



NEW WAY ENGINEERING LTD
Consulting Engineering

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PHOTOVOLTAIC SYSTEM

17,20 KW




NEW WAY ENGINEERING LTD

Offer Photovoltaic System for Pool

Date : 04/12/2024

Press Offer: 237/2024

Customer's Information

To: THALASSA VIEW GARDENS MANAGEMENT COMMITTEE

Address: CHLORAKA – PAFOS

Phone Number:

Dear Sir/Madam ,

Taking into consideration the extracted from our own conversation, on-site vision and thorough, theoretical study by our engineers, proposes a 600 kW, 50Hz, 17,20 kW power generator.

Product Quality

The key parts of the system, photovoltaic panels, voltage converter, mounts and cabling are high quality and advanced technology. Our partnership with award-winning European suppliers ensures maximum achievable electricity generation per installed power. In particular, according to the results of the highly prestigious independent Photon organization specializing in the evaluation of PV modules in real production conditions, our photovoltaic panels are pioneering on a global scale. In particular, the feasible output per installed kW reaches 1953kWh.

Terms of Payment

The system payment will be as follows:

- 60% VAT inclusive upon signing the installation agreement
- 40% of the above price including VAT upon completion of system installation.

How many days an offer is still on

The offer is valid for 1 month from date of issue.

Task Timetable

The system will be installed within 1 month .

Thank you for your time and attention and look forward to our further collaboration.

Offer 17.20 kw

A/A	ΠΕΡΙΓΡΑΦΗ ΒΑΣΙΚΩΝ ΜΕΡΩΝ ΣΥΣΤΗΜΑΤΟΣ	ΠΟΣΟΤΗΤΑ
1	Photovoltaic Panels Econess/ Bauer 430W (25 years warranty)	40
2	Solar Pump Inverter 4 kw (5 years warranty)	2
3	PV SUPPLY BASES + ALUMINUM RAILS + LINES + FOUNDATION + INSULATION PROTECTION BASES	1
4	New Battery 12volt 250Amper (2 years warranty)	1
5	Controller for 12Volt (2 years warranty)	1
6	BASE FITTING AND INSTALLATION - FRAMEWORK APPLICATION	1
7	AC ELECTRICAL CONNECTION - AC ELECTRICAL ACCESSORIES (MCB + RCD + MAIN SWITCH + CABLE + EARTH + AC HYPICAL PROTECTION) & AC CABLES + SPECIAL EQUIPMENT REQUIREMENTS FROM ELECRCITY AUTHORITY OF CYPRUS	1
8	LIFTING TRANSPORT	1
9	FINAL AUDIT - INTERFERENCE STUDIES - APPLICATION FOR FINAL APPROVAL TO IEK - SYSTEM CONNECTION TO ELECTRICITY AUTHORITY OF CYPRUS - INTERFERENCE STUDIES	1
	TOTAL PRICE WITHOUT VAT	13445.38
	DISCOUNT	
	REAL PRICE	13445.38
	VAT	2554.62
	INSTALLATION'S TOTAL PRICE WITH VAT	16000,00

For client


NAME: _____ SIGNATURE: _____

For the company New Way Engineering Ltd

NAME: _____ SIGNATURE: _____

NEW WAY ENGINEERING LTD

Panels:




EN182N-108D-415/420/425/430/435/440W

Bifacial Dual Glass TOPCON Monocrystalline Solar Module


108 Half-Cell Series


ABOUT ECONESS ENERGY


Established in 2009, Econess Energy is engaged in PV power station development and PV module production. With current annual production capacity of 12GW modules, Econess Energy now distributes its PV products all over the world, such as Germany, Spain, Italy, France, India, Japan ect. As a strong, bankable partner, we are committed to building strategic, mutually beneficial collaboration with installers and developers.





KEY FEATURES



Multi Busbar Technology
 Better light trapping and current collection to improve module power output and reliability.


Bifacial power generation
 Bifacial cell technology, 2% to 25% more yield depends on different conditions.


Lower temperature coefficients
 Enhance power generation.




Enhanced Mechanical Load
 Certified to withstand wind load (2400 Pa) and snow load (5400 Pa).


IP68 junction box
 High waterproof level.


High customer value
 Lower BOS cost and LCOE.

SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730
- IEC 61701 / IEC 62804
- ISO 9001 : 2015 Quality Management System
- ISO 14001 : 2015 Environment Mangement System
- ISO 45001 : 2018 Occupational Health and Safety Management System

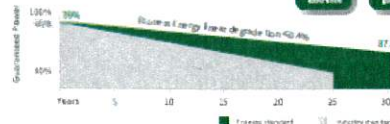



QUALITY WARRANTY

Econess Energy guarantees that defects will not appear in materials and workmanship defined by IEC 61215 or IEC 61730 under normal installation, use and maintenance as specified in Econess Energy's installation manual for 25 years from the warranty starting date.

PERFORMANCE WARRANTY

**Bifacial Dual Glass
N-type Monocrystalline Solar Module**



25 year
Quality
warranty

30 year
Power output
guarantee

ELECTRICAL PARAMETERS

Performance at STC (Power Tolerance 0~+5W)

Maximum Power(Pmax/W)	415	420	425	430	435	440
Operating Voltage (Vmpp/V)	31.32	31.51	31.70	31.88	32.06	32.24
Operating Current (Impp/A)	13.25	13.33	13.41	13.49	13.57	13.65
Open-Circuit Voltage (Voc/V)	37.92	38.11	38.30	38.49	38.68	38.87
Short-Circuit Current (Isc/A)	13.99	14.07	14.15	14.23	14.31	14.39
Module Efficiency η_m (%)	21.25	21.51	21.76	22.02	22.28	22.53

Performance at NOCT

Maximum Power(Pmax/W)	313.0	316.8	320.7	324.4	328.2	331.9
Operating Voltage(Vmpp/V)	29.37	29.55	29.73	29.90	30.07	30.24
Operating Current(Impp/A)	10.66	10.72	10.79	10.85	10.92	10.98
Open-Circuit Voltage(Voc/V)	36.18	36.36	36.55	36.73	36.91	37.09
Short-Circuit Current(Isc/A)	11.27	11.33	11.39	11.46	11.52	11.58

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NOCT: Irradiance 800W/m², Ambient Temperature 25°C, Wind Speed 1m/s

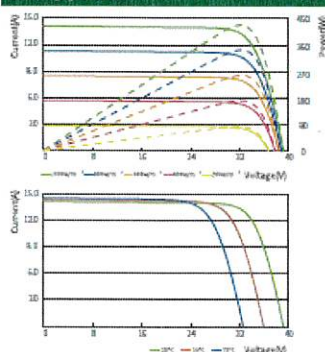
Electrical characteristics with different rear side power again (reference to 440W front)

Pmax gain (%)	5%	10%	15%	20%	25%
Maximum Power (Pmax/W)	462.0	484.0	506.0	528.0	550.0
Maximum Power Voltage (Vmpp/V)	32.24	32.24	32.24	32.24	32.24
Maximum Power Current (Impp/A)	14.33	15.02	15.70	16.38	17.06

MECHANICAL SPECIFICATION

Cell Arrangement	108 [2 x (9 x 6)]
Weight	20 kg(44.09 lb)
Module Dimensions	1722 x 1134 x 30mm(67.80 x 44.65 x 1.18 inch)
Cable	300 mm (11.81 inch) · 4 mm ² (0.006 sq.in)
Front Glass	1.6 mm High Transmission, Tempered Glass
Packing Configuration	36pcs/Pallet, 936pcs/40hq
Frame	Anodized Aluminium Alloy
Junction Box	IP68

I-V CURVE



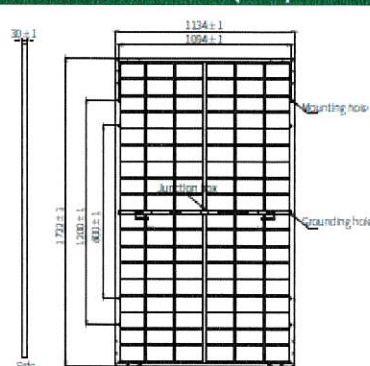
OPERATING CONDITIONS

Maximum System Voltage	1500V (IEC/UL) DC
Operating Temp	-40°C ~ +85°C
Maximum Fuse Rating	25 A
Static Loading	5400 Pa
Connector	MC4 Compatible

TEMPERATURE COEFFICIENT

Temperature Coefficient(Pmax)	-0.29%/°C
Temperature Coefficient(Voc)	-0.25%/°C
Temperature Coefficient(Isc)	+0.045%/°C
NOCT	42 ± 2°C

TECHNICAL DRAWINGS (mm)



Econess Energy Co., Ltd. Version No.-2024Q1-1-EN

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* This is preliminary datasheet and for reference only. The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Econess Energy reserves the right to make necessary adjustment to the information described herein at any time without further notice.

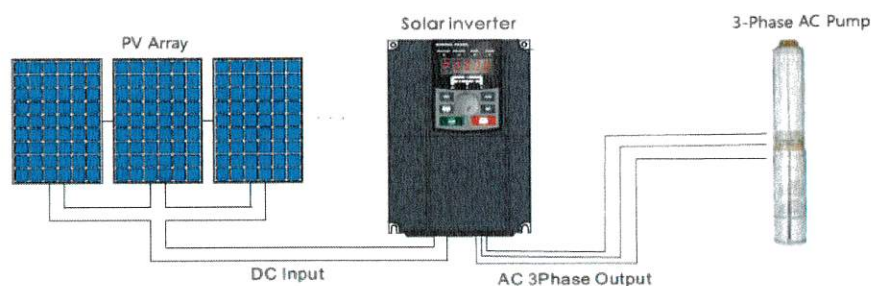
Inverter:

4 kW solar pump inverter DC voltage range (280V, 750V), with air cooling performance and IP20 protection. It is usually used in urban water, wastewater purification, and agricultural irrigation. Solar pump inverter with RS485 communication mode, output frequency reaches 0~400(Hz), no condensation when the humidity is below 95% RH.

Features

- Solar pump inverter adopts advanced MPPT control technology, real-time detection of solar panels power voltage, tracking the highest voltage and current, efficiency is as high as 98%.
- It can enter automatically into sleep mode when the intensity of sunlight is weak, as well as exit the sleep mode when the intensity of sunlight is becoming strong.
- Automatic sleep when on the high-water level and automatic restart when on the low-water level to realize automatic control through the water level.
- Smart operation, water level detection, and operation panel to prevent overflow and dry pumping.
- Protect itself from trouble and improve the reliability of the whole system.
- The bypass- AC source which runs automatically when the sun is not sufficient or absent.

Solar Pump Inverter Working System



Specs

GK330

4D0

- Model
- Rated power
- Voltage input
- Min. DC voltage
- Max. DC voltage
- Recommended DC MPPT range
- AC output current
- Output frequency
- Power factor
- Communication mode
- Protection class
- Ambient temperature
- Storage temperature
- Humidity
- Cooling
- Altitude
- Humidity
- Vibration

- Series inverter (for photovoltaic applications)
- Voltage range:
 - SP1: DC 250~400V to 1-phase AC 220V
 - SP2: DC 250~400V to 3-phase AC 220V
 - SP3: DC 350~750V to 3-phase AC 380V
- Adaptable motor power:
 - 4D0 (4kW)
- SP3-004
- 4kW
- DC 350~750 (V), AC 380~460 (V) at 3-phase (When the input is AC, the inverter output voltage is equal to the input voltage)
- 280V
- 750V
- DC 250~400V to 3-phase AC 220V; DC 350~750V to 3-phase AC 380V
- 9A at 3-phase 380V, 16A at 3-phase 220V
- 0-50/60(Hz)
- >0.99
- RS485 communication
- IP20
- 10°C~+40°C (ambient temperature at 40°C-50°C, please keep derated use)
- 20°C~+60°C
- Smaller than 95%RH, non-condensation
- Forced Air cooling
- Lower than 1000m
- Less than 95%RH, without condensing
- Less than 5.9 m/s2 (0.6 g)

