltage range	180Vac-276Vac (According to local standard)					
Nominal frequency	50Hz/60Hz					
Grid frequency range	45 ~ 55Hz/54 ~ 66Hz (According to local standard)					
THDI	< 3%					
Power factor	1 default (adjustable +/- 0.8)					
Efficiency						
Max. Efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%
European weighted efficiency	96.9%	96.9%	96.9%	97.2%	97.2%	97.2%
Self-consumption at night	< 1W					
MPPT efficiency	> 99.9%					
Protection						
Anti-islanding protection	Yes					
DC reverse polarity protection	Yes					
Over temp protection	Yes					
Leakage current protection	Yes					
Over voltage protection	Yes					
Over current protection	Yes					
Earth fault protection	Yes					
SPD	MOV, Type III standard					
Communication						
Standard communication mode	RS485, WiFi/GPRS/Ethernet(optional), USB					
General Data						
Topology	Transformerless					
Ambient temperature range	-30°C ~ +60°C					
Allowable relative humidity range	0 ~ 100%					
Noise	< 25dB					
DC switch	optional					
Cooling	Natural					
Max. Operating altitude	2000m					
Dimension[mm]	303*260.5*118	303*260.5*118	303*260.5*118	321*260.5*131.5	321*260.5*131.5	321*260.5*131.5
Support bracket	Wall-mounted					
Weight	5.5kg	5.5kg	5.5kg	6.3kg	6.3kg	6.3kg
Display	LCD+LED					
Degree of protection	IP65					
Warranty	5 years/ 7 years/ 10 years					
Standard						
EMC	EN 61000-6-1, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3					
Safety standards	IEC 62116, IEC 61727, IEC 61683, IEC 60068(1, 2, 14, 30), IEC 62109-1/2					
Grid standards	AS 4777, VDE V 0124-100, VDE V 0126-1-1, VDE-AR-N 4105, G83/2, C10/1, RD 1699					



ZENERGY 3k~7.5kTL-G2

3000/3600/4000/4600/5000/6000/7500



Single-Phase Dual-MPPT

- Built-in zero export function
- 2 MPPT high precision string detection
- IP65 ingress protection
- I-V curve scanning function
- Max. efficiency up to 98.2%
- Built-in sound and light alarm function
- Smart monitoring, RS485, Wifi/Ethernet/GPRS (optional)

Datasheet	Zenergy 3KTLM-G2	Zenergy 3.6KTLM-G2	Zenergy 4KTLM-G2	Zenergy 4.6KTLM-G2	Zenergy 5KTLM-G2	Zenergy 6KTLM-G2	Zenergy 7.5KTLM
Input (DC)							
Recommended Max. PV input power	3990Wp	4790Wp	5320Wp	6120Wp	6650Wp	7980Wp	9980Wp
Max DC power for single MPPT	3500W	3500W	3500W	3500W	3500W	3500W	2*2750W/2750W
Number of MPP trackers				2			
Number of DC inputs				1/1		2/1	
Max. Input voltage				600V			
Start-up voltage				120V			
Rated input voltage				360V			
MPPT operating voltage range				90-580V			
Full power MPPT voltage range	160V-520V	180V-520V	200V-520V	230V-520V	250V-520V	300V-520V	250V-520V
Max. Input current per MPPT				11A/11A		22A/11A	
Maximum DC input short circuit current per MPPT				13.2A		26.4/13.2A	
Output (AC)							
Rated power	3000W	3680W	4000W	4600W	5000W	6000W	7500W
Max. AC power	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA	7500VA
Max. Output current	13.7A	16.8A	18.2A	21A	22.8A	27.3A	32.6A
Nominal grid voltage				L/N/PE, 220Vac, 230Vac, 240Vac			
Grid voltage range				180Vac-276Vac (According to local standard)			
Nominal frequency				50Hz/60Hz			
Grid frequency range				45Hz-55Hz/54Hz-66Hz (According to local standard)			
Active power adjustable range				0-100%			
THDi				< 3%			
Power factor				1 default (adjustable +/- 0.8)			
Power limit export				Zero export or adjustable power limit export			
Performance							
Max efficiency				98.0%		98.2%	
European weighed efficiency				97.5%		97.6%	
Self-consumption at night				< 1W			
MPPT efficiency				> 99.9%			
Protection							
DC reverse polarity protection				Yes			
DC switch				Optional			
Protection class/overvoltage category				I/III			
Safety protection				Anti islanding, RCMU, Ground fault monitoring			
SPD				MOV: Type III standard			
Communication							
Power management unit				According to certification and request			
Standard communication mode				Rs485, Wifi/Ethernet/GPRS(optional), SD card(optional)			
Operation data storage				25 years			
General Data							
Ambient temperature range				-25°C~+60°C		-30°C~+60°C	
Topology				Transformerless			
Degree of protection				IP65			
Allowable relative humidity range				0-100%			
Max. Operating altitude				2000m			
Noise				< 25dB			
Weight				11.5kg		18kg	
Cooling				Natural			
Dimension				405*315*135mm		467*352*157mm	
Display				LCD display			
Warranty				5 years/ 7 years/ 10 years			
Standard							
EMC				EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12			
Safety standards				IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30)			
Grid standards				AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50549, GB3/G59/G98/G99, NB/T32004; ABNT NBR 16149/16150 for ZS3KTLM-G2,ZS5KTLM-G2&7.5KTLM			



ZENERGY 3.3k~12kTL-X

3300/4400/5000/5500/6600/8800/11000/12000

Three-Phase Dual-MPPT

-  Integrated with DC switch
-  Max. efficiency up to 98.3%
-  Super large 4-inch LCD
-  Built-in DRM port and logic
-  Smart monitoring, RS485, Wifi/Ethernet/GPRS (optional)
-  Over / under voltage, over current, over temperature, Anti-islanding and other multiple protections

Datasheet

	Znergy 3.3KTL-X	Znergy 4.4KTL-X	Znergy 5KTL-X (Australia)	Znergy 5.5KTL-X	Znergy 6.6KTL-X	Znergy 8.8KTL-X	Znergy 11KTL-X	Znergy 12KTL-X
Input (DC)								
Recommended Max. PV input power	4390Wp	5860Wp	6650Wp	7320Wp	8780Wp	11710Wp	14630Wp	15960Wp
Max DC power for single MPPT	3550W	4500W	5700W	5700W	6250W	6200W	6200W	6850W
Number of MPPT trackers	2							
Number of DC inputs	1 for each MPPT							
Max. Input voltage	1000V							
Start-up voltage	200V							
Rated input voltage	600V							
MPPT operating voltage range	160-960V							
Full power MPPT voltage range	160V-850V	190V-850V	240V-850V	240V-850V	290V-850V	380V-850V	480V-850V	575V-850V
Max. Input current per MPPT	11A/11A							
Maximum DC input short circuit current per MPPT	14A							
Output (AC)								
Rated power	3000W	4000W	5000W	5000W	6000W	8000W	10000W	12000W
Max. AC power	3300VA	4400VA	5000VA	5500VA	6600VA	8800VA	11000VA	13200VA
Max. Output current	4.8A	6.4A	8.0A	8.0A	9.6A	12.8A	15.9A	19.1A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac							
Grid voltage range	310Vac-480Vac (According to local standard)							
Nominal frequency	50Hz/60Hz							
Grid frequency range	45Hz-55Hz/54Hz-66Hz (According to local standard)							
Active power adjustable range	0-100%							
THDI	< 3%							
Power factor	1 default (adjustable +/- 0.8)							
Power limit export	Zero export or adjustable power limit export							
Performance								
Max efficiency	98.0%	98.0%	98.0%	98.0%	98.0%	98.3%	98.3%	98.3%
European weighted efficiency	97.5%	97.5%	97.5%	97.5%	97.5%	98.0%	98.0%	98.0%
Self-consumption at night	< 1W							
MPPT efficiency	> 99.9%							
Protection								
DC reverse polarity protection	Yes							
DC switch	Yes							
Safety protection	Anti islanding, RCMU, Ground fault monitoring							
ARPC	Anti reverse power controller (optional)							
Communication								
Power management unit	According to certification and request							
Standard communication mode	RS485, Wifi/Ethernet/GPRS (optional), SD card							
Operation data storage	25 years							
General Data								
Ambient temperature range	-25°C - +60°C							
Topology	Transformerless							
Degree of protection	IP65							
Allowable relative humidity range	0-100%							
Max. Operating altitude	2000m							
Noise	< 29dB							
Weight	21kg	21kg	21kg	21kg	21kg	22kg	22kg	22kg
Cooling	Natural							
Dimension	457*452*202mm							
Display	LCD display							
Warranty	5 years/ 7 years/ 10 years							
Standard								
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4							
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1, 2, 14, 30), IEC60255							
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50549, GB3, Rd1699, UTE C15-712-1, EN50530, NB/T32004							

The models marked with "*" should be available only for some designated countries.



ZENERGY 10k~15kTL-G2

10000 / 12000 / 15000



Three-Phase Dual-MPPT



Fuse free design

98.3%

Max. efficiency up to 98.3%



Built-in DRM port and logic



Outdoor IP65 protection level



I-V curve scanning function



Smart control and flexible configuration

Datasheet

	Znergy 10000TL-G2	Znergy 12000TL-G2	Znergy 15000TL-G2
Input (DC)			
Max. PV input power	18000Wp	18000Wp	19950Wp
Max DC power for single MPPT	11000W/7500W	11000W/7500W	11000W/7500W
Number of MPPT trackers		2	
Number for DC inputs		3	
Max. input voltage		1000V	
Start-up voltage		200V	
Rated input voltage		600V	
MPPT operating voltage range		160V-960V	
Full power MPPT voltage range		300V-840V	
Max. input MPPT current		21A / 11A	
Maximum DC input short circuit current per MPPT		30A / 15A	
Output (AC)			
Rated power	10000W	12000W	15000W
Max. AC power	11000VA	13200VA	16500VA
Max. Output current	3*16.5A	3*20A	3*24A
Nominal grid voltage		3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac	
Grid voltage range		310Vac-480Vac (According to local standard)	
Nominal frequency		50/60Hz	
Grid Frequency range		45Hz-55Hz/54Hz-66Hz (According to local standard)	
Active power adjustable range		0-100%	
THDi		<3%	
Power factor		>0.99 (adjustable+/-0.8)	
Performance			
Max efficiency		98.3%	
European weighted efficiency		98.0%	
Self-consumption at night		<1W	
MPPT efficiency		>99.9%	
Protection			
DC reverse polarity protection		Yes	
DC switch		Yes	
ARPC		Anti reverse power controller (optional)	
Safety protection		Anti islanding, RCMU, Ground fault monitoring	
Communication			
Power management unit		According to certification and request	
Standard communication mode		RS485, Wifi/Ethernet/GPRS (optional), SD card	
Operation data storage		25 years	
General Data			
Ambient temperature range		-25°C- +60°C	
Topology		Transformerless	
Degree of protection		IP65	
Allowable relative humidity range		0-100%	
Max. Operating altitude		2000m	
Noise		<45dB	
Weight	23.5kg	23.5kg	25kg
Cooling		Fan	
Dimension		539*452*202mm	
Display		LCD display	
Warranty		5 years/ 7 years/ 10 years	
Standard			
EMC		EN 61000-6-1, EN 61000-6-3	
Safety standards		IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1, 2, 14, 30)	
Grid standards		AS/NZS 4777, VDE-AR-N 4105, CEI 0-21, EN50549, V 0126-1-1, NB/T32004	



ZENERGY 10k~20kTL

10000/15000/17000/20000

Three-Phase Dual-MPPT

- 4"** Super large 4-inch LCD
- 98.2%** Max. efficiency up to 98.2%
- DRM** Built-in DRM port and logic
- Smart monitoring**, RS485, Wifi/Ethernet/GPRS (optional)
- I-V** I-V curve scanning function
- Grid** Built-in SPD, over / under voltage, over current, over temperature, Anti-islanding and other multiple protections

Datasheet	Znergy 10000TL	Znergy 15000TL	Znergy 17000TL	Znergy 20000TL
Input (DC)				
Recommended Max. PV input power	13300Wp	19950Wp	22610Wp	26600Wp
Max DC power for single MPPT	6750W	10500W	10500W	12000W
Number of MPP trackers	2			
Number for DC inputs	2 for each MPPT			
Max. input voltage	1000V			
Start-up voltage	350V			
Rated input voltage	600V			
MPPT operating voltage range	250V-960V			
Full power MPPT voltage range	350V-850V	370V-850V	420V-850V	430V-850V
Max. input current per MPPT	15A/15A	21A/21A	21A/21A	24A/24A
Maximum DC input short circuit current per MPPT	20A	27A	27A	30A
Output (AC)				
Rated power	10000W	15000W	17000W	20000W
Max. AC power	10000VA	15000VA	17000VA	20000VA
Max. Output current	15A	22A	25A	29A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac			
Grid voltage range	310Vac-480Vac (According to local standard)			
Nominal frequency	50/60Hz			
Grid Frequency range	45Hz-55Hz/54Hz-66Hz (According to local standard)			
Active power adjustable range	0~100%			
THDI	<3%			
Power factor	> 0.99 (adjustable +/- 0.8)			
Performance				
Max efficiency	98.2%	98.2%	98.2%	98.2%
European weighted efficiency	97.6%	97.9%	97.9%	98.0%
Self-consumption at night	< 1W			
MPPT efficiency	> 99.9%			
Protection				
DC reverse polarity protection	Yes			
DC switch	Yes			
Protection class/overvoltage category	I/III			
Safety protection	Anti islanding, RCMU, Ground fault monitoring			
ARPC	Anti reverse power controller (optional)			
Input/output SPD (II)	Optional			
Communication				
Power management unit	According to certification and request			
Standard communication mode	RS485, Wifi/Ethernet/GPRS (optional), SD card, Multi-function relay			
Operation data storage	25 years			
General Data				
Ambient temperature range	-25°C ~ +60°C			
Topology	Transformerless			
Degree of protection	IP65			
Allowable relative humidity range	0~100%			
Max. operating altitude	2000m			
Noise	< 45dB			
Weight	45kg	45kg	48kg	48kg
Cooling	Natural			
Dimension	709*492*246mm			
Display	LCD display			
Warranty	5 years/ 7 years/ 10 years			
Standard				
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4			
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30), IEC60255			
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, EN50549, GB3/G59, C10/11, Rd1699, UTE C15-712-1, EN50530			

ZENERGY 20k~33kTL-G2

20000/ 25000/ 30000/ 33000



Three-Phase Dual-MPPT

- 4"** Super large 4-inch LCD
- 1100v** 1100V voltage level design
- DRM** Built-in DRM port and logic
- 98.6%** Max. efficiency up to 98.6%
- I-V** I-V curve scanning function
- SPD** Built-in SPD, over / under voltage, over current, over temperature, Anti-islanding and other multiple protections

Datasheet







	Znergy 20000TL-G2	Znergy 25000TL-G2	Znergy 30000TL-G2	Znergy 33000TL-G2
Input (DC)				
Recommended Max. PV input power	26600Wp	33250Wp	39900Wp	43890Wp
Max DC power for single MPPT	13000W	16000W	18000W	20000W
Number of MPP trackers	2			
Number for DC inputs	2 for each MPPT	3 for each MPPT	3 for each MPPT	3 for each MPPT
Max. input voltage	1100V			
Start-up voltage	250V			
Rated input voltage	620V			
MPPT operating voltage range	230V-960V			
Full power MPPT voltage range	480V-850V	460V-850V	520V-850V	580V-850V
Max. input MPPT current	24A/24A	28A/28A	30A/30A	30A/30A
Maximum DC input short circuit current per MPPT	30A	35A	37.5A	37.5A
Output (AC)				
Rated power	20000W	25000W	30000W	33000W
Max. AC power	22000VA	27500VA	33000VA	36300VA
Max. Output current	32A	40A	48A	53A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac			
Grid voltage range	310Vac-480Vac (According to local standard)			
Nominal frequency	50/60Hz			
Grid Frequency range	45Hz-55Hz/54Hz-66Hz (According to local standard)			
Active power adjustable range	0-100%			
THDi	< 3%			
Power factor	> 0.99 (adjustable +/-0.8)			
Performance				
Max efficiency	98.2%	98.4%	98.4%	98.6%
European weighted efficiency	98.0%	98.2%	98.2%	98.2%
Self-consumption at night	< 1W			
MPPT efficiency	> 99.9%			
Protection				
DC reverse polarity protection	Yes			
DC switch	Yes			
Protection class/ overvoltage category	I/III			
Safety protection	Anti islanding, RCMU, Ground fault monitoring			
ARPC	Anti reverse power controller (optional)			
Communication				
Power management unit	According to certification and request			
Standard communication mode	RS485, Wifi/Ethernet/GPRS(optional), SD card			
Operation data storage	25 years			
General Data				
Ambient temperature range	-25°C ~ +60°C			
Topology	Transformerless			
Degree of protection	IP65			
Allowable relative humidity range	0-100%			
Max. operating altitude	2000m			
Noise	<30dB	<45dB	<45dB	<45dB
Weight	37kg			
Cooling	Natural	Fan	Fan	Fan
Dimension	666*512*254mm			
Display	LCD display			
Warranty	5 years/ 7 years/ 10 years			
Standard				
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12			
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30), IEC60255			
Grid standards	AS/NZS 4417, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, EN 50549, G59, P.O. 12.3, RD1699, UTE C15-712-1, EN 50530, NB/T32004			



ZENERGY 30k~40kTL

30000/ 33000/ 36000/ 40000

Three-Phase Dual-MPPT

-  Super large 4-inch LCD
-  Fuse free design
-  Outdoor IP65 protection level
-  I-V curve scanning function
-  Max. efficiency up to 98.7%
-  Support Modbus communication, external Wifi/ Ethernet/ GPRS (optional)

Datasheet	Znergy 30000TL	Znergy 33000TL	Znergy 36000TL	Znergy 40000TL
Input (DC)				
Recommended Max. PV input power	39900Wp	43890Wp	47880Wp	53200Wp
Max DC power for single MPPT	15360W	17000W	20400W	20400W
Number of MPP trackers	2			
Number for DC inputs	4 for each MPPT			
Max. input voltage	1000V			
Start-up voltage	350V			
Rated input voltage	600V	600V	600V	700V
MPPT operating voltage range	250V-960V			
Full power MPPT voltage range	480V-800V	480V-800V	500V-800V	560V-800V
Max. input MPPT current	32A/32A	35A/35A	38A/38A	35A/35A
Max. input current per string	12A			
Maximum DC input short circuit current per MPPT	40A	40A	42A	40A
Output (AC)				
Rated power	30000W	33000W	36000W	40000W
Max. AC power	30000VA	33000VA	36000VA	40000VA
Max. Output current	43A	48A	54A	48A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac			
Grid voltage range	310Vac-480Vac (According to local standard)		422Vac-528Vac(According to local standard)	
Nominal frequency	50/60Hz			
Grid Frequency range	45Hz-55Hz/54Hz-66Hz (According to local standard)			
Active power adjustable range	0-100%			
THDi	< 3%			
Power factor	> 0.99 (adjustable+/-0.8)			
Performance				
Max efficiency	98.5%	98.5%	98.5%	98.7%
European weighted efficiency	98.2%	98.2%	98.2%	98.4%
Self-consumption at night	< 1W			
MPPT efficiency	> 99.9%			
Protection				
DC reverse polarity protection	Yes			
DC switch	Yes			
Protection class/ overvoltage category	I/III			
Safety protection	Anti islanding, RCMLU, Ground fault monitoring			
ARPC	Anti reverse power controller (optional)			
Input/output SPD (II)	Optional			
Communication				
Power management unit	According to certification and request			
Standard communication mode	RS485, Wifi/Ethernet/GPRS (optional), SD card, Multi-function relay			
Operation data storage	25 years			
General Data				
Ambient temperature range	-25°C ~ +60°C			
Topology	Transformerless			
Degree of protection	IP65			
Allowable relative humidity range	0-100%			
Max. operating altitude	2000m			
Noise	< 30dB	< 45dB	< 45dB	< 45dB
Weight	50kg			
Cooling	Natural	Fan	Fan	Fan
Dimension	774*564*298mm			
Display	LCD display			
Warranty	5 years/ 7 years/ 10 years			
Standard				
EMC	EN 61000-6-2, EN 61000-6-4			
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30)			
Grid standards	AS/NZS 4777, AS/NZS 61000, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, EN50549, G59, Rdl 699, UTE C 15-712-1, EN50530			

The models marked with *** should be available only for some designated countries.



ZENERGY 50k~70kTL

50000/ 60000/ 70000

Three-Phase Three-MPPT

- Super large 4-inch LCD
- Outdoor IP65 protection level
- Sound and light alarm function
- DC SPD Class 2, over/under voltage, over current, over temperature, Anti-islanding and other multiple protections
- Fuse free design
- Built-in DRM port and logic
- 98.6% Max. efficiency up to 98.6%

Datasheet	Znergy 50000TL	Znergy 60000TL	Znergy 70000TL-HV
Input (DC)			
Recommended Max. PV input power	66500Wp	79800Wp	93100Wp
Max DC power for single MPPT	22000W 16000W 16000W	22000W 22000W 22000W	26000W 26000W 26000W
Number of MPP trackers		3	
Number for DC inputs	4/3/3	4/4/4	4/4/4
Max. input voltage		1000V	
Start-up voltage		350V	
Rated input voltage	600V	600V	700V
MPPT operating voltage range		250V-950V	
Full power MPPT voltage range	530V-800V	530V-800V	660V-800V
Max. input MPPT current	40A/30A/30A	40A/40A/40A	40A/40A/40A
Max. input current per string		12A	
Maximum DC input short circuit current per MPPT	48A/36A/36A	48A	48A
Output (AC)			
Rated power	50000W	60000W	70000W
Max. AC power	50000VA	60000VA	75000VA
Max. Output current	80A	90A	90A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac, 240/415Vac		3/N/PE or 3/PE, 277/480Vac
Grid voltage range	310Vac-480Vac (According to local standard)		422Vac-528Vac(According to local standard)
Nominal frequency		50/60Hz	
Grid Frequency range		45Hz-55Hz/54Hz-66Hz (According to local standard)	
Active power adjustable range		0-100%	
THDI		<3%	
Power factor		> 0.99 (adjustable +/-0.8)	
Performance			
Max efficiency	98.5%	98.6%	98.6%
European weighted efficiency	98.3%	98.4%	98.4%
Self-consumption at night		< 1W	
MPPT efficiency		> 99.9%	
Protection			
DC reverse polarity protection		Yes	
DC switch		Yes	
Protection class/ overvoltage category		I/III	
Input/ output SPD(III)		PV: type II standard, AC: type II optional	
Safety protection		Anti islanding, RCMU, Ground fault monitoring	
ARPC		Anti reverse power controller (optional)	
Communication			
Power management unit		According to certification and request	
Standard communication mode		RS485, Wifi/Ethernet/GPRS(optional), SD card, Multi-function relay	
Operation data storage		25 years	
General Data			
Ambient temperature range		-25°C~ +60°C	
Topology		Transformerless	
Degree of protection		IP65	
Allowable relative humidity range		0-100%	
Max. operating altitude		4000m	
Noise		≤60dB	
Weight	68kg	70kg	70kg
Cooling		Fan	
Dimension		713*737*297mm	
Display		LCD display	
Warranty		5 years/ 7 years/ 10 years	
Standard			
EMC	EN 61000-6-2, EN 61000-6-4, EN 61000-3-11, EN 61000-3-12		
Safety standards	IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1,2,14,30)		
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, BDEW, CEI 0-21/CEI 0-16, UNE 206 007-1, EN50549, G59, EN50530, NB/T32004		



ZENERGY 80K~136KTL

80KTL/100KTL/110KTL/100KTL-HV/125KTL-HV/136KTL-HV



Three-Phase Eight to twelve MPPTs

- 99%** Max. efficiency up to 99%
- Remote** Remote firmware upgrade
- Outdoor** Outdoor IP66 protection level
- I-V** I-V curve scanning function
- SPD** Type II SPD for both DC and AC
- 12 MPPT** Maximum 12 MPP trackers with 1.5* DC overload
- Modbus** Support Modbus communication, external Wifi/ PLC/ GPRS (optional)
- AC/DC** AC/DC dual power supply redundant design, 24-hour status monitoring

Datasheet	Znergy 80KTL	Znergy 100KTL	Znergy 110KTL	Znergy 100KTL-HV	Znergy 125KTL-HV	Znergy 136KTL-HV
Input (DC)						
Max. input voltage				1100V		
Rated input voltage	600V	600V	600V	680V	680V	680V
Start-up voltage				200V		
MPPT operating voltage range				180V-1000V		
Full power MPPT voltage range	500V-850V	500V-850V	500V-850V	550V-850V	550V-850V	550V-850V
Number of MPP trackers	8	10	10	10	10	12
Number for DC inputs	16	20	20	20	20	24
Max. input current per MPPT				26A		
Max. input short circuit current per MPPT				40A		
Output (AC)						
Rated power	80kW	100kW	110kW	100kW	125kW	136kW
Max. AC power	88kVA	110kVA	121kVA	110kVA	137kVA	150kVA
Max. output current	128A	160A	175A	128A	160A	160A
Nominal grid voltage		3/N/PE, 230V/400Vac, 220V/380Vac		3/PE, 288V/500Vac	3/PE, 288V/500Vac	3/PE, 311V/540Vac
Grid voltage range	310Vac-480Vac	310Vac-480Vac	310Vac-480Vac	400Vac-575Vac	400Vac-575Vac	432Vac-621Vac
Nominal frequency				50/60Hz		
Grid frequency range				45Hz-55Hz/54Hz-60Hz (According to local standard)		
Active power adjustable range				0-100%		
THDi				<3%		
Power factor				1default (adjustable +/-0.8)		
Performance						
Max. Efficiency	98.60%	98.70%	98.75%	98.80%	99.00%	99.00%
European weighted efficiency	98.20%	98.30%	98.40%	98.50%	98.50%	98.51%
MPPT efficiency				>99.9%		
Protection						
DC reverse polarity protection				Yes		
Anti-islanding protection				Yes		
Leakage current protection				Yes		
Ground fault monitoring				Yes		
PV-array string fault monitoring				Yes		
Zero voltage ride through				Yes		
DC switch				Yes		
Anti-PID protection				Optional		
AFCI				Optional		
Protection class/ Overvoltage category				III		
Input/ Output SPD				PV: type II standard, AC: type II standard		
Communication						
Power management unit				According to certification and request		
Communication				RS485, Optional: Wifi/ GPRS/ PLC		
Operation data storage				25 years		
General Data						
Ambient temperature range				-30°C ~ +60°C		
Topology				Transformerless		
Degree of protection				IP66		
Allowable relative humidity range				0-100%		
Max. operating altitude				4000m		
Noise				≤60 dB		
Weight	85kg	90kg	90kg	85kg	90kg	92kg
Cooling				Smart forced air cooling		
Dimension				1051*660*340mm		
Display				LCD+Bluetooth+APP		
Warranty				5 years/ 7 years/ 10 years		
Standard						
EMC				EN 61000-6-2, EN 61000-6-4		
Safety standard				IEC62109-1/2, IEC62116, IEC61727, IEC-61683, IEC60068(1, 2, 14, 30)		
Grid standard				AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21/CEI 0-16, UNE 206 007-1, EN50549, G99, EN50530, NB/T32004		



ZENERGY 3000SP

3KW AC

Coupled energy storage inverter

-  A variety of work modes are optional
-  LCD+LED – human friendly-machine interface
-  Outdoor IP65 design
-  Smart battery energy management system
-  Compatible with other brands of inverter
-  Flexible configuration of lead acid or lithium battery
-  Integrated fanless self-recognition heat dissipation design

Datasheet

ME 3000SP

Battery Parameters

Battery Type	Lithium-Ion, Lead-acid
Nominal battery voltage	48V
Battery voltage range	42-58V
Recommended battery capacity	200Ah (100–500Ah optional)
Recommended storage capacity	9.6kWh
Max. Charging current	60A
Charging current range	0-60A (Programmable)
Charging curve	3-Stage adaptive with maintenance
Max. Discharging current	60A
Electronic protection	OCP OTP OVP
Short circuit protection	Fuse (100A)
Discharge times (Hour)	Po = 1kVA/9.6h Po = 3kVA/3.2h
Depth of discharge	Lithium-Ion: 0-80% DOD adjustable Lead-acid: 0-50% DOD adjustable

AC Parameters

Max. Output power	3kVA
Rated Input/ Output voltage	230V
Max. Input/ Output current	13A
AC Input/ Voltage range	180V-270V
Grid frequency range	44–55Hz / 54–66Hz
THD	<3%
Power factor	1 default (+/-0.8 adjustable)
Connection phase	Single
Current (inrush)	0.8A/ 1us
Maximum output fault current	100A/ 1us
Maximum output over current protection	13A

System Parameters

Max. Charging efficiency	>95%
Max. Discharging efficiency	>95%
Standby losses	<5W
Topology	High frequency isolated transformer
Degree of protection	IP65
Safety protection	Anti islanding, RCMU, Ground fault monitoring
Communication	RS485, Wifi/Ethernet/GPRS, CAN2.0
SPD protection	III

Environmental

Ambient temperature range	-25°C – +60°C (Above 45°C Derating)
Allowable relative humidity range	0 – 100%
Protective class	Class I
Max. Operating altitude	2000m
Current sensor connection	External

Emergency Power Supply

EPS rated power	3000VA
EPS rated voltage, Frequency	230V, 50/60Hz
EPS rated current	13A
Total harmonic distortion	<3%
Switch time	<3s

General Data

Noise	<25dB
Weight	16kg
Cooling	Natural
Dimension (W*H*D)	530*360*173mm
Display	LCD display
Warranty	5 Years (Optional: Extension to 10 years)

Standard

EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Safety standards	IEC62109-1/2, IEC62040-1
Grid standards	AS/NZS 4777, AS/NZS 62040, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50549, G83/G98, UTE C15-712-1



ZENERGY 3000SP

3KW AC

Coupled energy storage inverter

-  A variety of work modes are optional
-  LCD+LED – human friendly-machine interface
-  Outdoor IP65 design
-  Smart battery energy management system
-  Compatible with other brands of inverter
-  Flexible configuration of lead acid or lithium battery
-  Integrated fanless self-recognition heat dissipation design

Datasheet

ME 3000SP

Battery Parameters

Battery Type	Lithium-Ion, Lead-acid
Nominal battery voltage	48V
Battery voltage range	42-58V
Recommended battery capacity	200Ah (100–500Ah optional)
Recommended storage capacity	9.6kWh
Max. Charging current	60A
Charging current range	0-60A (Programmable)
Charging curve	3-Stage adaptive with maintenance
Max. Discharging current	60A
Electronic protection	OCP OTP OVP
Short circuit protection	Fuse (100A)
Discharge times (Hour)	Po = 1kVA/9.6h Po = 3kVA/3.2h
Depth of discharge	Lithium-ion: 0-80% DOD adjustable Lead-acid: 0-50% DOD adjustable

AC Parameters

Max. Output power	3kVA
Rated Input/ Output voltage	230V
Max. Input/ Output current	13A
AC Input/ Voltage range	180V-270V
Grid frequency range	44–55Hz / 54–66Hz
THD	<3%
Power factor	1 default (+/-0.8 adjustable)
Connection phase	Single
Current (inrush)	0.8A/ 1us
Maximum output fault current	100A/ 1us
Maximum output over current protection	13A

System Parameters

Max. Charging efficiency	>95%
Max. Discharging efficiency	>95%
Standby losses	<5W
Topology	High frequency isolated transformer
Degree of protection	IP65
Safety protection	Anti islanding, RCMU, Ground fault monitoring
Communication	RS485, Wifi/Ethernet/GPRS, CAN2.0
SPD protection	III

Environmental

Ambient temperature range	-25°C~+60°C (Above 45°C Derating)
Allowable relative humidity range	0–100%
Protective class	Class I
Max. Operating altitude	2000m
Current sensor connection	External

Emergency Power Supply

EPS rated power	3000VA
EPS rated voltage, Frequency	230V, 50/60Hz
EPS rated current	13A
Total harmonic distortion	<3%
Switch time	<3s

General Data

Noise	<25dB
Weight	16kg
Cooling	Natural
Dimension (W*H*D)	530*360*173mm
Display	LCD display
Warranty	5 Years (Optional: Extension to 10 years)

Standard

EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Safety standards	IEC62109-1/2, IEC62040-1
Grid standards	AS/NZS 4777, AS/NZS 62040, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50549, G83/G98, UTE C15-712-1









ZENERGY 3k~6k-ES

3000/3600/4000/4600/5000/6000

Single-Phase Energy storage integrated inverter



-  Outdoor IP65 design
-  Compatible with on grid and off grid
-  A variety of work modes are optional
-  EPS function, switching time is less than 10ms
-  Built-in zero export function
-  Flexible configuration of lead acid or lithium battery
-  Integrated fanless self-recognition heat dissipation design

Datasheet	Znergy 3000-ES	Znergy 3600-ES	Znergy 4000-ES	Znergy 4600-ES	Znergy 5000-ES	Znergy 6000-ES
Battery Parameters						
Battery Type	Lithium-Ion, Lead-acid					
Nominal battery voltage	48V					
Battery voltage range	42-58V					
Battery Capacity	50-2000Ah					
Maximum Charging / Discharging Power	3000W					
Maximum Charging Current	45A (Programmable)					
Maximum Discharging Current	70A (Programmable)					
Charging curve(Lithium-ion)	BMS					
Charging curve(Lead-acid)	3-Stage adaptive with maintenance					
Depth of discharge	Lithium-Ion: 0-90% DOD adjustable, Lead-acid:0-50% DOD adjustable					
Input DC(PV side)						
Recommended Max. PV Input power	3990Wp	4790Wp	5320Wp	6120Wp	6650Wp	7980Wp
Max DC power for single MPPT	2000W	2400W	2600W	2800W	3000W	3500W
Max. input voltage	600V					
Start-up voltage	120V					
Nominal DC Voltage	360V					
MPPT operating voltage range	90-580V					
Full power MPPT voltage range	160V-520V	180V-520V	200V-520V	230V-520V	250V-520V	300V-520V
MPPT number	2					
The max DC input current	12A/12A					
The max DC input short current	15A/15A					
Output AC(Grid side)						
Rated Power	3000W	3600W	4000W	4600W	5000W	6000W
Max. Output Power	3000VA	3600VA	4000VA	4600VA	5000VA	6000VA
Nominal Grid Voltage	L/N/PE: 220, 230, 240					
Operation phase	Single (L-N-PE)					
Max. Input / Output current	13.7A	16A	18.2A	21.0A	22.8A	27.3A
AC voltage Range	180V-276V (According to local standard)					
Grid Frequency range	44-55Hz/54-66Hz (According to local standard)					
THD	<3%					
Power factor	1 default (+/-0.8 adjustable)					
Output AC(Emergency Power Supply)						
EPS rated power	3000VA					
Operation phase	Single (L-N-PE)					
EPS rated voltage, Frequency	230V/ 50/60Hz					
EPS rated current	13.2A					
Peak Output Apparent Power	4000VA, 10s					
THD	<3%					
Switch time	10ms default					
Efficiency						
MPPT efficiency	99.9%					
Max efficiency of solar inverter	97.6%	97.6%	97.6%	97.8%	97.8%	98.0%
European efficiency of solar inverter	97.2%	97.2%	97.2%	97.3%	97.3%	97.5%
Max. Charging efficiency of battery	94.6%					
Max. Discharging efficiency of battery	94.6%					
Protection						
PV reverse polarity protection	Yes					
PV insulation detection	Yes					
Ground fault monitoring	Yes					
Over current protection	Yes					
Over voltage protection	Yes					
Battery soft start protection	Yes					
SPD protection	III					
General Data						
Ambient temperature range	-25°C ~ +60°C (Above 45°C Derating)					
Standby Losses	< 10W					
Topology	High frequency isolation (for bat)					
DC-Switch	Yes					
Degree Of Protection	IP65					
Allowable Relative Humidity Range	0-100%					
Communication	RS485, Wi/Ethernet/GPRS, SD, CAN2.0					
Protective class	Class I					
Max. Operating Altitude	2000m					
Current Sensor Connection	External					
Noise	<25dB					
Weight	20.5kg					
Cooling	Natural					
Dimension (W*H*D)	564*394*173 mm					
Display	LCD display					
Warranty	5 Years or more					
Standard						
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12					
Safety standards	IEC62109-1/2, IEC62040-1, IEC62116, IEC61727, IEC-61683, IEC60068(1, 2, 14, 30)					
Grid standards	AS/NZS 4777, VDE V 0124-100, V 0126-1-1, VDE-AR-N 4105, CEI 0-21, EN50549, GB3/G59/G98/G99, UTE C 15-712-1, UNE 206 007-1					
The models marked with "*" should be available only for some designated countries.						



ZENERGY 5K~20KTL-3PH

5000/6000/8000/10000/15000/20000



Three-Phase Energy storage integrated inverter

- 2 MPPT** 2 MPPT inputs, more flexible configuration
- APF** Maximum two battery inputs
- Smart Control** Diversified work patterns and rapid gains
- Smart Control** Full digital control, higher control accuracy
- Grid** Multiple parallel systems, more flexible system solutions
- Grid** Off-grid output can be connected to unbalanced load, three-phase separate output is supported

Datasheet	Znergy 5KTL-3PH	Znergy 6KTL-3PH	Znergy 8KTL-3PH	Znergy 10KTL-3PH	Znergy 15KTL-3PH	Znergy 20KTL-3PH
Battery Input Data						
Battery type	Li4em					
No. of battery input	1	1	1	2	2	2
Battery voltage range	180V-800V					
Battery voltage range for full load	200V-800V	240V-800V	320V-800V	200V-800V	300V-800V	400V-800V
Nominal charging/discharging power	5000W	6000W	8000W	10000W	15000W	20000W
Max. charging/discharging current	25A	25A	25A	50A(35A/25A)	50A(35A/25A)	50A(35A/25A)
Peak charging/discharging current, Duration	40A, 60s	40A, 60s	40A, 60s	70A(35A/35A), 60s	70A(35A/35A), 60s	70A(35A/35A), 60s
Charging strategy for battery	Self-adaptation to BMS					
Battery capacity	15Ah~100Ah					
Communication interfaces	CAN(RS485)					
PV String Input Data						
Recommended Max. PV input power	7200Wp(6200Wp/8000Wp)	9000Wp(6400Wp/800Wp)	12000Wp(6400Wp/6600Wp)	15000Wp(7500Wp/7500Wp)	22500Wp(1200Wp/1200Wp)	30000Wp(1000Wp/1000Wp)
Max. DC voltage	1000V					
Start-up operating voltage	200V					
MPPT voltage range	180V-960V					
Nominal DC voltage	600V					
Full power MPPT voltage range	250V-850V	320V-850V	340V-850V	220V-850V	350V-850V	450V-850V
Max. input current	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	25A/25A	25A/25A	25A/25A
Max. short current	15A/15A	15A/15A	15A/15A	30A/30A	30A/30A	30A/30A
No. of MPPT trackers	2					
No. of strings per MPPT tracker	1	1	1	2	2	2
AC Output Data (On-grid)						
Nominal AC power	5000W	6000W	8000W	10000W	15000W	20000W
Max. AC power output to utility grid	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Max. AC power from utility grid	10000VA	12000VA	16000VA	20000VA	30000VA	40000VA
Max. AC current output to utility grid	8A	10A	13A	16A	24A	32A
Max. AC current from utility grid	15A	17A	24A	29A	44A	58A
Nominal grid voltage	3/N/PE, 220/380Vac, 230/400Vac					
Grid voltage range	184Vdc~276Vdc					
Nominal grid frequency	50/60Hz					
Grid frequency range	45Hz~55Hz/55Hz~65Hz					
Output power factor	-1 (0 leading to 0.8 lagging)					
Output THDi (@Nominal output)	<3%					
AC Output Data (Back-up)						
Nominal output power	5000W	6000W	8000W	10000W	15000W	20000W
Max. output power	5500VA	6600VA	8800VA	11000VA	16500VA	22000VA
Peak output power, Duration	10000VA, 60s	12000VA, 60s	16000VA, 60s	20000VA, 60s	22000VA, 60s	22000VA, 60s
Max. output current	8A	10A	13A	16A	24A	32A
Peak output current, Duration	15A, 60s	18A, 60s	24A, 60s	30A, 60s	32A, 60s	32A, 60s
Nominal output voltage	3/N/PE, 220/380Vac, 230/400Vac					
Nominal output frequency	50/60Hz					
Output THDv (@Liner load)	<3%					
Switch time	<15ms					
Efficiency						
MPPT efficiency	99.9%					
Euro efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%
Max. efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%
Max. battery charge/discharge efficiency	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%
Protection						
DC switch	Yes					
PV reverse polarity protection	Yes					
Output over current protection	Yes					
Output over voltage protection	Yes					
Anti-islanding protection	Yes					
Residual current detection	Yes					
Insulation resistor detection	Yes					
Surge protection level	II					
Battery reverse protection	Yes					
General Data						
Dimension	571.4*515*264.1mm					
Weight	33kg	33kg	33kg	37kg	37kg	37kg
Inverter topology	Transformerless					
Standby self-consumption	<10W					
Operating temperature range	-30°C~+40°C					
Relative humidity	0~100%					
Noise	<45dB					
Operating altitude	<4000m					
Cooling	Natural	Natural	Natural	Forced airflow	Forced airflow	Forced airflow
Protection degree	IP65					
Feature						
DC terminal	MCK					
Grid AC terminal	SP Connector					
Back-up AC terminal	SP Connector					
Display	LCD Display					
Monitoring interfaces	Bluetooth/RS485/WIFI/GPRS (optional)					
Parallel operation	Yes					
Standard warranty	Standard 5 years					
Certifications & Standards						
EMC	EN61000-4-1, EN61000-4-3					
Safety	IEC62109-1, IEC62109-2, NB-T32004IEC62040-1					
Grid	AS/NZS 4777, VDE V 0124-100, V0126-1-1, VDE-AR-N 4105, CEI 0-16/CEI 0-21, EN62049, QN009, UTE C15-712-1					

ZS 750~3300TL-X



- Maximum efficiency of 97.2%
- Compact design
- Touch key and OLED display
- Flexible interface
- Online service

Datasheet	ZS 750TL-X	ZS 1000TL-X	ZS 1500TL-X	ZS 2000TL-X	ZS 2500TL-X	ZS 3000TL-X	ZS 3300TL-X
Input data (DC)							
Max. recommended PV power (for module STC)	1050W	1400W	2100W	2800W	3500W	4200W	4290W
Max. DC voltage	500V	500V	500V	500V	550V	550V	550V
Start voltage	50V	50V	50V	50V	80V	80V	80V
Nominal voltage	120V	180V	250V	360V	360V	360V	360V
MPP voltage range	50V-500V	50V-500V	50V-500V	50V-500V	65V-550V	65V-550V	65V-550V
No. of MPP trackers	1			1			
No. of PV strings per MPP tracker	1			1			
Max. input current per MPP tracker				13A			
Max. short-circuit current per MPP tracker				16A			
Output data (AC)							
AC nominal power	750W	1000W	1500W	2000W	2500W	3000W	3300W
Max. AC apparent power	750VA	1000VA	1500VA	2000VA	2500VA	3000VA	3300VA
Nominal AC voltage (range*)	230V (180-280V)						
AC grid frequency (range*)	50/60 Hz (45-55Hz/55-65 Hz)						
Max. output current	3.6A	4.8A	7.1A	9.5A	11.9A	14.3A	14.3A
Adjustable power factor	0.8leading... 0.8lagging						
THDi	<3%						
AC grid connection type	Single phase						
Efficiency							
Max. efficiency	97.4%	97.4%	97.4%	97.4%	97.6%	97.6%	97.6%
European efficiency	96.5%	96.5%	97.0%	97.0%	97.0%	97.1%	97.1%
MPP efficiency	99.9%						
Protection devices							
DC reverse polarity protection	Yes						
DC switch	Yes						
AC/DC surge protection	Type II / Type III						
Insulation resistance monitoring	Yes						
AC short-circuit protection	Yes						
Ground fault monitoring	Yes						
Grid monitoring	Yes						
Anti-islanding protection	Yes						
Residual-current monitoring unit	Yes						
AFCI protection	Optional						
General data							
Dimensions (W / H / D)				274/254/138mm			
Weight	6kg	6kg	6kg		6.2kg	6.2kg	6.2kg
Operating temperature range	-25°C ... +60°C						
Noise emission (typical)	≤25 dB(A)						
Nighttime power consumption	< 0.5W						
Topology	Transformerless						
Cooling	Natural convection						
Protection degree	IP65						
Relative humidity	0-100%						
Altitude	4000m						
DC connection	H4/MC4(Optional)						
AC connection	Connector						
Display	OLED + LED/WIFI + APP						
Interfaces: RS485 / USB/WI-FI / GPRS / RF/LAN				Yes/Yes/Optional/Optional/Optional/Optional			
Warranty: 5 years / 10 years	Yes/Optional						

* The AC voltage and frequency range may vary depending on specific country grid standard. All specifications are subject to change without notice.

ZS 15~25KTL3-X



- Max. efficiency 98.7%
- 40% compact and lighter
- Dual MPP trackers
- Supports export control
- Touch key and OLED display
- Type II SPD on AC and DC side

Datasheet	ZS 75kTL3-X	ZS 17kTL3-X	ZS 20kV13-X	ZS 22kTL3-X	ZS 250kTL3-X
Input data (DC)					
Max. recommended PV power (for module STC)	22500W	25500W	30000W	33000W	37500W
Max. DC voltage	1100V				
Start Voltage	250V				
Nominal voltage	680V				
MPP voltage range	160V-1000V				
No. of MPP trackers	2				
No. of PV strings per MPP tracker	2	2	2	2	2/3
Max. input current per MPP tracker	25A	25A	25A	25A	25A/37.5A
Max. short circuit current per MPP	32A	32A	32A	32A	32A/48A
Output data (AC)					
Rated AC output power	15000W	17000W	20000W	22000W	25000W
Max. AC apparent power	16600VA	18800VA	22000VA	24400VA	27700VA
Nominal AC voltage (range*)	220V/380V, 230V/400V (340-440V)				
AC grid frequency (range*)	50/60 Hz (45-58Hz/55-65 Hz)				
Max. output current	24.2A	27.4A	31.9A	35.5A	40.2A
Adjustable power factor	0.8leading... 0.8lagging				
THDi	<3%				
AC grid connection type	3W + N + PE				
Efficiency					
Max. efficiency	98.75%				
European efficiency	98.6%				
MPP efficiency	99.9%				
Protection devices					
DC reverse polarity protection	Yes				
DC Switch	Yes				
AC/DC surge protection	TypeII/Type II				
Insulation resistance monitoring	Yes				
AC short-circuit protection	Yes				
Ground fault monitoring	Yes				
Grid monitoring	Yes				
Anti-islanding protection	Yes				
Residual-current monitoring unit	Yes				
String monitoring	Optional				
AFCI protection	Optional				
General data					
Dimensions (W / H / D)	525/395/222mm				
Weight	23kg				
Operating temperature range	-25 °C ... +60 °C				
Noise emission (typical)	≤40 dB(A)				
Self-Consumption (night)	< 1W				
Topology	Transformerless				
Cooling	Smart air cooling				
Protection degree	IP65				
Relative Humidity	0-100%				
Altitude	4000m				
DC connection	H4/MC4(Optional)				
AC connection	Cable gland + OF terminal				
Display	OLED + LED/WIFI + APP				
Interfaces: RS485 / USB / WIFI / GPRS / RF / LAN	Yes/Yes/Optional/Optional/Optional/Optional				
Warranty: 5 years / 10 years	Yes/Optional				

* The AC voltage range and frequency range may vary depending on specific country grid standard. All specifications are subject to change without notice.

ZS 25~40KTL3-X



- The maximum efficiency is up to 98.8%
- 40% compact and lighter
- AFCI function optional
- Self-consumption monitoring
- Touch key and OLED display
- Type II SPD on DC and AC side

Datasheet	ZS 25KTL3-X1	ZS 30KTL3-X	ZS 33KYL3-X	ZS 36KTL3-X	ZS 40KTL3-X
Input data (DC)					
Max. recommended PV power (for module STC)	37500W	45000W	49500W	54000W	60000W
Max. DC voltage			1100V		
Start Voltage			250V		
Normal Voltage			600V		
MPP voltage range			200-1000V		
No. of MPP trackers	3	3	3	4	4
No. of PV strings per MPP tracker			26A		
Max. short-circuit current per MPP tracker			32A		
Output data (AC)					
AC nominal power	25000W	30000W	33000W	36000W	40000W
Max. AC apparent power	27700VA	33300VA*	36600VA	39600VA	44000VA
Nominal AC voltage (range*)			220V/380V, 230V/400V (340-440V)		
AC grid frequency (range*)			50/60 Hz (45-65Hz±0.5 Hz)		
Max. output current	40A	50.5A	55.5A	60.0A	66.6A
Adjustable power factor			0.8leading...0.8lagging		
THDI			<3%		
AC grid connection type			3W+N+PE		
Efficiency					
Max. efficiency			98.8%		
European efficiency			98.5%		
MPP efficiency			99.9%		
Protection devices					
DC reverse polarity protection			Yes		
DC switch			Yes		
AC/DC surge protection			Type II / Type II		
Insulation resistance monitoring			Yes		
AC short-circuit protection			Yes		
Ground fault monitoring			Yes		
Grid monitoring			Yes		
Anti-islanding protection			Yes		
Residual-current monitoring unit			Yes		
String monitoring			Optional		
Anti-PID function			Optional		
AFCI protection			Optional		
General data					
Dimensions (W / H / D)			575/420/225mm		
Weight			30kg		
Operating temperature range			-35°C ... +60°C		
Noise emission (typical)			≤50dB(A)		
Nighttime power consumption			<1W		
Topology			Transformerless		
Cooling			Smart air cooling		
Protection degree			IP66		
Relative humidity			0-100%		
Altitude			4000m		
DC connection			H4/MC4(Optional)		
AC connection			Cable gland + Cf terminal		
Display			OLED + LED / WF1 + APP		
Interfaces: RS485 / USB / WiFi / GPRS / BT / LAN			Yes/Yes / Optional/Optional/Optional/Optional		
Warranty: 5 years / 10 years			Yes / Optional		

CE, VDE0126, Graeco, EN50549, C10/C11, UTE C 15-712, IEC62116, IEC61727, IEC 60068, IEC 61683, CE0-21, CE0-16, N4105, TOR Eneugel, G98/G99, G100, AS/NZS 3100, ASA777, UNE217001, UNE200607, PO12.2, KSC8565

* For Belgium C10/C11 and VDE-AR-N4105, MID 30KTL3-X max. output power is limit to 30KW.
* The AC voltage range and frequency range may vary depending on specific country grid standards.
All specifications are subject to change without notice.

ZS 2500~6000TL-X



- Maximum efficiency 98.4%
- Type II SPD on DC side
- Touch key and OLED display
- Dual MPP trackers
- Supports export control

Datasheet	ZS 2500TL-X	ZS 3000TL-X	ZS 3600TL-X	ZS 4200TL-X	ZS 4600TL-X	ZS 5000TL-X	ZS 6000TL-X
Input Data							
Max. recommended PV power (for module STC)	3500W	4200W	5040W	5880W	6440W	7000W	8100W
Max. DC voltage		500V			550V		
Start voltage				100V			
MPP work voltage range/ nominal voltage				80V-500V / 360V			
Max. input current				12.5A/12.5A			
Max. short-circuit current				16A/16A			
Number of independent MPP trackers / strings per MPP tracker				2/1			
Output (AC)							
Rated AC output power	2500W	3000W	3600W	4200W	4600W	5000W	6000W
Max. AC apparent power	2500VA	3000VA	3600VA	4200VA	4600VA	5000VA	6000VA
Max. output current	11.3A	13.6A	16A	19A	20.9A	22.7A	27.2A
AC nominal voltage				230V(160V-300V)			
AC grid frequency				50Hz/60Hz ±0.5Hz			
Adjustable power factor				0.8leading...0.8lagging			
THDI				<3%			
AC connection				Single phase			
Efficiency							
Max. efficiency	98.2%	98.2%	98.2%	98.4%	98.4%	98.4%	98.4%
Euro weighted efficiency	97.1%	97.1%	97.2%	97.5%	97.5%	97.5%	97.5%
MPP efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Protection Devices							
DC reverse polarity protection				Yes			
DC switch				Yes			
DC surge protection				Type II			
Output over current protection				Yes			
Output over voltage protection-avalanche				Yes			
Ground fault monitoring				Yes			
Grid monitoring				Yes			
Integrated all - pole sensitive leakage current monitoring unit				Yes			
General Data							
Dimensions (W / H / D) in mm				375/300/160			
Weight				10.8KG			
Operating temperature range				-25°C ... +60°C			
Noise emission (typical)				≤25 dB(A)			
Altitude				4000m			
Self-Consumption night				< 0.5W			
Topology				Transformerless			
Cooling concept				Natural			
Environmental Protection Rating				IP65			
Relative humidity				100%			
Features							
DC connection				H4/MC4(opt)			
AC connection				Connector			
Display				OLED + LED			
Interfaces: RS485 / USB / WiFi / 4G / RF				Yes / yes / opt / opt / opt			
Warranty: 5 years / 10 years				Yes / opt			

CE, IEC62109, G83, VDE0126-1-1, VFR2014, G59, ASA777, AS/NZS 3100, CE0-21, VDE-AR-N4105, EN50438, CQC, IEC61683, IEC60068, IEC61727, IEC62116

*1 For VDE-AR-N4105 Max. output power is 4600W *2 For ASA777, Iac max. 21.7A

ZS 2500~6000TL-X



- Battery ready
- Max. Efficiency 98.4%
- Type II SPD on DC side
- Dual MPP trackers
- Rapid shutdown & AFCI optional
- Touch key and OLED display

Datasheet	ZS 2500TL-X1	ZS 3000TL-XH	ZS 3600TL-XH	ZS 4200TL-XH	ZS 4600TL-XH	ZS 5000TL-XH	ZS 6000TL-XH
Input Data (PV)							
Max. recommended PV power (for module STC)	3500W	4200W	5150W	5880W	6440W	7000W	8100W
Max. PV voltage	500V				550V		
Start voltage				100V			
Nominal voltage				360V			
MPP voltage range				70V~600V			
Number of independent MPP trackers / strings per MPP tracker				2/1			
Max. input current per MPP trackers				12.5A			
Max. short-circuit current per MPP trackers				16A/16A			
Input Data (DC)							
Max. input voltage				480V			
Nominal DC input voltage				380V			
Max. input current				16A			
Output Data (AC Grid)							
AC nominal power	2500W	3000W	3600W	4200W	4600W	5000W	6000W
Max. AC apparent power	2500VA	3000VA	3600VA	4200VA	4600VA	5000VA	6000VA
Nominal output voltage				230V/187V~276V			
Nominal output frequency				50Hz/60Hz			
Max. output current	11.3A	13.6A	16A	19A	20.9A	22.7A	27.2A
Adjustable power factor				0.8leading~0.8lagging			
THDi				<3%			
AC grid connection type				LN/PE			
Output Data (Backup Power)							
AC nominal power	2500W			3000W			
Max. AC apparent power	2500VA			3680VA			
Nominal output voltage				220V/230V~240V			
Nominal output frequency				50Hz/60Hz			
THDv				<5%			
Efficiency							
Max. efficiency	98.2%			98.4%			
Euro-eta	97.1%	97.1%	97.2%	97.2%	97.5%		
MPP efficiency				99.9%			
Protection Devices							
DC reverse-polarity protection				yes			
DC switch				yes			
DC Surge protection				Type II			
AC surge protection-voltstor				yes			
AC short-circuit protection				yes			
Ground fault monitoring				yes			
Grid monitoring				yes			
Residual-current monitoring unit				yes			
AFCI protection				opt			
General Data							
Dimensions (W / H / D) in mm				375/350/160			
Weight				10.8KG			
Operating temperature range				-25°C ... +60°C			
Noise emission (typical)				≤25 dB(A)			
Altitude				4000m			
Self-consumption night				(>2000 derating)			
Topology				≤ 10W			
Cooling concept				transformerless			
Environmental Protection Rating				Natural Convection			
Relative humidity				IP65			
				0%~100%			
Features							
DC connection				H4/MC4(opt)			
AC connection				Connector			
Display				OLED + LED/WIFI + APP			
Interfaces: RS485/USB				yes / yes /			
WiFi/GPRS/4G/RF				opt/opt/opt/opt			
Warranty: 5 / 10 years				yes / opt			

CE: EC62109, AS/NZS 4777.2, CBI 0-21, VDE-AR-N 4105, VDE 0126-1-1, UJE C 16-712-1, EN 50438, EN 50649, IEC 62116, IEC 61727, G98/G99

ZS 7000~8000MTL-X



- Maximum efficiency 98.4%
- DC/AC ratio 131%
- Dual MPP trackers
- Supports export control

Datasheet	ZS 7000MTL-S	ZS 8000MTL-S
Input Data		
Max. recommended PV power (for module STC)	9100W	10500W
Max. DC voltage		650V
Start voltage		100V
Nominal voltage		360V
MPP voltage range		80-550
No. of MPP trackers		2
No. of PV strings per MPP trackers		2/1
Max. input current per MPP trackers		2*12.5A/12.5A
Max. short-circuit current per MPP trackers		32A/16A
DC overvoltage category		Category II
Output Data (AC)		
AC nominal power	7kW	8.2kW
Max. AC apparent power	7kVA	8.2kVA
AC grid frequency/range		220V/180~280V
Max. output current	33.5A	50,60Hz/44-55Hz;54-65Hz
Power factor(@nominal power)		±0.99
Adjustable power factor		0.8leading ... 0.8lagging
THDi		<3%
AC grid connection type		Single phase
AC overvoltage category		Category III
Efficiency		
Max. efficiency	98.4%	
Euro-eta	97.9%	
Protection Devices		
DC reverse-polarity protection	yes	
DC switch	yes	
DC Surge protection	Type III	
Insulation resistance monitoring	yes	
AC surge protection	Type III	
AC short-circuit protection	yes	
Ground fault monitoring	yes	
Grid monitoring	yes	
Anti-islanding protection	yes	
Residual-current monitoring unit	yes	
General Data		
Dimensions (W / H / D) in mm	419/355/185	
Weight	16.8 kg	
Operating temperature range	-25 °C ... + 60 °C	
Noise emission (typical)	≤ 25 dB(A)	
Altitude	3000m	
Internal consumption at night	~0.5W	
Topology	transformerless	
Cooling	Natural convection	
Protection degree	IP65	
Relative humidity	0~100%	
DC connection	VP-D4/MC4(Optional)	
AC connection	AC connector	
Features		
Display	LCD + LED	
RS485/RS232	integrated	
WiFi/GPRS/4G/LAN/ RF	Optional	
Warranty: 5/10 years	Yes/ Optional	

INMETRO,AS/NZS 4777.2,IEC62109-1,IEC62109-2

ZS 3000~6000TL3-S



- Max. Efficiency 98%
- Supports export limitation
- Max. DC voltage 1000VDC
- Dual MPP trackers
- Integrated DC switch
- Natural cooling

Datasheet	ZS 3000TL3-S	ZS 4000TL3-S	ZS 5000TL3-S	ZS 6000TL3-S
Input Data				
Max. recommended PV power (for module STC)	4000W	5320W	6650W	8000W
Max. DC voltage		1000V		
Start Voltage		140V		
MPP work voltage range		160V-1000V		
Nominal voltage		620V		
Max. input current		11A/11A		
Number of independent MPP trackers/strings per MPP tracker		2/1		
Output (AC)				
Rated AC output power	3000W	4000W	5000W	6000W
Max. AC apparent power	3000VA	4000VA	5000VA	6000VA
Max. output current	5.1A	6.8A	8.5A	10.2A
AC nominal voltage		230V/400V; 320-478V		
AC grid frequency		50Hz/60Hz, ±5Hz		
Power factor		0.8leading - 0.8lagging		
THDi		< 3%		
AC grid connection type		3W+N+PE		
Efficiency				
Max. efficiency	97.5%	97.6%	96.9%	96.0%
Euro - eta	96.5%	96.7%		97.1%
MPP efficiency		99.5%		
Protection Devices				
DC reverse polarity protection		Yes		
DC switch		Yes		
Output over current protection		Yes		
Output AC overvoltage Protection - Vastor		Yes		
Ground fault monitoring		Yes		
Grid monitoring		Yes		
Integrated all-pole sensitive leakage current monitoring unit		Yes		
General Data				
Dimensions (W / H / D) in mm		480/448/200		
Weight		21.2kg		
Operating temperature range		-25 °C ... +60 °C		
Noise emission (typical)		≤35 dB(A)		
Altitude		3000m		
Self-consumption night		< 0.5W		
Topology		Transformerless		
Cooling concept		Natural		
Environmental Protection Rating		IP65		
Relative humidity		0-100%		
Features				
DC connection		H4/MC4(opt)		
AC connection		Connector		
Display		LCD		
Interfaces:RS232/RS485/RF/Ethernet/Wi-Fi		yes/yes/opt/opt		
Warranty:5 years/10 years		yes/opt		

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, ITC 15-712, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

ZS 7000~10000TL3-S



- Max. Efficiency 98.4%
- Supports export limitation
- Max. DC voltage 1000VDC
- Dual MPP trackers
- Integrated DC switch
- Natural cooling

Datasheet	ZS 7000TL3-S	ZS 8000TL3-S	ZS 9000TL3-S	ZS 10000TL3-S	ZS 11000TL3-S
Input Data					
Max. recommended PV power (for module STC)	9310W	10640W	12000W	13300W	14700W
Max. DC voltage		1000V			
Start Voltage		160V			
MPP work voltage range		200V-1000V			
Nominal voltage		600V			
Max. input current		11.5A/11.5A		13A/13A	
Max. short-circuit current			16A/16A		
Number of independent MPP trackers/strings per MPP tracker			2/1		
Output (AC)					
Rated AC output power	7kW	8kW	9kW	10kW	11kW
Max. AC apparent power	7.7kVA	8.8kVA	9.9kVA	11kVA	12.1kVA
Max. output current	11.7A	13.3A	15A	16.7A	18.3A
AC nominal voltage			230V/400V; 320-478V		
AC grid frequency			50Hz/60Hz, ±5Hz		
Power factor			0.8leading - 0.8lagging		
THDi			< 3%		
AC grid connection type			3W+N+PE		
Efficiency					
Max. efficiency		98.3%		98.4%	
Euro - eta	97.5%	97.8%		98%	
MPP efficiency			99.5%		
Protection Devices					
DC reverse polarity protection			Yes		
DC switch			Yes		
Output over current protection			Yes		
Output AC overvoltage Protection - Vastor			Yes		
Ground fault monitoring			Yes		
Grid monitoring			Yes		
Integrated all-pole sensitive leakage current monitoring unit			Yes		
General Data					
Dimensions (W / H / D) in mm			480/448/200		
Weight			21.6kg		
Operating temperature range			-25 °C ... +60 °C		
Noise emission (typical)			≤35 dB(A)		
Altitude			3000m		
Self-consumption night			< 0.5W		
Topology			Transformerless		
Cooling concept			Natural		
Environmental Protection Rating			IP65		
Relative humidity			0-100%		
Features					
DC connection			H4/MC4(opt)		
AC connection			Scow terminal		
Display			LCD		
Interfaces:RS232/RS485/RF/Wi-Fi			yes/yes/opt/opt		
Warranty:5 years/10 years			yes/opt		

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, VFR 2014, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

ZS 10000~15000TL3-S(-AU)



- Max. Efficiency 98.4%
- Supports export limitation
- Max. DC voltage 1000VDC
- Dual MPP trackers
- Integrated DC switch
- Natural cooling

Datasheet	ZS 10000TL3-S-AU	ZS 12000TL3-S	ZS 13000TL3-S	ZS 15000TL3-S
Input Data				
Max. recommended PV power (for module STC)	13000W	15600W	16900W	19500W
Max. DC voltage		1100V		
Start Voltage		160V		
MPP work voltage range		200V-1000V		
Nominal voltage		600V		
Max. input current		20A/10A		
Number of independent MPP trackers/strings per MPP tracker		2/2 + 1		
Output (AC)				
Rated AC output power	10kW	12kW	13kW	15kW
Max. AC apparent power	11kVA	13.2kVA	14.3kVA	16.5kVA
Max. output current	16.7A	19A	20.6A	23.8A
Output AC voltage		230V/400V 50/60Hz		
Power factor		0.8leading - 0.8lagging		
THDI		<3%		
AC grid connection type		3W+N+PE		
Efficiency				
Max. efficiency		98.3%		
Euro - eta		98%		
MPP efficiency		99.5%		
Protection Devices				
DC reverse polarity protection		yes		
DC switch		yes		
Output over current protection		yes		
Output AC overvoltage Protection - Voltage		yes		
Ground fault monitoring		yes		
Grid monitoring		yes		
Integrated all-pole sensitive leakage current monitoring unit		yes		
General Data				
Dimensions (W / H / D) in mm		480/448/200		
Weight		23.5kg		
Operating temperature range		-25 °C ... +60 °C		
Noise emission (typical)		<35 dB(A)		
Self-Consumption (night)		<0.5W		
Topology		transformerless		
Cooling concept		Natural		
Environmental Protection Rating		IP65		
Altitude		3000m		
Relative Humidity		0-100%		
Features				
DC connection		H4/MC4(cpt)		
AC connection		Screw terminal		
Display		LCD		
Interfaces (RS232/RS485/RF/Ethernet/Wi-Fi)		yes/yes/opt/opt/opt		
Warranty/5 years/10 years		yes/opt		

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, VFR 2014, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

ZS 30000~50000TL3-S



- Max. Efficiency 99%
- Supports export limitation
- String fuse and string monitoring
- Natural cooling
- Dual MPP trackers
- Integrated DC switch
- PID-recovery function
- Type II DC and AC SPDs

Datasheet	ZS 30000TL3-S	ZS 33000TL3-S	ZS 40000TL3-MS	ZS 50000TL3-S
Input Data				
Max. recommended PV Power (for module STC)	40000W	44000W	54000W	67000W
Max DC voltage		1000V		
Start Voltage		250V		
MPP work voltage range		200V-1000V		
Nominal voltage		580V		695V
Max. input current		34A/34A		
Max. input current per string		12A		
Number of MPP trackers / strings per MPP tracker		2/4		
Output (AC)				
Rated AC output power	30kW	33kW	40kW	48kW
Max. AC apparent power	30kVA	36.6kVA	44.4kVA	53.3kVA
Max. output current	48.3A	53A	64.5A	64.5A
AC nominal voltage		230V/400V		277V/480V
AC grid frequency		50Hz/60Hz		
Power factor		0.8 leading - 0.8 lagging		
THDI		<3%		
AC grid connection type		3W+N+PE		3W+N+PE/3W+PE
Efficiency				
Max. efficiency	98.9%		99%	
Euro - eta	98.4%		98.5%	
MPP efficiency		99.5%		
Protection Devices				
DC reverse polarity protection		yes		
DC Switch		yes		
DC Surge protection		Type II		
Ground fault monitoring		yes		
Output short circuit protection		yes		
AC Surge protection		Type II		
String Fuse protection		yes		
String fault monitoring		yes		
Anti-PID protection		yes		
General Data				
Dimensions (W / H / D) in mm		470/754/270		
Weight		48kg		
Operating temperature range		-25 °C ... +60 °C		
Noise emission (typical)		<40 dB(A)		
Altitude		4000m		
Self-consumption night		< 1W		
Topology		transformerless		
Cooling concept		Smart cooling		
Environmental Protection Rating		IP65		
Relative humidity		0-100%		
Features				
Display		Graphic LCD		
Interfaces: RS232/RS485/WiFi/LAN/GPRS		yes / yes / opt / opt / opt		
Warranty/5 years / 10 years		yes / opt		

CE, IEC 62109-1/2, IEC 61727, IEC 62116, VDE 0126-1-1, Greece, VFR 2014, CEI 0-21, CEI 0-16, VDE-AR-N4105, EN50438, G590, AS 4777, IEC 61727, IEC 60066, IEC 61683, DRRG

ZS 50~80KTL3 LV



- 6 MPPTs
- High efficiency up to 99%
- String monitoring
- Smart diagnosis
- Local WIFI connection
- AC&DC type II SPD

Datasheet	ZS 50KTL3 LV	ZS 60KTL3 LV	ZS 70KTL3 LV	ZS 80KTL3 LV
Input Data				
Max.DC power	67000W	80000W	94000W	107000W
Max.DC voltage	1100V			
Start Voltage		250V		
MPP work voltage range		200V-1000V		
Nominal voltage	585V		600V	685V
Max. input current per MPPT		25A		
Number of MPP trackers / strings per MPP tracker		6/2		
Output (AC)				
Rated AC output power	50000W	60000W	70000W	80000W
Max. AC apparent power	55600VA	66600VA	77700VA	88800VA
Max. output current	80.5A	96.6A	112.7A	128.8A
AC nominal voltage		230V/400V		
AC grid frequency		50Hz/60Hz		
Power factor		0.8leading...0.8lagging		
THD		<-3%		
AC grid connection type		3W+N+PE		
Efficiency				
Max. efficiency	98.8%		99%	98.8%
Euro - eta	98.3%		98.4%	98.3%
MPPT efficiency		99.9%		
Protection Devices				
DC reverse polarity protection		yes		
DC Switch		yes		
DC Surge protection		Type II		
Ground fault monitoring		yes		
Output short circuit protection		yes		
AC Surge protection		Type II		
String fault monitoring		yes		
Anti-PID protection		opt		
AFCI protection		opt		
General Data				
Dimensions (W / H / D) in mm		860/600/300		
Weight		82kg		
Operating temperature range		-25°C ... +60°C		
Noise emission (typical)		≤55dB(A)		
Self-Consumption		< 1W*		
Topology		transformerless		
Cooling concept		Smart cooling		
Environmental protection Rating		IP65		
Altitude		4000m		
Relative Humidity		0-100%		
Features				
Display		LED/WIFI+APP		
Interfaces:USB/R485/GPRS		yes / yes / opt		
Warranty:5 years / 10 years		yes / opt		

CQC, CE, VDE 0126-1-1, UTE C 15-712, VDE-AR-N4105, EN50438, DRRG, CEI 0-16, BDEW, IEC 62116, IEC61727, IEC 60068, IEC 61683, AS 4777

ZS SPH 3000~6000



- Dual MPP trackers
- Programmable working modes
- Online Smart Service
- IP65 & Natural cooling
- Supports Export Control

Datasheet	ZS SPH3000	ZS SPH3600	ZS SPH4000	ZS SPH4600	ZS SPH5000	ZS SPH6000
DC input data						
Max. recommended PV power		6600W			8000W	
Start voltage				160V		
Max. PV voltage				550V		
PV voltage range				120V-550V		
MPP voltage range/nominal voltage				150V-550V/360V		
Max. input current of tracker A/B				12A/12A		
Number of MPP trackers / strings per MPP tracker				2/1		
AC Output						
Rated AC output power	3000W	3680W	4000W	4600W	4999W	6000W
Max. AC apparent power	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA
Max. output current		16A		22A		27A
Nominal AC output voltage				230V		
Nominal grid frequency				50/60Hz		
Power factor at rated power				1		
Displacement power factor				0.8leading...0.8lagging		
THD				<-3%		
AC output power(backup)						
Max. output power				3000W		
Rated AC output voltage				230Vac		
Rated AC output frequency				50/60Hz		
Automatic switchover time				<0.5S		
Battery data						
Battery voltage range				42~59V		
Max. charging voltage				58V		
Max. charging and discharging current				66A		
Max. charging and discharging power				3000W		
Battery type				Lithium /Lead acid		
Depth of discharging				80%DOD/50%DOD		
Capacity of battery				3~12kWh		
Efficiency						
Max. efficiency		97.5%			97.6%	97.7%
Euro European efficiency		97.0%			97.1%	
MPPT efficiency			99.5%			
Protection devices						
DC switch				yes		
DC reverse polarity protection				yes		
Battery reverse protection				yes		
Output over current protection				yes		
Output over voltage protection				yes		
Ground fault monitoring				yes		
Grid monitoring				yes		
Integrated oil - pole sensitive leakage				yes		
General Data						
Dimensions (W / H / D) in mm				547/516/170		
Weight				27KG		
Operating temperature range				-25°C ... +60°C		
Noise emission (typical)				≤ 25 dB(A)		
Altitude				2000m		
Self-Consumption				< 3W		
Topology				transformerless		
Cooling concept				Natural		
Environmental Protection Rating				IP65		
Relative humidity				100%		
Features						
DC connection				MC4/accpt		
Interfaces:RS232/USB/R/Wi-Fi				yes/yes/opt/opt		
Display				LCD		
Warranty: 5 years / 10 years				yes / opt		

CE, IEC62109, GB3/GS9, VDE0126-1-1, AS4777, AS/NZS 3100, CEI 0-21, VDE-AR-N4105, UTE C 15-712, EN50438, IEC 61727, IEC 62116

ZS SPA1000~3000TL BL



- IP65 & Natural cooling
- Supporting Single&Three Phase system
- Workmodes programmable
- Online Smart Service

Datasheet	ZS SPA 4000TL3 BH	ZS SPA 5000TL3 BH	ZS SPA 6000TL3 BH	ZS SPA 7000TL3 BH	ZS SPA 8000TL3 BH	ZS SPA 10000TL3 BH
Output data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Nominal AC voltage/range	230V/400V; 310~476V					
AC grid frequency/range	50/60Hz; 45~55Hz/55~65 Hz					
Power factor@(nominal power)	1					
Adjustable power factor	0.8leading...0.8lagging					
THDi	<-3%					
AC grid connection type	3W+N+PE					
Stand alone(AC power)						
Max. AC output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Rated AC output voltage	230V / 400V					
AC grid frequency	50Hz / 60Hz					
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
THDi	<-3%					
Switch time	<-0.5s					
Battery data(DC)						
Battery voltage range	100~550V					
Max charging current	25A					
Type of battery	lithium battery					
Capacity of battery	5~50kWh					
Efficiency						
Battery charge/discharge efficiency	97.4%					
Protection devices						
Battery reverse protection	yes					
Insulation resistance monitoring	yes					
AC surge protection	Type II					
AC short-circuit protection	yes					
Ground fault monitoring	yes					
Grid monitoring	yes					
Anti-islanding protection	yes					
Residual-current monitoring unit	yes					
General data						
Dimensions (W / H / D) in mm	505/453/198					
Weight	28kg					
Operating temperature range	-25°C ... +60°C					
Noise emission (typical)	≤ 35 dB(A)					
Altitude	3000m					
Self-Consumption	<13 W					
Inverter Topology	transformerless					
Cooling concept	Natural					
Environmental Protection Rating	IP65					
Relative humidity	0~100%					
Features						
AC connection	Cable gland+CF terminal					
Battery connection	H4/MC4(opt)					
Display	LCD+LED					
RS232/RS485/CAN/USB	yes					
RF/WIFI/GPRS/4G	opt					
Warranty:5 years/10 years	yes/opt					

IEC 61000, IEC 62109, IEC 62040, VDE-AR-N 4105, VDE 0126, IEC C 15-712, EN50549, ITR 2.1, ITR 3.1, CB-D-21, IEC62116, IEC61727, AS/NZS 4777, G98, IEC 62477, C10/11

ZS SPH 4000~10000TL3 BH



- IP65 & Natural cooling
- 3-Phase and Battery Ready
- Programmable working modes
- Compatible with high-voltage battery
- Online Smart Service

Datasheet	ZS SPH 4000TL3 BH	ZS SPH 5000TL3 BH	ZS SPH 6000TL3 BH	ZS SPH 7000TL3 BH	ZS SPH 8000TL3 BH	ZS SPH 10000TL3 BH
Input data(DC)						
Max. recommended PV power (for module 30°C)	5200W	6500W	7800W	9100W	10400W	13000W
Max. DC voltage	1000V					
Start Voltage	160V					
MPP voltage range / nominal voltage	162V/1000V / 600V					
Max. input current per MPP trackers	12A/12A					
Max. short-circuit current per MPP trackers	15A/15A					
Number of MPP trackers/strings per MPP tracker	2/1					
Output data(AC)						
AC nominal power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Nominal AC voltage/range	230V/400V; 310~476V					
AC grid frequency/range	50/60Hz; 45~55Hz/55~65 Hz					
Power factor@(nominal power)	1					
Adjustable power factor	0.8leading...0.8lagging					
THDi	<-3%					
AC grid connection type	3W+N+PE					
Stand alone(AC power)						
Max. AC output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. output current	6.1A	7.6A	9.1A	10.6A	12.1A	15.2A
Nominal AC output voltage	230V/400V					
Nominal AC output frequency	50/60Hz					
THDi	<-3%					
Switch time	<-0.5s					
Battery data (DC)						
Battery voltage range	100~550V					
Max charging and discharging current	25A					
Continuous charging and discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	lithium battery					
Capacity of battery	5~50kWh					
Efficiency						
Max. efficiency	97.6%	97.8%	98.0%	98.2%	98.2%	98.2%
Euro European efficiency	97.0%	97.2%	97.3%	97.4%	97.4%	97.5%
Battery charge/discharge efficiency	97.4%					
Protection devices						
DC switch	yes					
DC reverse polarity protection	yes					
DC surge protection	Type I					
Battery reverse protection	yes					
AC short circuit protection	yes					
AC surge protection	Type II					
Ground fault monitoring	yes					
Grid monitoring	yes					
Anti-islanding protection	yes					
Residual-current monitoring unit	yes					
Insulation resistance monitoring	yes					
General data						
Dimensions (W / H / D) in mm	505/453/198					
Weight	28kg					
Operating temperature range	-25 °C ... +60 °C					
Noise emission (typical)	≤ 35 dB(A)					
Altitude	3000m					
Self-consumption	<13W					
Topology	Transformerless					
Cooling concept	Natural					
Environmental Protection Rating	IP65					
Relative humidity	0~100%					
Features						
DC connection	H4 / MC4 (opt)					
AC connection	Cable gland+CF terminal					
Display	LCD+LED					
RS232/RS485/CAN/USB	yes					
RF/WIFI/GPRS/4G	opt					
Warranty: 5 years / 10 years	yes / opt					

IEC 61000, IEC 62109, IEC 62040, VDE-AR-N 4105, VDE 0126, IEC C 15-712, EN50549, ITR 2.1, ITR 3.1, CB-D-21, IEC62116, IEC61727, AS/NZS 4777, G98, IEC 62477, C10/11