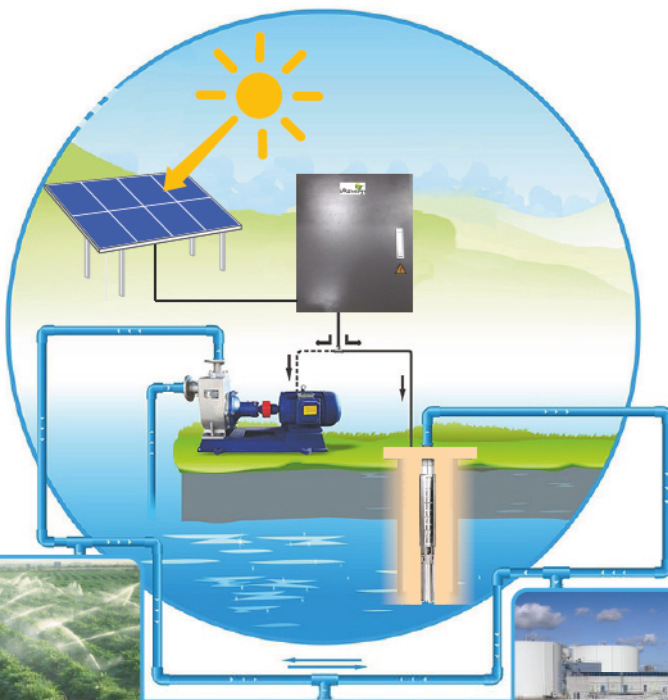




UREnergy®

USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA

Energy for All



URE 100



URE 200



PUMP

Solar Water Pumping System

☎ 1800 120 4011

🏠 www.urenergyglobal.com

✉ india@urenergyglobal.com



U R Energy started its journey in the solar industry in Australia in 2009 and within 6 years achieved a market leading position servicing 26,000+ residential and commercial customers across the Australian solar market. Inspired by the success in Australia, the company decided to expand globally and began operations in India in 2015 and the United States of America in 2016. The company now procures, develops and installs solar power systems at economic prices for residential, commercial and utility scale customers across the world including Australia, United States of America, India, Dubai, Africa, and United Kingdom. UR Energy group has installed 200+ MW Solar Plants across these countries and adding more daily.

Quality is at the core of our business whether it be the solar products we source, our installation process or the service we provide to our customers. U R Energy is an ISO 9001, ISO 14001 and OHSAS 18001 accredited company and we source the highest quality solar power systems from Tier 1, modern manufacturing facilities around the world.

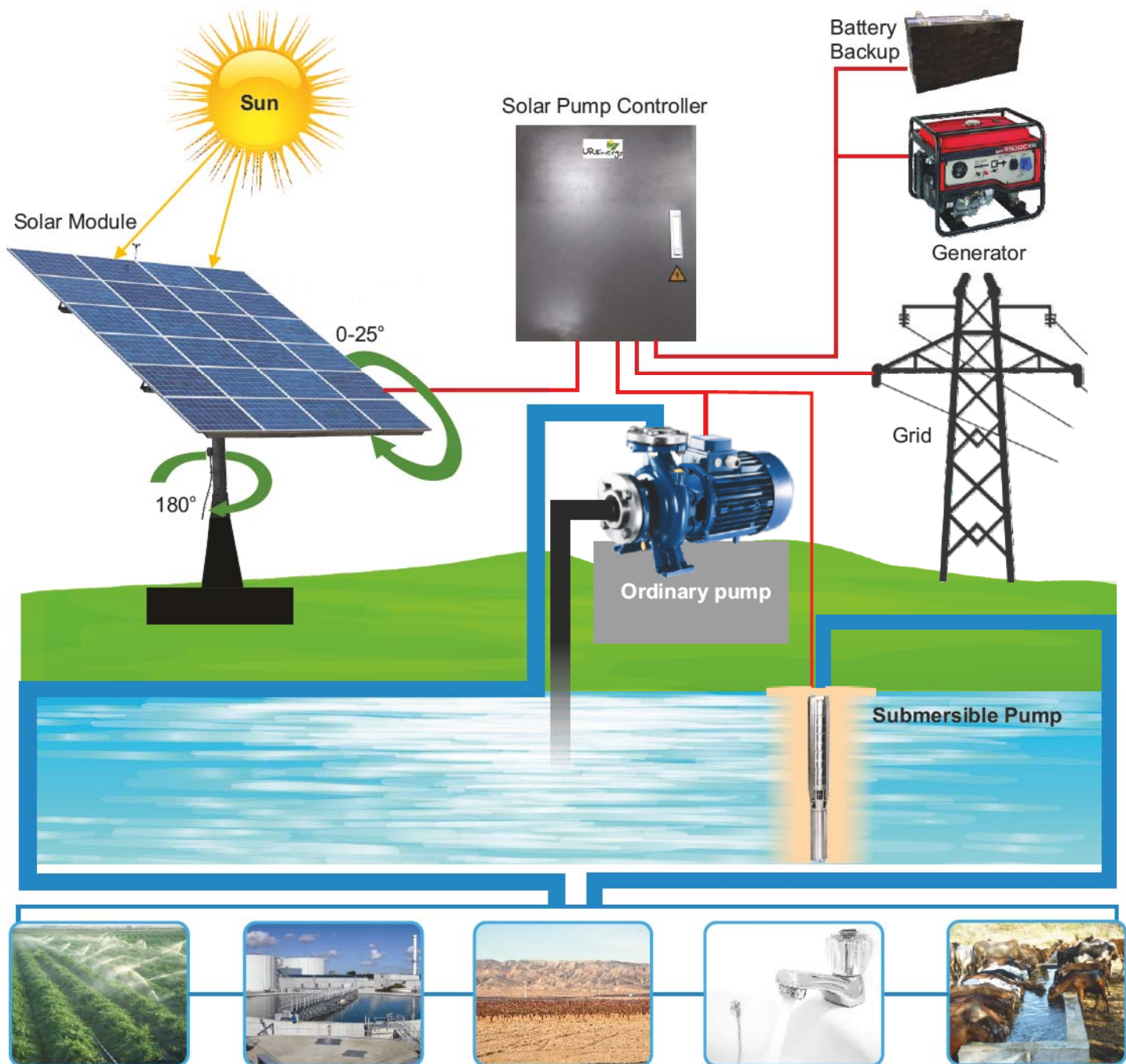
The business was started with a single goal, to help accelerate the growth and adoption of solar power systems across the world, not only for its obvious environmental benefits but also for the economic benefits available to our customers. That's why we offer the highest quality products at the best price available on the market today and as always, backed by our 5% price beat guarantee.



How Solar Water Pump System Work ?	3
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Solar Water Pumping System : Components	5
(A) Panel :	
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How Solar Water Pump System Work ?



Solar Pump Advantages

- DC/AC Input Compatible
- DC: Solar PV Power Supply
- AC: Diesel Generator or Grid Supply
- Environment-protection, Economic
- Optimized MPPT Arithmetic, Accuracy Reached 99% and above.
- Multi-liquid-level Control
- Less Water, Full Water Liquid-Level Control, Liquid-Level Detector Failure Adjustment
- Pumping Water Much
- Water Pumping on the Same Circumstance
- Rich Protection Functions
- Featured with Protection Functions of Lightning-proof, Over-voltage, Over-current, Over-load, etc.
- Dormancy on weak light, awoken on strong light
- Auto-dormancy on weak light, auto-recover working on strong light, no need man-made operation.

Solar Power System

THREE MAIN TYPES OF SOLAR POWER SYSTEMS

- ♦ On-grid - also known as grid-tie or grid-feed solar system
- ♦ Off-grid - known as a stand-alone power system (SAPS)
- ♦ Hybrid - Solar and battery storage system with grid-connection

ON-GRID - ALSO KNOWN AS GRID-TIE OR GRID-FEED SOLAR SYSTEM :

Grid-tied or grid connected solar is a solar electricity system without batteries. Your home is hooked up to both the national grid and your UR Energy solar electricity system, so you will always have electricity available at the flick of a switch; even at night, or if it is cloudy. You can install a solar electricity system of any size and you will only ever be billed if your power consumption is in excess of the amount you are generating.

The electricity grid acts as a 100% efficient and maintenance free battery while also providing unlimited 'on demand' energy. This is what makes grid connected solar electricity so attractive. It has all the benefits of being attached to the electricity grid but with a portion of your electricity bill never increasing in price.

However we do offer grid-connect solar power systems with back-up for customers with special requirements.

OFF-GRID - KNOWN AS A STAND-ALONE POWER SYSTEM (SAPS) :

Off-grid connected solar is a solar electricity system with battery backup. During the day the sun shines and charges the batteries as well as supplies power to your home. During the evening or on rainy days when the sun isn't shining you use the power stored in the batteries. Your house is not connected to the national grid hence the name: off-grid.

Although there have been large price reductions in the cost of panels and inverters, batteries are generally quite expensive and require regular maintenance. Generally the idea of being off the grid is quite appealing but it does require more investment.

Most of the time it is more cost efficient to connect to the grid and offset your electricity consumption with a grid-connect solar PV system than to go off-grid. However if you are building a new house or holiday home in a remote location off-grid solar can work out to be a lot cheaper than paying to be connected to the grid.

There is no absolute standard off-grid system and it should be designed to suit your specific electrical loads and use patterns. At UR Energy we have designed systems that run whole pacific nations. We love off-grid systems and would love to help design yours

HYBRID - SOLAR AND BATTERY STORAGE SYSTEM

Hybrids are becoming more useful. The basic concept of a hybrid system is to store electricity that is generated during the day by your solar electricity system so you can use it in the evening when the sun has gone down. Hybrid systems are not designed to store days and days of electricity but rather enough electricity to last you through the night. It is called a hybrid system as you are still connected to the grid but have batteries to store power. So if it rains for 4 days you will be getting your electricity from the national grid like most other people.

(A) URE-6PB SERIES 6 INCH 60 CELLS

255-275w



Marketed by:



UREnergy
USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA

Manufactured by:



SERAPHIM

Rated tire 1 company by **Bloomberg**

MANAGEMENT SYSTEM

ISO 9001 : Quality management system
ISO 14001 : Standard for environmental management system
OHSAS 18001 : International standard for occupational health and safety assessment system

WARRANTY

10 YEARS guarantee on product material
25 YEARS linear power output warranty

INSURANCE

 **PowerGuard**
SPECIALITY INSURANCE SERVICES

 **SOLAR**
INSURANCE & FINANCE

Certifications and standards:



Leading Features

Safety



Safety for salt mist corrosion
(IEC61701, tested in Intertek)



Safety for ammonia corrosion
(IEC62716, tested in TÜV SÜD)



Safety for fire risk
(Class C, tested in TÜV SÜD and Rheinland)

Reliability



PID free products, passing TÜV SÜD system voltage durability test



World 1st company to pass "Thresher Test" and "On-site Power Measurement Validation" certificate



Bankable products

Performance



Advanced glass and solar cell surface texturing allow for excellent performance in low-light environments



100% In-line Electroluminescence (EL) tested during production process ensures modules are high quality



Top rank in Photon yield measurement

255-275w



Electrical Characteristics

	URE-255-6PB	URE-260-6PB	URE-265-6PB	URE-270-6PB	URE-275-6PB	UNIT
Rated Power at STC (Pmp)	255	260	265	270	275	W
Power Tolerance	(0,+4.99)	(0,+4.99)	(0,+4.99)	(0,+4.99)	(0,+4.99)	W
Maximum Power at STC	259.99	264.99	269.55	274.99	279.99	W
Minimum Module Efficiency (nm)	15.7	16.0	16.3	16.6	16.9	%
Open Circuit Voltage (Voc)	38.1	38.2	38.3	38.4	38.5	V
Short Circuit Current (Isc)	8.60	8.67	8.73	8.82	8.88	A
Maximum Power Voltage (Vmp)	31.9	32.1	32.4	32.7	33.0	V
Maximum Power Current (Imp)	8.00	8.10	8.18	8.28	8.34	A
Maximum System Voltage	1000(TUV), 600(UL)					V
Maximum Series Fuse Rating	15					A

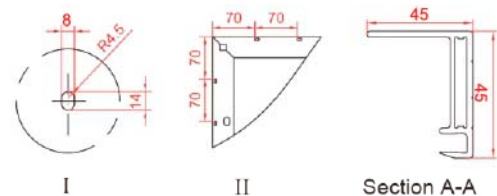
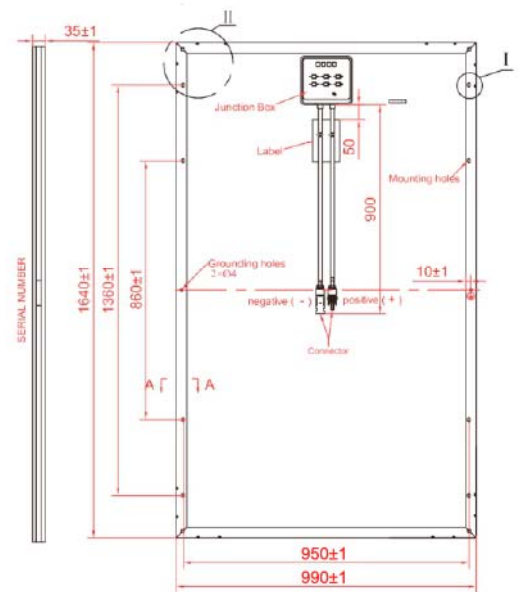
STC: Irradiance 1000 W/m² module temperature 25C AM=1.5;
Power measurement tolerance : +/-3%

Temperature Characteristics

Pmax Temperature Coefficient	-0.42%/°C
Voc Temperature Coefficient	-0.32%/°C
Isc Temperature Coefficient	+0.04%/°C
Operating Temperature	-40~+85°C
Nomial Operating Cell Temperature (NOCT)	45±2°C

Packing Configuration

Container	20'GP	40'GP	40' HC
Piecesper Pallet	30	30	N.A
Palletsper Container	12	28	N.A
Piecesper Container	360	840	N.A



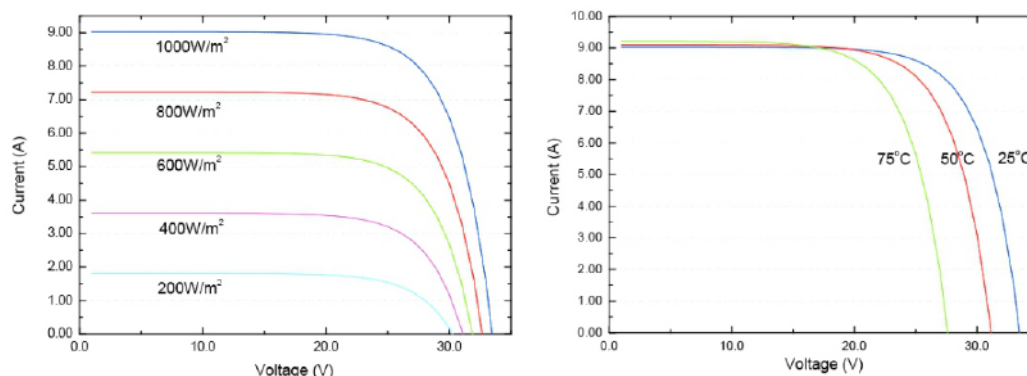
* All Dimensions in mm

* The above drawing is a graphical representation of the product.
For engineering quality drawings please contact UR ENERGY.

Mechanical Specifications

External Dimensions	1640 x 990 x 45 mm
Weight	19.0kg
Solar Cells	Polycrystalline 156 x 156 mm (60pcs)
Front Glass	3.2mm tempered glass, low iron
Frame	Anodized / Electrophoretic aluminium alloy
Junction Box	IP65/IP67
Output Cables	4.0mm ² , symmetrical lengths 900 mm
Connector	Mc4 Compatible
Mechanical Load	5400 Pa
Hailstone Impact Test	80km/h for 25mm ice ball

Current-Voltage & Power-Voltage Curve(URE-260-6PB)



(A) URE-6PA SERIES 6 INCH 72 CELLS

305-325w



Marketed by:



UREnergy®
USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA

Manufactured by:



SERAPHIM®

Rated tire 1 company by **Bloomberg**

MANAGEMENT SYSTEM

- ISO 9001** : Quality management system
- ISO 14001** : Standard for environmental management system
- OHSAS 18001** : International standard for occupational health and safety assessment system

WARRANTY

- 10 YEARS** guarantee on product material
- 25 YEARS** linear power output warranty

INSURANCE



Certifications and standards:



Leading Features

Safety



Safety for salt mist corrosion
(IEC61701, tested in Intertek)



Safety for ammonia corrosion
(IEC62716, tested in TÜV SÜD)



Safety for fire risk
(Class C, tested in TÜV SÜD and Rheinland)

Reliability



PID free products, passing TÜV SÜD system voltage durability test



World 1st company to pass "Thresher Test" and "On-site Power Measurement Validation" certificate



Bankable products

Performance



Advanced glass and solar cell surface texturing allow for excellent performance in low-light environments

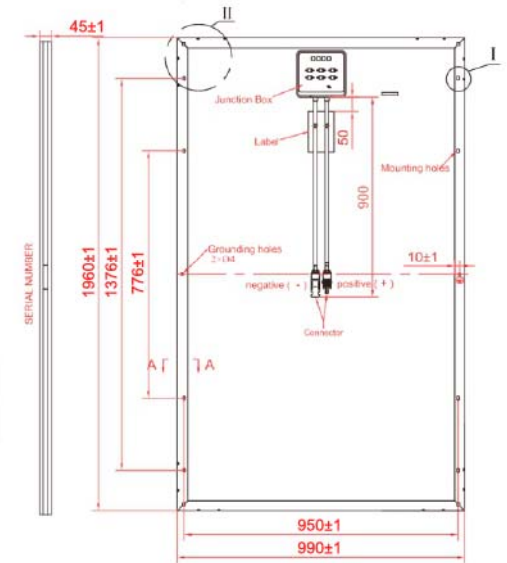
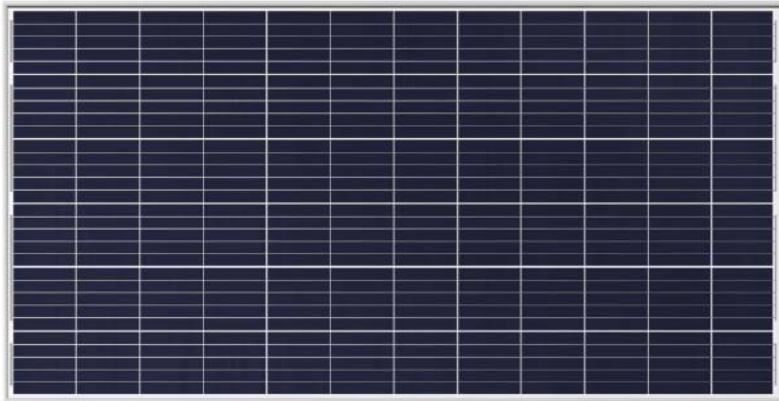


100% In-line Electroluminescence (EL) tested during production process ensures modules are high quality



Top rank in Photon yield measurement

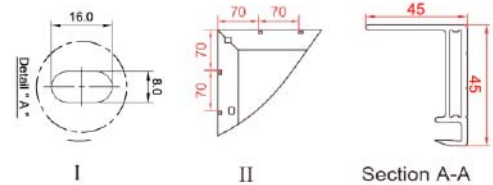
305-325w



Electrical Characteristics

	URE-305-6PA	URE-310-6PA	URE-315-6PA	URE-320-6PA	URE-325-6PA	UNIT
Rated Power at STC (Pmp)	305	310	315	320	325	W
Power Tolerance	(0,+4.99)	(0,+4.99)	(0,+4.99)	(0,+4.99)	(0,+4.99)	W
Maximum Power at STC	309.99	314.99	319.99	324.99	329.99	W
Minimum Module Efficiency (nm)	15.71	15.97	16.23	16.49	16.8	%
Open Circuit Voltage (Voc)	45.5	45.7	45.9	46.1	46.3	V
Short Circuit Current (Isc)	8.60	8.60	8.73	8.82	8.88	A
Maximum Power Voltage (Vmp)	38.2	38.4	38.6	38.8	39.0	V
Maximum Power Current (Imp)	7.99	8.08	8.17	8.25	8.34	A
Maximum System Voltage	1000(TUV), 1000 (UL)					V
Maximum Series Fuse Rating	15					A

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5;
Power measurement tolerance : +/-3%



* All Dimensions in mm

* The above drawing is a graphical representation of the product.
For engineering quality drawings please contact UR ENERGY.

Temperature Characteristics

Pmax Temperature Coefficient	-0.42%/°C
Voc Temperature Coefficient	-0.32%/°C
Isc Temperature Coefficient	+0.04%/°C
Operating Temperature	-40~+85°C
Nominal Operating Cell Temperature (NOCT)	45±2°C

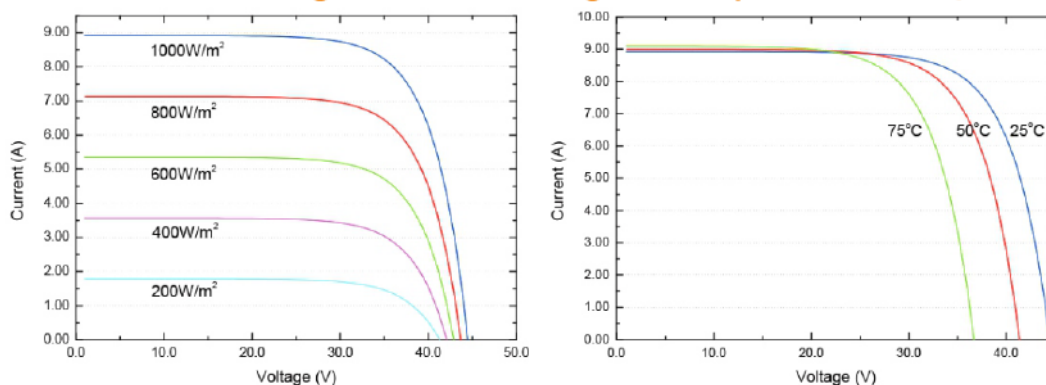
Packing Configuration

Container	20' GP	40' GP	40' HC
Pieces per Pallet	26	26	N.A
Pallets per Container	10	22	N.A
Pieces per Container	260	572	N.A

Mechanical Specifications

External Dimensions	1960 x 990 x 45 mm
Weight	24.0kg
Solar Cells	Polycrystalline 156 x 156 mm (72pcs)
Front Glass	3.2mm tempered glass, low iron
Frame	Anodized / Electrophoretic aluminium alloy
Junction Box	IP65/IP67
Output Cables	4.0mm ² , symmetrical lengths 900 mm
Connector	Mc4 Compatible
Mechanical Load	5400 Pa
Hailstone Impact Test	80km/h for 25mm ice ball

Current-Voltage & Power-Voltage Curve(URE-310-6PA)



(A) URE Poly Solar Panels for Made in India Requirement

300-320W



Marketed by:
UREnergy®
USA | UK | AFRICA | DUBAI | INDIA | CHINA | AUSTRALIA

Manufactured by:
JAKSON™
EMPOWERING PEOPLE

MANAGEMENT SYSTEM

- ISO 9001** : Quality management system
- ISO 14001** : Standard for environmental management system
- OHSAS 18001** : International standard for occupational health and safety assessment system

WARRANTY

10 YEARS guarantee on product material

25 YEARS linear power output warranty

Leading Features



Superior Module Efficiency as per International Benchmarks



Positive Power Tolerance 0/+ 5W



PID Resistant with long term reliability



Glass with Anti Reflective Coating Improves light transmission



Salt mist, Ammonia and Hail Resistant (IEC 61701)



Sustain Heavy Wind & Snow loads



IP 67 rated MC4 compatible connectors



Excellent Performance in low light



Sand and Dust Storm Resistant



IEC 61215, IEC 61730 (I & II) Certified

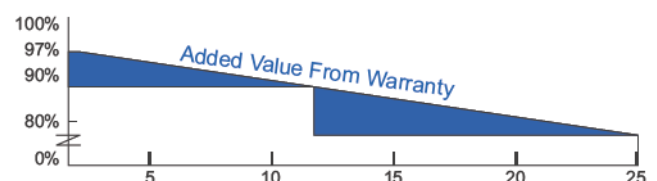


State of art Module manufacturing facility

25 Years
Output
Warranty

10 years Limited Product Warranty**
25 years Limited Power Output Warranty**

- Minimum 90% at the end of 10 years
- Minimum 80% at the end of 25 years



Electrical & Mechanical Characteristics

Model (as per IEC)	URE- 24x290	URE- 24x295	URE- 24x300	URE- 24x305	URE- 24x310	URE- 24x315	URE- 24x320
Nominal Maximum Power P _m (W)*	290	295	300	305	310	315	320
Number of Cells	72	72	72	72	72	72	72
Power Tolerance	+5/-0%	+5/-0%	+5/-0%	+5/-0%	+5/-0%	+5/-0%	+5/-0%
Open Circuit Voltage, V _{OC} (V)*	44.20	44.50	44.80	45	45.30	45.60	46.0
Short Circuit Current, I _{SC} (A)*	8.40	8.50	8.60	8.70	8.77	8.85	8.90
Voltage at Maximum Power, V _{mp} (V)*	36.40	36.50	36.60	37.00	37.50	37.80	38.1
Current at Maximum Power, I _{mp} (A)*	7.97	8.09	8.20	8.25	8.28	8.34	8.40
Maximum System Voltage (V)	1000	1000	1000	1000	1000	1000	1000
Module Efficiency (%)	14.95	15.20	15.46	15.72	15.98	16.23	16.49
Maximum Series Fuse Rating (A)	15	15	15	15	15	15	15
*Under Standard Test Conditions (STC) of 1000W/m ² irradiance, AM 1.5 spectrum and 25°C Cell temperature.							
Module Length (L) -mm	1960	1960	1960	1960	1960	1960	1960
Module Width (W) - mm	990	990	990	990	990	990	990
Mounting Holes Pitch (Y) - mm	1000	1000	1000	1000	1000	1000	1000
Mounting Holes Pitch (X) -mm	948	948	948	948	948	948	948
Weight	22	22	22	22	22	22	22

Module Specification

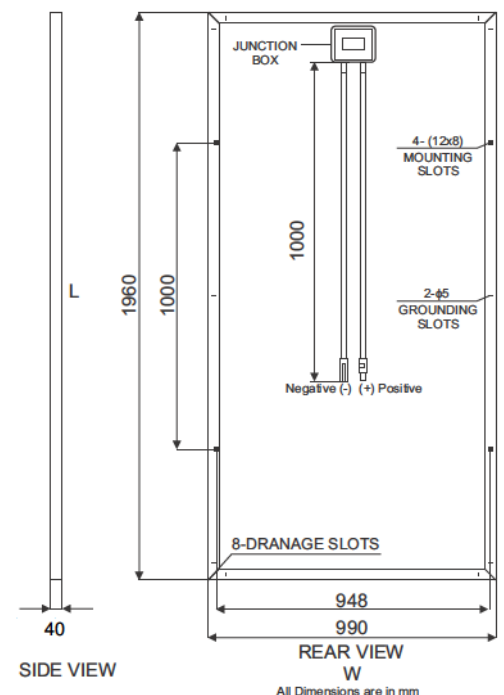
Solar Cell type	Polycrystalline
Front Cover (Material / Thickness)	High transmission low iron 3.2mm tempered glass
Encapsulate	EVA (Ethylene Vinyl Acetate)
Frame Material	Anodized aluminium frame with twin wall profile (6036-T6)
Junction Box (Protection degree)	3 bypass diodes, IP-67, TUV+UL 1000V
Cable & Connectors	4mm ² , TUV+UL Certified, 1000mm & MC4 Compatible
Application Class	Class A (Safety class II)

Thermal Characteristics

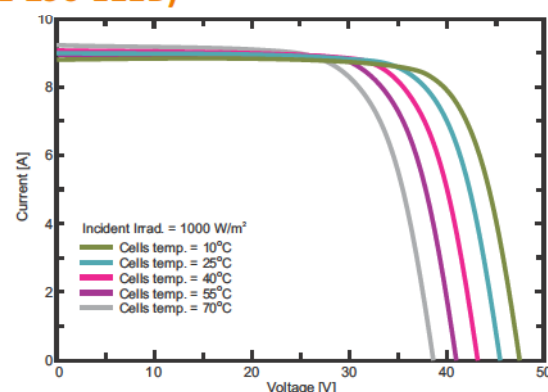
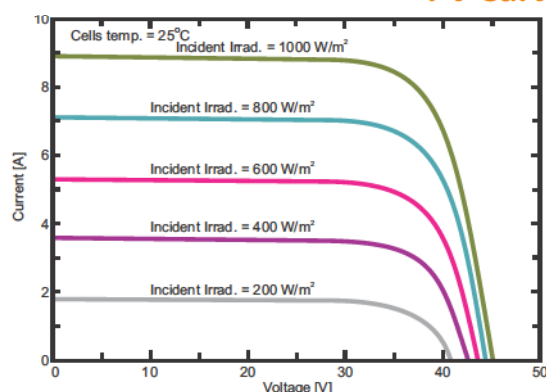
Temperature coefficient of current (I _{sc}), α (%/°C)	+0.04%/°C
Temperature coefficient of Voltage (V _{oc}), β (%/°C)	-0.32%/°C
Temperature coefficient of Power (P _m), γ (%/°C)	-0.43%/°C
NOCT (°C)	47°C ± 2°C
Operating temperature range (°C)	-40°C - +85°C

Packaging Configuration

No. of modules per 40 feet Container	550 Nos
No. of modules per 20 feet Container	125 Nos



I-V Curve (URE-290-E11B)



URE 250W-60P



Features



Positive Tolerance
Guaranteed positive tolerance $\sim +3\%$ ensures reliable power output



Intensive Wind and Snow Load Tests
Entire module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)



Excellent Weak Light Performance
Excellent performance under low light environments to capture early morning and late evening sunlight



World Class Manufacturing Facilities
Our manufacturing facilities are ISO certified for Quality assurance and delivers world class products



Insured by CHUBB Insurance Policy / by reputed international insurance company

URE 300W-72P



Certifications and standards:



- World's trusted manufacturer of crystalline silicon photovoltaic modules
- Un-rivaled manufacturing capacity and world-class technology
- Industry leading module power output warranty
- International quality, safety and performance certifications ISO 9001, ISO, 14001, OHSAS 18001 certified company
- Beautiful appearance, good durability & easy installation
- Special design in accordance with requirements of customers
- Test of harsh environment
- Rigorous quality control meeting the highest international standards

Warranty

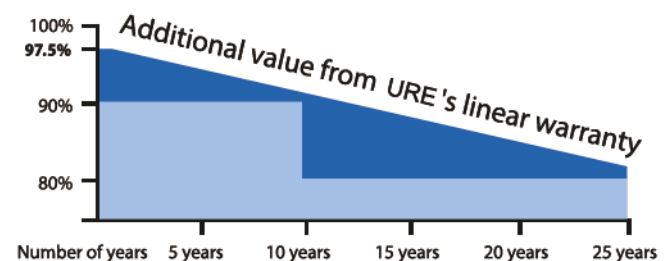
05 Years Product Warranty

10 Years limited power warranty for 90% NP

15 Years limited power warranty for 85% NP

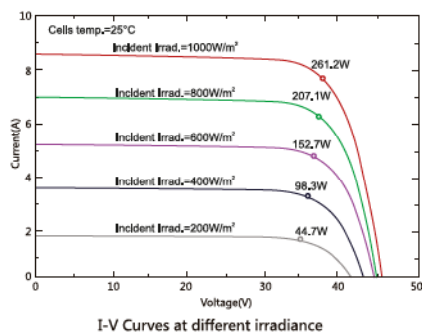
25 Years limited power warranty for 80% NP

URE's NEW linear performance warranty

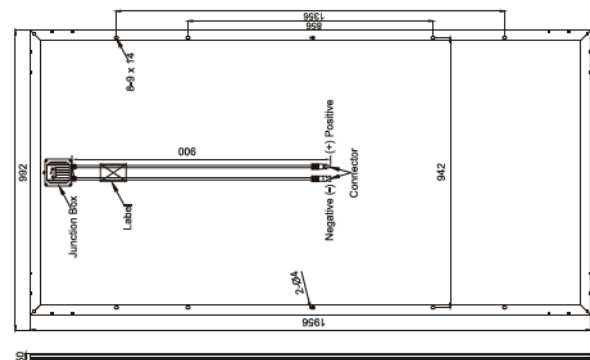
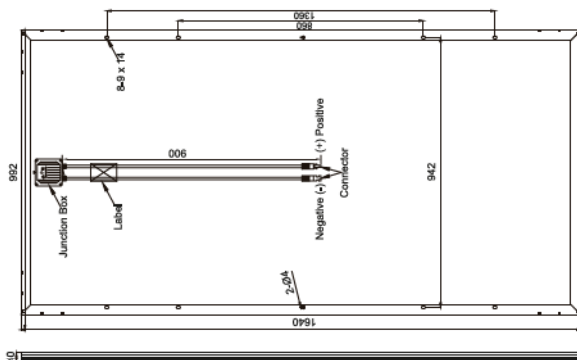
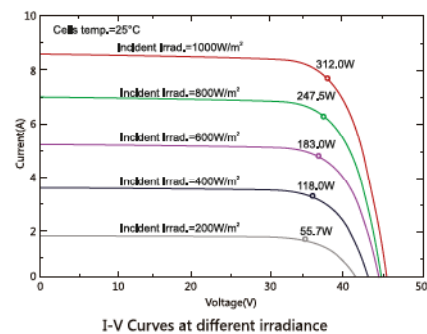


Model type	URE 250-60P	URE 300-72P
Peak power (Pmax)	250W	300W
Maximum power voltage (Vmp)	30.96V	36.60V
Maximum power current (Imp)	8.08A	8.20A
Open circuit voltage (Voc)	37.92V	44.60V
Short circuit Current (Isc)	8.62A	9.10A
Module efficiency	15.05%	15.22%
Number of the cells	60 cells in series	72 cells in series
Weight	19.8 Kg	27.5 Kg
Dimensions	1666 x 996 x 45 mm	1976 x 996 x 45 mm
Fill factor (%)	75.90%	76.01%
Maximum system voltage	DC 1000 V	
Operating Temperature	(-40 ~ + 85%) °C	
Positive Tolerance	± 3%	
Cell type	Poly Crystalline Silicon	
Connectors	Mc4 compatible Ip67	

URE250-60P



URE300-72P

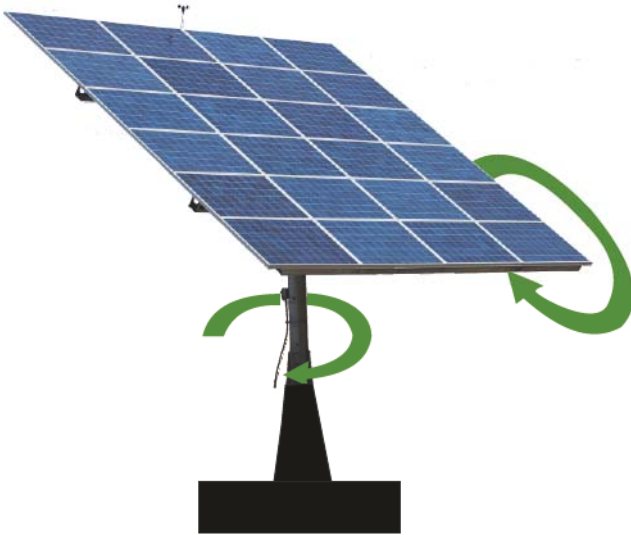


Test Certifications and Warranties

Standard Tests :	CEI/IEC 61215, CEI/IEC 61730-1, CEI/IEC 61730-2, IEC 61701
System Certificates :	ISO 9001 : 2008, ISO 14001:2004, OHSAS 18001 : 2007
Junction Box :	Weather proof (≥Ip65)
Warranties :	05 years Product Warranty
	10 years limited power warranty for 90% NP
	15 years limited power warranty for 85% NP
	25 years limited power warranty for 80% NP

(B) Mounting Structure

DUAL AXIS TRACKER



Features

- Automated tracking of daily and seasonal movement of sun
- Yield of solar PV system is increased by **35-40%**
- From 4 panels to 20 panels - custom configuration to suit your PV system
- Full range of azimuth (0-270°) and elevation angles (0 to 60°) traversed by sun along solar path
- Tracking is based on astronomical algorithms and not affected by cloudy or sunny days
- Pole made from hot dipped galvanized steel, other structural elements from anodized aluminum
- Wind gusts of 30m/s
- Concrete or grounding screw foundation
- Overwind protection available
- Remote Monitoring (Optional)

TECHNICAL SPECIFICATIONS:

	URE-DAT-24	URE-DAT-36
Max Module Area	24 sq. m	36 sq.m
Max No of solar panels	12 panels of 280-300W	18 panels of 280-300W
Layout	3X4	3X6
Weight Without Modules	Approx 780 kg	Approx 1000kg
Tracking method	Astronomical algorithms	
Tracking Control	Microcontroller	
Elevation Positioning	Linear Actuator	
Elevation Range	0 to 60 degrees	
Azimuth Positioning	Slew Drive or Actuator	
Azimuth Range	0 to 270 degrees	
Positioning accuracy	0.5 degrees	
Material Specification	Hot dipped galvanized steel pole, with anodized Al rails	
Foundation	Concrete or grounding screw	
Wind Speed Resistance	30m/s	
Power Supply to Motors	24V DC	
Overwind Protection	Programmable	
Remote Monitoring	Optional	
Warranty	10 years on mechanical, 2 years on electrical parts including actuators and drives	

(C) VFD (CONTROLLER)

UR100



UR200



Single Phase & Three Phase Pumping Inverter



- **Power**
Single Phase 220V: 0.2KW~2.2KW
Three Phase 220V: 0.2KW~2.2KW
Three Phase 380V: 0.75KW~4KW
- **Terminal**
5*Digital Input (DI1~DI4,DI7)
2*Analog Input(0~10V,0~20mA)
1*Digital Output(Y1)
1*Relay Output(R1)

- **Power**
Three Phase 220V: 0.75KW~75KW
Three Phase 380V: 0.75KW~400KW
- **Terminal**
7*Digital Input(DI1~DI7)
3*Analog Input(0~10V,0~20mA,
-10V~10V)
2*Digital Output(Y1,Y2)
2*Relay Output(R1,R2)

Product Range :-

UR100-4T-5.5B
UR200-4T-4B
UR200-4T-5.5B
UR200-4T-7.5B
UR200-4T-11B
UR200-4T-15B
UR200-4T-18.5B
UR200-4T-22B



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Solar Water Pumping System

Model	UR100-2S-0.4B	UR100-2S-0.7B	UR100-2S-1.5B	UR100-2S- 2.2B	UR200-4T-0.7B	UR200-4T-1.5B	UR200-4T-2.2B
Maximum Input DC Voltage	450VDC				800VDC		
Recommended MPPT Voltage Range	250~350VDC				450~600VDC		
Working DC voltage of Inverter	120~450V				230V~800VDC		
Max MPPT efficiency	99%						
Grid or backup generator input							
Input Voltage	Single phase 220V(-15%~30%)				Three phase 380V (-15%~30%)		
Input frequency	50Hz (-5%~+5%)						
Output specification							
Drive mode	Variable Frequency Drive, output PWM, 3 phase						
Rated output voltage	3PH 220V				3PH 380V		
Applicable motor (kW)	0.4kW	0.75kW	1.5kW	2.2kW	0.75kW	1.5kW	2.2kW
Rated output current (A)	2.5A	4.2A	7.5A	9.5A	2.5A	4.2A	5.5A
Output frequency	0~600.00Hz (Off 0~50.00Hz)						
Protection							
Built-in Protection	Over-current , overvoltage, overheating						
	Output phase-lose						
	Under-load, under-voltage, over load						
	Short circuit and etc						
	Dry run protection/Reverse polarity						
General Parameters							
Power generated by PV panel	Built-in						
UP time of the pump	Built-in						
Full auto running	Built-in						
Over tank & dry run control	Built-in						
Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping						
Altitude	0~2000m, derated use above 1000m; Per 100m, the rated output current decrease 1%.						
Environment Temperature	-10~40 (Environment Temperature be 40~50, derated use.)						
Humidity	5~95%,non-condensation						
Vibration	less than 5.9 m/s ² (0.6g)						
Storage Temperature	-20~+70						
Efficiency	Rated Power Run ≥93%						
Installation	Wall mounted or flange installation						
Protection Grade	IP20						
Cooling	Forced Air Cooling						
Package Size*	233*180*214	233*180*215	233*180*216	233*180*217	232*191*247		232*191*247
VFD Size*	110*173*135	110*173*136	110*173*137	110*173*138	117*187*60		117*187*60
VFD Size & Weight	Net weight: 1.47Kg, Gross weight: 1.9Kg	Net weight: 1.47Kg, Gross weight: 1.10Kg	Net weight: 1.47Kg, Gross weight: 1.11Kg	Net weight: 1.47Kg, Gross weight: 1.12Kg	Net weight: 2.2Kg, Gross weight: 2.3Kg		Net weight: 2.3Kg, Gross weight: 2.4Kg
Special Feature	Remote Monitoring System (if Required)						
	One Month Data Backup (via GPRS Data Logger)						

Remark : (*, **, ***) (W*H*D) Dimension are in mm

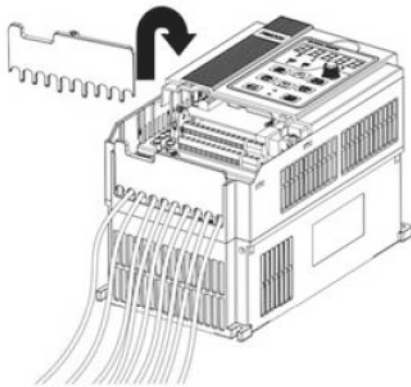
Solar Water Pumping System

Model	UR200-4T-4B	UR200-4T-5.5B	UR200-4T-7.5B	UR200-4T-11B	UR200-4T-15B	UR200-4T-18.5B	UR200-4T-22B
Maximum Input DC Voltage	800VDC						
Recommended MPPT Voltage Range	450~600VDC						
Working DC voltage of Inverter	230V~800VDC						
Max MPPT efficiency	99%						
Grid or backup generator input							
Input Voltage	Three phase 380V (-15%~30%)						
Input frequency	50Hz/60Hz (-5%~+5%)						
Output specification							
Drive mode	Variable Frequency Drive, output PWM, 3 phase						
Rated output voltage	3PH 380V	3PH 380V	3PH 300V/380V				
Applicable motor (kW)	4kW	5.5kW	7.5kW	11kW	15kW	18.5kW	22kW
Rated output current (A)	9.5A	13A	17A	25A	32A	37A	45A
Output frequency	0~600.00Hz (Off 0~50.00Hz)						
Protection							
Built-in Protection	Over-current , overvoltage, overheating						
	Output phase-lose						
	Under-load, under-voltage, Overload						
	Short circuit and etc						
	Dry run protection/Reverse polarity						
General Parameters							
Power generated by PV panel	Built-in						
UP time of the pump	Built-in						
Full auto running	Built-in						
Over tank & dry run control	Built-in						
Application Site	No direct sunshine, no dust, corrosive gas, combustible gas, oil mist, steam, dripping						
Altitude	0~2000m, derated use above 1000m; Per 100m, the rated output current decrease 1%.						
Environment Temperature	-10~40 (Environment Temperature be 40~50, derated use.)						
Humidity	5~95%,non-condensation						
Vibration	less than 5.9 m/s ² (0.6g)						
Storage Temperature	-20~+70						
Efficiency	Rated Power Run ≥93%						
Installation	Wall mounted or flange installation						
Protection Grade	IP20						
Cooling	Forced Air Cooling						
Package Size*	343*240*272	343*240*272	343*240*272	394*292*280		554*370*347	
Inverter Size*	146*249*177	146*249*177	146*249*177	198*300*185		255*459*220	
Inverter Size & Weight	Net weight: 3.08Kg, Gross weight: 4.03Kg		Net weight: 3.15Kg, Gross weight: 4.1Kg	Net weight: 5.7Kg, Gross weight: 6.83Kg	Net weight: 5.8Kg, Gross weight: 6.92Kg	Net weight: 14.5Kg, Gross weight: 16.4Kg	Net weight: 14.8Kg, Gross weight: 16.7Kg
Special Feature	Remote Monitoring System (if Required)						
	One Month Data Backup (via GPRS Data Logger)						

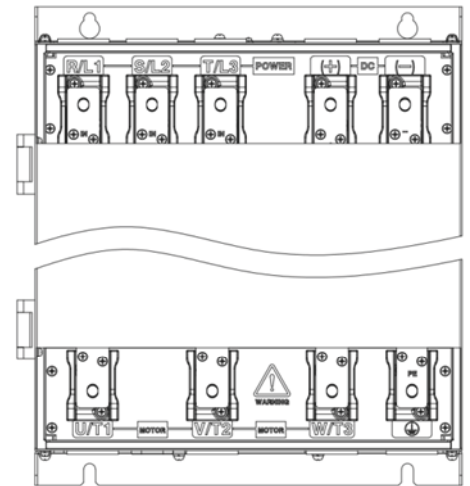
Remark : (*, **, ***) (W*H*D) Dimension are in mm

Installation & Wirings

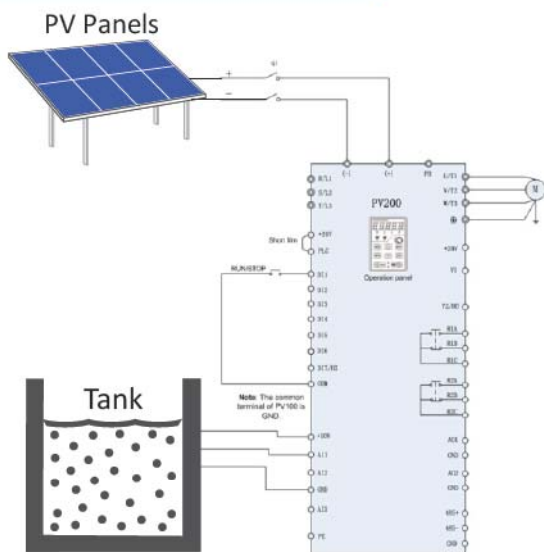
Installation: support din rail mounting, wall mounting, and cabinet mounting.



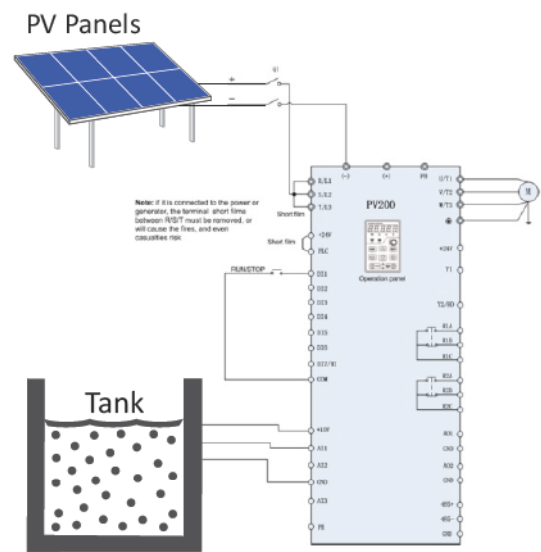
Wirings:
wires plug through the whole,
wirings connected by top-
enter and bottom-exit from
90kw, easy for cooper
buswork wirings, built-in
DC reactor, save space,
save wirings.



Wirings



220V ≤15KW or 380V ≤30KW
Wirings Drawing



220V ≥18KW or 380V ≥37KW
Wirings Drawing

FULL-AUTO RUNNING

After solar pumping inverter finish power-off, when solar panel restore voltage, solar inverter need to do setting as below:

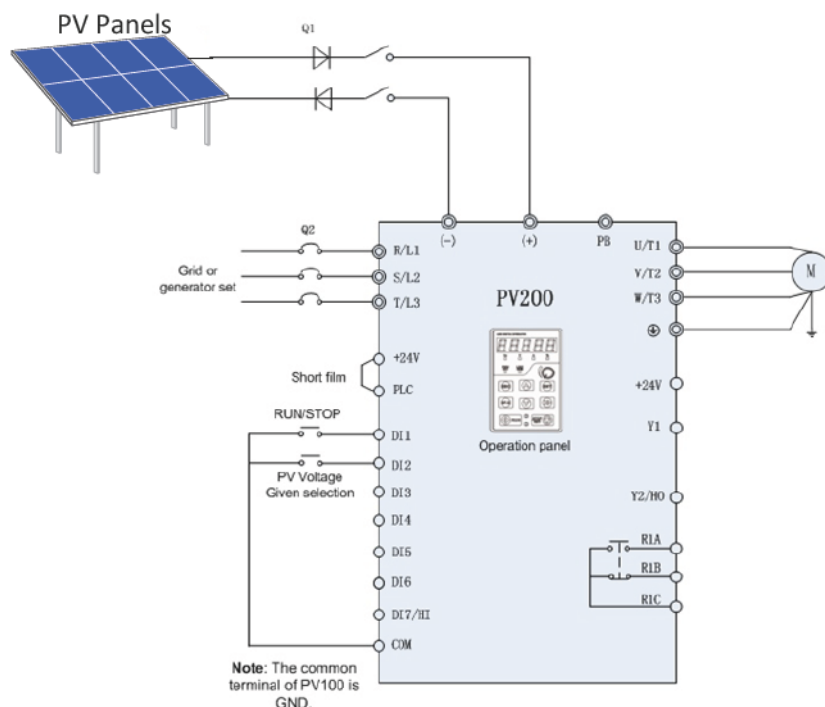
- Set F02.00 = 1, started by terminal ;
- DI1 and COM terminal been Shortened

WEAK-LIGHT VOLTAGE SETTING

System weak-light voltage set by H00.25

- 380V inverter lowest voltage to 250VDC
- 220V inverter lowest voltage to 120VDC

SWITCH BETWEEN SOLAR AND GRID



Method 1: Parameter Control

- disconnect Q1, and then close Q2, set H00.01=0, now power supplied by grid
- disconnect Q2, and then close Q1, set H00.01=1, now power supplied by solar panel

Method 2: Terminal Control

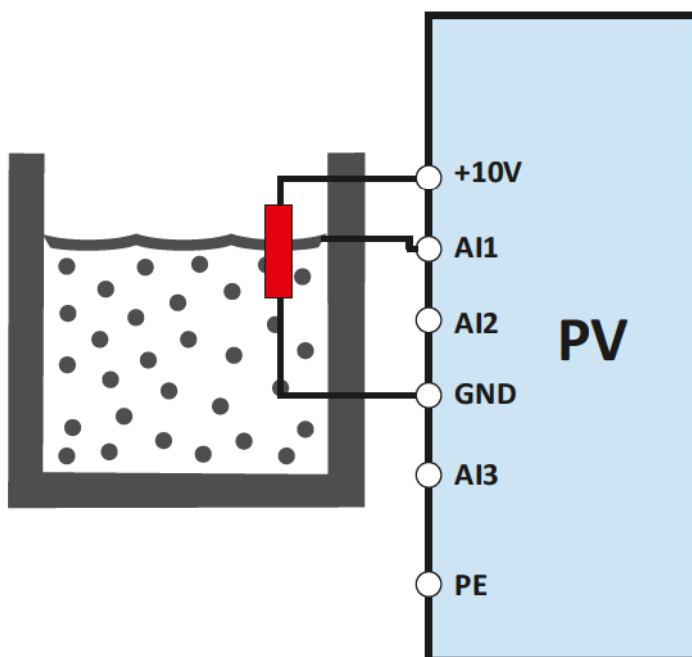
Set H00.01 0, F04.01=51

- disconnect Q1, and then close Q2, disconnect DI2, now power supplied by grid
- disconnect Q2, and then close Q1, and shorten DI2, now power supplied by solar panel

CONTROL MODE

- Constant Voltage Adjustment Methods
H00.02=0, voltage set by H00.03
- Voltage Range Setting MPPT
H00.02=1, search voltage range H00.04~H00.05
- Auto- MPPT
H00.02=2, system will auto-search the max power point according to solar panel voltage and sunlight intensity

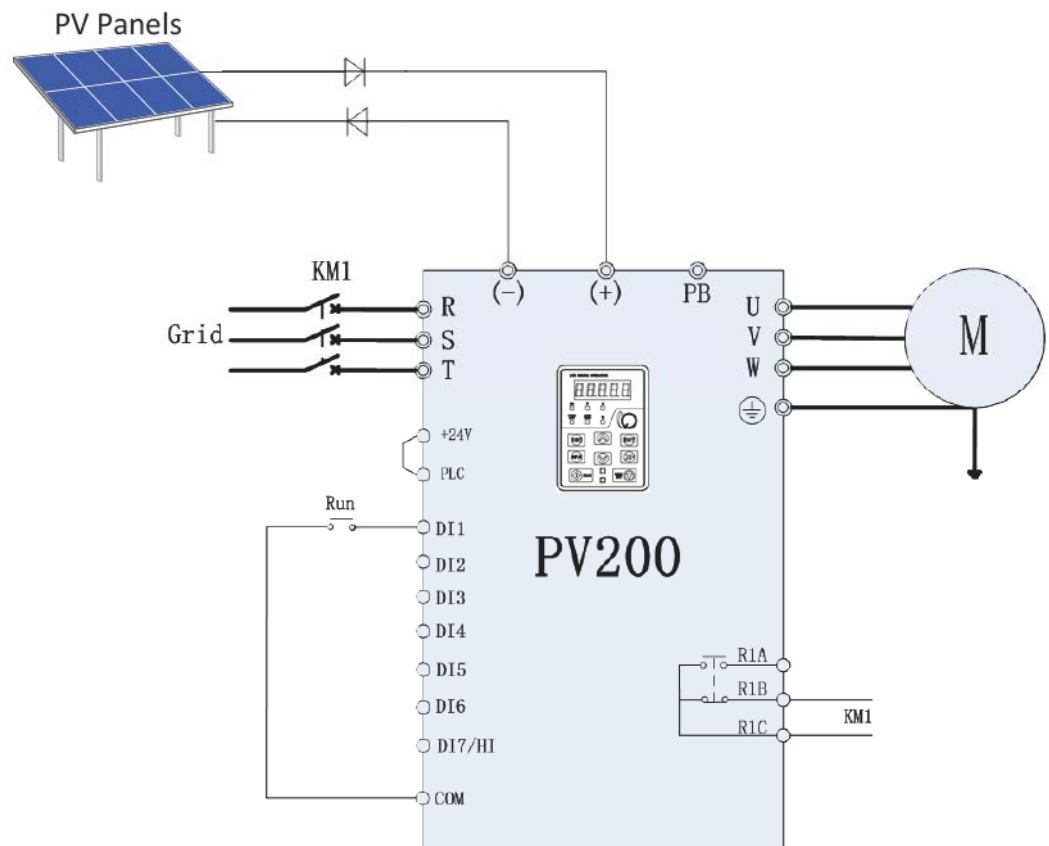
FLOATER DETECT THE FUNCTION OF FULL-WATER AND DRY-RUN



- H00.15 choose AI channel
- H00.17 is the value set to detect water level
- H00.24 is direction for float detecting water level. When water level higher, and the detect value larger, set H00.24=1; when water level higher, and detect value smaller, set H00.24=0。
- When water level higher than H00.17, after delay H00.18, system enter dormancy; when water level lower than H00.17, after delay H00.16, system will start automatically.

AUTO SWITCH GRID & SOLAR

- H00.27=1



Functions & Applications

PV Pump Special Inverter Model	Open Circuit Voltage Level of Solar Cell Components									
	20 ± 3V		30 ± 3V		36 ± 3V		42 ± 3V			
	Power of components ± 5Wp	Numbers of component per string*Numbers of string	Power of components ±5 Wp	Numbers of component per string*Numbers of string	Power of components ± 5Wp	Numbers of component per string*Numbers of string	Power of components ± 5Wp	Numbers of component per string*Numbers of string	Power of components ±5 Wp	Numbers of component per string*Numbers of string
URE200-4T-0.7B	30	29*1	-	-	-	-	-	-	-	-
URE200-4T-1.5B	60	30*1	-	-	-	-	-	-	-	-
URE200-4T-2.2B	90	30*1	-	-	145	18*1	175	15*1	-	-
URE200-4T-4.0B	85	28*2	220	22*1	140	17*2	160	15*2	-	-
URE200-4T-5.5B	-	-	-	-	195	17*2	220	15*2	-	-
etc										

(D) PUMP

SUITABLE FOR 100 MM (4") BORE WELL & ABOVE										
Outlet : 32 mm (1.25")										
MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	18	22	26	32	36	46
URE-1	0.5	9	HEAD IN METER	50	45	43	41	36	32	25
URE-1	0.75	12		66	60	57	54	48	42	33
URE-1	1	20		110	100	95	90	79	69	53
URE-1	1.5	25		138	125	119	113	100	88	69
URE-1	2	30		165	150	143	135	120	105	83
Outlet : 32 mm (1.25")										
MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	28	36	42	55	60	70
URE-2	0.5	7	HEAD IN METER	37	33	30	27	25	22	7
URE-2	0.75	10		57	50	45	40	38	33	11
URE-2	1	12		68	60	54	48	45	39	13
URE-2	1	15		83	75	69	63	59	53	16
URE-2	1.5	20		110	97	88	79	74	65	20
URE-2	2	25		137	120	108	96	90	78	26
URE-2	3	30		171	150	135	120	113	98	33
Outlet : 32 mm (1.25")										
MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	45	49	54	70	80	96
URE-4	0.5	5	HEAD IN METER	31	25	24	23	20	18	15
URE-4	0.75	7		43	35	33	32	28	25	21
URE-4	1	10		62	50	48	45	40	36	30
URE-4	1.5	12		74	60	57	54	48	43	36
URE-4	1.5	15		93	75	71	68	60	54	45
URE-4	2	20		124	100	95	90	80	72	60
URE-4	3	25		155	125	119	113	100	90	75
URE-4	5	35		217	175	166	158	140	126	105



SUITABLE FOR 100 MM (4") BORE WELL & ABOVE
Outlet : 32 mm (1.25")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	60	75	90	120	132	145
URE-5	1	8	HEAD IN METER	49	40	36	32	24	20	16
URE-5	1.5	10		62	50	45	40	30	25	20
URE-5	2	15		92	75	68	60	45	38	30
URE-5	3	20		123	100	90	80	60	50	40
URE-5	5	30		185	150	135	120	90	75	60

Outlet : 38 mm (1.5")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	65	80	105	120	142	155
URE-7	1	6	HEAD IN METER	36	32	31	28	26	21	18
URE-7	1.5	8		52	46	44	40	36	28	22
URE-7	2	12		76	68	64	58	52	40	34
URE-7	3	15		98	87	83	75	68	53	45
URE-7	5	25		163	145	138	125	113	98	78

Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	150	170	190	210	240	270
URE-10	2	10	HEAD IN METER	54	36	31	29	24	21	16
URE-10	3	12		64	44	38	35	29	26	20
URE-10	5	15		87	60	53	49	41	38	30
URE-10	5	20		113	77	67	62	52	47	37

Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	150	170	190	210	240	270
URE-18	3	9	HEAD IN METER	52	36	32	23	20	18	14
URE-18	5	12		70	48	42	30	27	24	18
URE-18	5	14		81	56	49	35	32	28	21

Outlet : 75 mm (2.5")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	190	240	310	350	370	430
URE-18C	3	6	HEAD IN METER	31	25	22	18	15	13	10
URE-18C	5	10		51	38	34	30	26	22	17
URE-18C	7.5	14		72	56	47	42	35	31	24



SUITABLE FOR 150 MM (6") BORE WELL & ABOVE
Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	60	93	100	140	155	190
UREK-30	3	8	HEAD IN METER	72	66	62	56	42	36	20
UREK-30	3	10		90	83	78	70	53	45	25
UREK-30	4	12		108	99	93	84	63	54	30
UREK-30	5	14		126	116	109	98	74	63	35
UREK-30	5	15		135	124	116	105	79	68	38
UREK-30	5	16		144	132	124	112	84	72	40
UREK-30	6	17		153	140	132	119	89	77	43
UREK-30	6	18		162	149	140	126	95	81	45
UREK-30	7.5	20		180	165	155	140	105	90	50

Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	70	110	135	160	180	210
UREK-40	3	7	HEAD IN METER	70	59	54	49	37	32	18
UREK-40	4	10		100	84	77	70	53	45	25
UREK-40	5	12		120	101	92	84	63	54	30
UREK-40	6	14		140	118	108	98	74	63	35
UREK-40	6	15		150	126	115	105	79	68	38
UREK-40	7.5	18		180	152	138	126	94	81	85

Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	105	155	175	185	220	245
UREK-50	3	6	HEAD IN METER	65	54	48	45	42	36	30
UREK-50	4	8		86	72	64	60	56	48	40
UREK-50	5	10		108	90	80	75	70	60	50
UREK-50	6	12		130	108	96	90	84	72	60
UREK-50	7.5	14		151	126	112	105	98	84	70
UREK-50	7.5	16		173	144	128	120	112	96	80
UREK-50	10	18		194	162	144	135	126	108	90
UREK-50	10	20		216	180	160	150	140	120	100



SUITABLE FOR 150 MM (6") BORE WELL & ABOVE
Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	140	155	195	205	225	260
UREK-60	3	5	HEAD IN METER	58	53	50	45	43	38	30
UREK-60	4	6		69	63	60	54	51	45	36
UREK-60	4	7		81	74	70	63	60	53	42
UREK-60	5	8		92	84	80	72	68	60	48
UREK-60	6	10		115	105	100	90	85	75	60
UREK-60	7.5	12		138	126	120	108	102	90	72
UREK-60	10	15		173	158	150	135	128	113	90
UREK-60	10	16		184	168	160	144	136	120	96
UREK-60	12.5	20		230	210	200	180	170	150	120
UREK-60	15	24		276	252	240	216	204	180	144
UREK-60	15	26		299	273	260	234	221	195	156
UREK-60	17.5	28		322	294	280	252	238	210	168

Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	210	230	255	295	330	375
UREK-80	3	4		46	40	38	36	32	28	24
UREK-80	4	5		58	50	48	45	40	35	30
UREK-80	5	6		69	60	57	54	48	42	36
UREK-80	6	7		81	70	67	63	56	49	42
UREK-80	7.5	9		104	90	86	81	72	63	54
UREK-80	7.5	10		115	100	95	90	80	70	60
UREK-80	10	12		138	120	114	108	96	84	72
UREK-80	12.5	14		161	140	133	126	112	98	84
UREK-80	12.5	15		173	150	143	135	120	105	90
UREK-80	15	20		230	200	190	180	160	140	120
UREK-80	17.5	22		253	220	209	198	176	154	132
UREK-80	20	25		288	250	238	225	200	175	150



SUITABLE FOR 150 MM (6") BORE WELL & ABOVE
Outlet : 50 mm (2")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	175	290	320	340	370	405
UREK-100	3	3	HEAD IN METER	38	33	30	27	24	21	18
UREK-100	4	4		50	44	40	36	32	28	24
UREK-100	5	5		63	55	50	45	40	35	30
UREK-100	6	6		75	66	60	54	48	42	36
UREK-100	7.5	7		88	77	70	63	56	49	42
UREK-100	10	10		125	110	100	90	80	70	60
UREK-100	12.5	12		150	132	120	108	96	84	72
UREK-100	15	15		188	165	150	135	120	105	90
UREK-100	17.5	17		213	187	170	153	136	119	102
UREK-100	20	20		250	220	200	180	160	140	120
UREK-100	25	25		313	275	250	225	200	175	150



SUITABLE FOR 150 MM (6") BORE WELL & ABOVE
Outlet : 50/75 mm (2.5" / 3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	200	300	400	500	600	650
URE 42	3	3	HEAD IN METER	36	33	29	25	21	17	15
URE 42	4	4		46	40	36	32	28	24	22
URE 42	5	5		57	49	45	40	35	30	28
URE 42	6	6		69	58	54	48	42	36	33
URE 42	7.5	7		80	68	62	56	49	42	39
URE 42	10	9		103	88	80	72	63	54	50
URE 42	10	10		115	97	89	80	70	60	55
URE 42	12.5	12		138	116	107	96	84	72	66
URE 42	15	14		161	136	125	112	98	84	77
URE 42	15	15		172	145	134	120	105	90	83
URE 42	17.5	17		195	165	151	136	119	102	94
URE 42	20	18		207	175	160	144	126	108	99
URE 42	20	20		230	194	178	160	140	120	110
URE 42	25	25		265	235	218	200	175	150	138

Outlet : 50 / 75 mm (2.25" x 3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	350	400	450	500	600	700
URE 62	5	3	HEAD IN METER	35	27	26	24	22	16	15
URE 62	5	4		46	37	35	33	30	22	21
URE 62	7.5	5		57	46	45	41	38	30	29
URE 62	7.5	6		69	55	52	49	45	35	33
URE 62	10	7		80	64	61	57	52	41	38
URE 62	10	8		92	74	71	66	61	47	44
URE 62	12.5	9		103	82	79	73	66	50	47
URE 62	15	10		115	91	87	84	74	56	54
URE 62	15	11		126	102	97	90	82	62	60
URE 62	15	12		126	102	97	90	82	62	60
URE 62	17.5	12		138	111	105	98	89	67	65
URE 62	20	14		161	128	122	114	105	79	78
URE 62	20	15		172	136	131	123	114	82	81
URE 62	25	18		207	165	157	144	136	101	99
URE 62	25	20		220	178	170	158	149	120	108



SUITABLE FOR 150 MM (6") BORE WELL & ABOVE
Outlet : 75 mm (3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	450	500	600	700	800	900
URE 73	5	2	HEAD IN METER	23	19	18	16	14	11	8
URE 73	6	3		35	28	27	24	21	17	13
URE 73	6	4		46	37	34	29	25	19	14
URE 73	7.5	4		47	39	37	32	27	22	15
URE 73	7.5	5		57	42	41	37	33	27	17
URE 73	10	5		58	48	46	40	35	28	19
URE 73	10	6		69	55	53	48	41	32	22
URE 73	12.5	7		80	64	62	56	48	38	26
URE 73	15	8		92	73	71	64	54	42	30
URE 73	17.5	9		103	83	80	72	61	48	33
URE 73	20	10		115	89	86	80	70	57	40
URE 73	25	12		138	111	107	96	81	64	44
URE 73	25	14		138	111	107	96	81	64	44

Outlet : 75 mm (3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	700	800	900	1000	1100	1250
URE 02	5	2	HEAD IN METER	23	17	15	14	12	10	7
URE 02	7.5	3		35	25	23	21	18	15	11
URE 02	7.5	4		46	30	28	25	21	16	12
URE 02	10	4		47	34	32	29	26	22	16
URE 02	10	5		57	38	36	33	28	23	17
URE 02	12.5	5		58	43	39	35	31	26	19
URE 02	15	6		69	51	47	42	37	31	21
URE 02	17.5	7		80	59	55	49	43	37	25
URE 02	20	8		92	67	62	56	49	41	29
URE 02	20	9		103	75	70	63	55	46	33
URE 02	25	10		115	83	77	71	63	53	41



SUITABLE FOR 200 MM (8") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	600	800	1000	1200	1400	1600
JM/URE-31	7.5	2	HEAD IN METER	41	35	31	26	23	17	13
JM/URE-31	7.5	3		52	41	34	28	24	15	9
JM/URE-31	10	2		46	39	35	32	28	25	18
JM/URE-31	10	3		59	48	43	37	31	26	17
JM/URE-31	12.5	3		63	55	50	45	40	34	22
JM/URE-31	15	3		68	59	53	48	43	38	25
JM/URE-31	20	4		90	78	70	64	59	50	40

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	600	800	1000	1200	1400	1600
7JM/URE-33	7.5	2	HEAD IN METER	38	32	30	24	21	14	11
7JM/URE-33	7.5	3		48	40	35	27	22	12	6
7JM/URE-33	10	2		44	36	32	30	29	27	18
7JM/URE-33	10	3		54	44	40	35	30	25	15
7JM/URE-33	12.5	3		59	48	44	38	33	28	18
7JM/URE-33	15	3		62	55	50	44	36	32	22
7JM/URE-33	15	4		78	65	58	50	40	30	20
7JM/URE-33	20	4		81	70	62	57	51	43	35
7JM/URE-33	20	5		90	78	69	62	56	39	30
7JM/URE-33	20	5		99	88	76	65	60	44	35
7JM/URE-33	30	6		109	96	85	72	66	49	39

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1300	1400	1500	1600	1700	1900
JM/URE-84	12.5	2	HEAD IN METER	41	30	28	26	23	20	14
JM/URE-84	15	2		44	35	33	31	28	25	20
JM/URE-84	15	3		55	40	37	35	32	29	23
JM/URE-84	20	2		52	43	42	40	39	38	34
JM/URE-84	20	3		61	48	45	42	39	36	31
JM/URE-84	20	4		73	53	49	46	42	38	30
JM/URE-84	25	3		68	57	54	51	48	45	40
JM/URE-84	25	4		81	62	58	54	50	46	41



SUITABLE FOR 200 MM (8") BORE WELL & ABOVE
Outlet : 75 mm (3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	360	460	600	650	750	780
URE-93	10	4	HEAD IN METER	92	76	70	64	60	52	46
URE-93	12.5	5		115	95	88	80	75	65	58
URE-93	15	6		138	114	105	96	90	78	69
URE-93	20	8		184	152	140	128	120	104	92
URE-93	25	10		230	190	175	160	150	130	115
URE-93	30	12		276	228	210	192	180	156	138
URE-93	35	14		322	266	245	224	210	182	161
URE-93	40	16		368	304	280	256	240	208	184

Outlet : 75 mm (3")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	380	490	575	650	700	840
URE-93	12.5	4	HEAD IN METER	96	82	76	70	64	60	48
URE-93	15	5		120	103	95	88	80	75	60
URE-93	20	7		168	144	133	123	112	105	84
URE-93	25	8		192	164	152	140	128	120	96
URE-93	30	10		240	205	190	175	160	150	120
URE-93	35	12		288	246	228	210	192	180	144
URE-93	40	13		312	267	247	228	208	195	156
URE-93	45	15		360	308	285	263	240	225	180



Outlet : 75 mm (3")										
MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	440	590	670	740	830	930
URE-93	12.5	3	HEAD IN METER	72	59	54	53	48	45	38
URE-93	20	5		120	98	90	88	80	75	63
URE-93	25	6		144	117	108	105	96	90	75
URE-93	30	8		192	156	144	140	128	120	100
URE-93	35	9		216	176	162	158	144	135	113
URE-93	40	10		240	195	180	175	160	150	125
URE-93	45	11		264	215	198	193	176	165	138
URE-93	50	12		288	234	216	210	192	180	150
SUITABLE FOR 200 MM (8") BORE WELL & ABOVE Outlet : 75 mm (3")										
MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	510	620	725	825	900	1000
URE-93	15	3	HEAD IN METER	75	63	60	59	53	46	41
URE-93	20	4		100	84	80	78	70	62	57
URE-93	25	5		125	105	100	98	88-	78	70
URE-93	30	6		150	126	120	117	105	95	84
URE-93	35	7		175	147	140	137	123	110	98
URE-93	40	8		200	168	160	156	140	128	112
URE-93	45	9		225	189	180	176	158	145	130
URE-93	50	10		250	210	200	195	175	160	150
URE-93	60	12		300	252	240	234	210	198	175



SUITABLE FOR 200 MM (8") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	600	800	1000	1200	1400	1500
URE-331	12.5	4	HEAD IN METER	72	57	53	45	33	23	20
URE-331	15	5		90	71	66	56	41	29	24
URE-331	20	6		108	85	79	67	49	35	29
URE-331	25	7		126	107	96	81	63	44	34
URE-331	25	8		144	114	101	87	69	48	37
URE-331	30	8		152	122	110	93	73	51	40
URE-331	30	9		162	128	118	99	77	53	44
URE-331	30	10		180	133	120	104	82	56	47
URE-331	35	9		170	137	127	103	80	54	46
URE-331	35	10		184	142	132	110	86	57	50
URE-331	40	11		198	170	154	132	94	71	54
URE-331	40	12		216	177	160	139	102	74	58

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	600	800	1000	1200	1400	1500
URE-431	12.5	3	HEAD IN METER	63	52	48	43	31	21	18
URE-431	15	4		84	67	62	52	39	27	21
URE-431	20	5		105	82	76	63	46	32	28
URE-431	25	6		126	101	98	83	65	46	31
URE-431	30	7		147	118	106	90	70	49	34
URE-431	35	8		168	132	120	100	78	53	41
URE-431	40	10		203	167	148	129	99	67	50
URE-431	45	11		225	177	160	135	106	71	54
URE-431	50	12		246	195	180	159	124	83	58



SUITABLE FOR 200 MM (8") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	600	800	1000	1200	1400	1500
URE-531	15	3	HEAD IN METER	66	59	55	51	40	27	23
URE-531	20	4		88	76	71	60	44	32	27
URE-531	25	5		110	96	91	81	62	44	30
URE-531	30	6		132	113	104	88	68	47	33
URE-531	35	7		154	128	116	97	76	51	40
URE-531	40	8		176	151	141	123	97	66	49
URE-531	45	9		198	169	153	129	102	69	52
URE-531	50	10		220	185	175	156	122	81	57
URE-531	60	12		264	220	204	190	172	130	118

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	800	900	1000	1200	1300	1400
URE-533	12.5	3	HEAD IN METER	57	44	43	42	38	36	33
URE-533	15	3		59	48	47	46	42	40	37
URE-533	20	4		78	64	62	60	55	52	49
URE-533	25	5		97	80	77	75	68	65	61
URE-533	30	6		117	96	93	90	82	78	74
URE-533	35	7		136	112	109	105	96	91	86
URE-533	40	8		156	128	124	120	110	105	100
URE-533	45	9		175	144	140	135	124	118	113
URE-533	50	10		195	160	156	150	138	132	124
URE-533	60	12		234	192	188	180	166	160	146



SUITABLE FOR 200 MM (8") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	800	900	1100	1300	1400	1500
URE-633	12.5	2	HEAD IN METER	40	36	35	33	31	29	27
URE-633	20	3		60	52	51	47	43	40	38
URE-633	25	4		80	68	66	62	56	52	49
URE-633	30	5		100	84	82	77	69	65	60
URE-633	40	6		120	100	98	92	82	77	71
URE-633	45	7		140	116	114	107	96	89	82
URE-633	50	8		160	132	129	122	108	101	93
URE-633	60	10		200	164	159	152	132	125	115

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	1900	2000
URE-684	12.5	2	HEAD IN METER	41	32	28	28	17	14	10
URE-684	20	3		61	49	44	44	31	27	23
URE-684	25	4		81	62	55	55	36	31	26
URE-684	30	5		101	77	68	68	45	39	32
URE-684	40	6		121	93	82	82	54	47	40
URE-684	45	7		141	108	95	95	63	55	46
URE-684	50	8		161	122	109	109	74	63	52
URE-684	60	9		182	140	130	130	100	94	77
URE-684	60	10		201	151	136	136	103	97	80

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	1900	2100
URE-784	15	2	HEAD IN METER	44	37	33	28	23	19	12
URE-784	30	4		88	68	62	55	47	42	33
URE-784	35	5		110	84	77	69	60	55	44
URE-784	45	6		132	99	91	82	72	66	54
URE-784	50	7		154	114	106	96	84	78	64
URE-784	60	8		172	135	126	115	97	90	74



SUITABLE FOR 250 MM (8") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	1900	2100
URE-884	25	3	HEAD IN METER	68	57	53	47	39	35	26
URE-884	35	4		92	76	71	63	53	48	37
URE-884	40	5		115	95	89	79	66	59	45
URE-884	50	6		138	111	103	93	80	74	54
URE-884	60	7		161	133	125	114	96	88	70

Outlet : 32 mm (1.25")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	2000	2200
URE-984	20	2	HEAD IN METER	50	44	42	39	36	32	24
URE-984	30	3		75	64	60	55	50	44	34
URE-984	40	4		100	82	78	72	64	56	44
URE-984	50	5		125	107	100	92	82	70	56
URE-984	60	6		150	129	121	110	96	86	69



SUITABLE FOR 250 MM (10") BORE WELL & ABOVE
Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	800	900	1100	1300	1400	1500
URE-33	52	8	HEAD IN METER	160	132	129	122	108	101	93
URE-33	62	9		180	148	144	138	122	113	104
URE-33	62	10		200	164	159	152	132	125	115
URE-33	75	12		240	196	192	180	150	152	140

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	800	900	1100	1600	1700	1800
URE-33	52	7	HEAD IN METER	140	134	131	124	93	83	74
URE-33	62	8		160	152	149	142	106	95	84
URE-33	75	9		180	170	167	159	118	106	94
URE-33	75	10		200	188	185	177	130	117	104
URE-33	85	11		220	206	203	195	142	128	114
URE-33	100	13		260	242	139	230	166	150	134

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	1900	2100
URE-84	62	8	HEAD IN METER	160	135	126	115	97	90	74
URE-84	62	9		182	140	130	118	100	94	77
URE-84	75	10		203	161	150	135	115	107	86
URE-84	85	11		224	180	166	151	127	114	96
URE-84	100	13		265	212	196	178	151	133	113

Outlet : 100 mm (4")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1200	1400	1600	1800	2000	2200
URE-84	62	6	HEAD IN METER	150	129	121	110	96	86	69
URE-84	75	7		175	151	141	129	114	98	80
URE-84	85	8		200	172	161	147	130	112	91
URE-84	100	10		250	215	201	183	162	140	113
URE-84	125	12		300	258	241	219	194	168	135



SUITABLE FOR 250 MM (10") BORE WELL & ABOVE
Outlet : 150 mm (6")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1400	1600	1900	2200	2500	2800
URE-104	62	4	HEAD IN METER	112	101	98	90	80	69	52
URE-104	75	5		140	125	120	110	100	85	65
URE-104	85	6		168	150	144	132	120	102	78
URE-104	100	7		196	175	168	154	140	119	91
URE-104	125	9		252	225	216	198	180	153	117

Outlet : 150 mm (6")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1600	2100	2300	3000	3300	3600
URE-105	62	3	HEAD IN METER	82	69	64	61	54	49	45
URE-105	85	4		110	92	85	81	72	65	60
URE-105	100	5		138	115	106	101	90	81	75
URE-105	125	6		165	138	127	121	108	97	90

Outlet : 150 mm (6")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	1800	2200	2400	3000	3400	3800
URE-106	52	2	HEAD IN METER	60	53	50	47	43	37	32
URE-106	75	3		90	79	75	71	65	55	48
URE-106	100	4		120	106	100	94	86	73	64
URE-106	125	5		150	131	125	119	109	91	79



SUITABLE FOR 250 MM (10") BORE WELL & ABOVE
Outlet : 150 mm (6")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	2400	3000	3400	3900	4500	4900
URE-107	52	1	HEAD IN METER	55	42	39	36	32	27	23
URE-107	85	2		110	81	76	70	63	57	46
URE-107	125	3		165	122	114	105	95	80	69

Outlet : 150 mm (6")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	3500	4500	5400	6000	6500	6900
URE-108	75	1	HEAD IN METER	60	42	40	38	36	33	31
URE-108	150	2		120	84	80	76	72	66	62

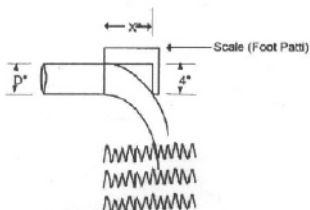
Outlet : 200 mm (8")

MODEL	H.P.	STAGE		DISCHARGE IN LPM						
				0	6000	7500	9000	10000	12000	13500
URE-109	150	1	HEAD IN METER	65	47	43	42	38	33	28



DISCHARGE CALCULATION AT SITE

HORIZONTAL DISTANCE 'X' IN INCHES	DISCHARGE RATE (L P M) NOMINAL PIPE DIAMETER "D"								
	1"	1¼"	1½"	2"	2½"	3"	4"	5"	6"
4	25.878	44.492	60.382	99.88	140.74	222.46	376.82	590.2	862.6
5	32.234	55.388	75.364	127.12	177.06	276.94	472.16	749.1	1089.6
6	38.59	66.738	90.8	149.82	213.38	331.42	567.5	885.3	1293.9
7	45.4	77.634	105.328	177.06	249.7	385.9	662.84	1044.2	1520.9
8	51.302	88.984	120.31	199.76	281.48	444.92	753.64	1180.4	1725.2
9	58.112	99.88	135.292	227	317.8	499.4	848.98	1339.3	1952.2
10	64.468	111.23	150.728	249.7	354.12	553.88	944.32	1475.5	2156.5
11	70.824	118.04	165.71	276.94	390.44	608.36	1039.66	1634.4	2383.5
12	77.18	131.66	177.06	299.64	426.76	667.38	1135.00	1770.6	2587.8
13	83.99	143.01	195.22	326.88	458.54	721.86	1225.8	1929.5	2814.8
14	90.8	154.36	211.11	349.58	494.86	776.34	1321.14	2043.00	3019.1
15	96.702	164.802	225.184	376.82	531.18	830.82	1416.48	2224.6	3223.4
16	103.058	177.06	240.62	399.5	567.5	889.84	1511.82	2360.8	3450.4
17	109.414	188.41	255.602	426.76	603.82	944.32	1602.62	2519.7	3677.4
18	115.77	198.398	270.584	449.46	635.6	998.8	1697.96	2678.6	3881.7
19	122.58	209.748	285.566	476.7	671.92	1053.28	1793.3	2814.8	4108.7
20	128.936	220.644	300.548	503.94	708.24	1107.76	1888.64	2951.00	4313.0
21	135.292	231.54	315.53	526.64	744.56	1162.24	1983.98	3109.9	4540.0
22	141.648	242.89	330.512	553.88	780.88	1221.26	2074.78	3268.8	4767.0
23	148.458	253.786	345.494	576.58	812.66	1275.74	2170.12	3405.00	4971.3
24	154.814	264.682	360.476	603.82	848.98	1330.22	2265.46	3541.2	5175.6
25	161.17	275.578	375.458	626.52	885.3	1389.24	2360.8	3700.1	5402.6
26	167.526	286.928	390.44	653.76	921.62	1443.72	2456.14	3836.3	5606.9
27	173.882	297.824	405.422	676.46	957.94	1498.2	2546.94	3995.2	5833.9
28	180.692	308.72	420.858	703.7	989.72	1552.68	2642.28	0	0
29	187.048	320.07	435.84	726.4	1026.04	1607.16	2737.62	0	0
30	193.404	330.966	450.822	753.64	1065.36	1666.18	2832.96	0	0
31	0	0	467.62	776.34	1098.68	1720.66	0	0	0
32	0	0	481.24	803.58	1135.00	1775.14	0	0	0
33	0	0	494.86	826.28	1166.78	1829.62	0	0	0
34	0	0	513.02	853.52	1203.1	1884.1	0	0	0
35	0	0	526.64	880.76	1239.42	1943.12	0	0	0



Example :

Horizontal Distance X" = 20"

Nominal Pipe Diameter D" = 2"

Discharge = 504

Selection of Pump Set for Sprinkler Application

Total Head Calculation

H1 : Actual Lowering of pumpset in Meter

H2 : Horizontal Pipe line friction losses (1 /0 of total length)

H3 : Vertical Hight of Slope (In case of slope only)

H4 : Pressure required in each sprinkler x No. of sprinkler (Avg. 1 Meter per sprinkler)

Total Head H = H1 + H2 + H3 + H4

Discharge Calculation

Total Discharge = 30 LPM x No. of Sprinkler

Example

Actual Lowering (H1) = 175 ft. (53 mtr.)

Length of pipe line (distance from the last sprinkler) = 1500 ft. (455 mtr.)

So the 1% friction loss (H2) = 5 mtr.

H3 = 0 (if no slope in line)

20 Nozzles are required so H4 = 20 Mtr.

H = 53 + 5 + 0 + 20 = 78 Mtr.

20 Sprinklers are required so Discharge require Q = 30 x 20 = 600 LPM

Now Select the pumpset from the performance table for 600 LMP at 78 Mtr.

Calculation for H.P.

$$\text{H.P.} = \frac{\text{Head (M)} \times \text{Discharge (LPM)}}{4500 \times \text{Pump Eff.}}$$

Example :

Head = 78 M

Discharge = 400 LPM Pump Eff. = 68%

$$\text{H.P.} = \frac{78 \times 400}{4500 \times 0.68}$$

= 10.19

Calculation for Current

$$\text{H.P.} = \frac{\sqrt{3} \times \text{Voltage} \times \text{Current} \times \text{Power Factor}}{4500 \times \text{Pump Eff.}}$$

So that,

$$\text{H.P.} = \frac{\text{H.P} \times 746}{\sqrt{3} \times \text{Voltage} \times \text{Power Factor}}$$

Example : HP=10, Voltage=415, Power Factor=0.95 then

$$\text{Current} = \frac{10 \times 746}{(\sqrt{3} \times 415 \times 0.95)}$$

Current = 10.93 Ampere

URE Brand Energy Efficient Submersible Motors

Model	HP
URE 4 HH	0.50
	0.75
	1.00
	1.50
	2.00
	3.00
	4.00
	5.00
	6.00
	7.50
URE 6	3.0
	4.0
	5.0
	6.0
	7.5
	10.0
	12.5
	15.0
	17.5
	20.0
	25.0
	30.0

Model	HP
URE 8	10.0
	12.5
	15.0
	17.5
	20.0
	25.0
	30.0
	35.0
	40.0
	45.0
	50.0
	60.0
	75.0
	85.0

Model	HP
URE 10	45.0
	50.0
	60.0
	75.0
	85.0
	100.0
	110.0
	125.0



CENTRIFUGAL PUMPS (2 HP TO 30 HP)

URE Centrifugal Pumps



Features

- High operating efficiency resulting in lower power consumption
- Good suction lift characteristics
- Dynamically balanced rotating parts including rotor and impeller
- Balanced and rigid construction
- Back pull-out design for easy servicing & repair
- Single shaft ensures permanent & correct alignment
- Inbuilt thermal over load protector in all single-phase pumpsets (1.5kW)

Performance Range

- Flow rate up to 2500 l/min. (150 m³/h)
- Dynamic head up to 84 mts.

Total pumping head, usually stated in feet of liquid pumped, is a combination of static and dynamic components, with the former being the total elevation through which the liquid must be raised and the latter being back pressure generated by the system. Dynamic losses would be pipe friction plus any fittings through which the discharge passes like spray nozzles.

If the pump is acting as a system booster pump or has a flooded suction, then any positive suction pressure would be subtracted from the static head. Velocity head, $V^2/2g$, which would be factored into axial flow pump head calculations with high flow rates and very low heads, is neglected as insignificant in these kinds of applications.

Motor

- 2 - pole induction motor 50 Hz (n=2900 RPM)
- Three phase : 400V + 5-15%
- Insulation class F
- Protection IP 44
- Constructed in accordance with IEC 34.

Material

COMPONENTS	MATERIAL
Pump Casing	Grey Iron
Bracket	Grey Iron
Impeller	Gray Iron / Bronze
Stator Frame	Grey Iron
Shaft	Carbon Steel

Centrifugal Pump Curve – System Head Curve

Catalogue pump curves are plotted for synchronous motor speeds (minus slip). If performance at another speed such as 50 cycle vs. 60 cycle or variable speed applications is required, a simple relationship is available for making a special curve plot. Head varies with the square of the speed and capacity varies in direct proportion to the speed. From the curve used in this example illustrates a 50 cycle curve plot derived from 60 cycle performance.

Centrifugal pump Curves- Characteristics

Efficiencies:-

$$\text{Eff} = Q \times H \times \text{Sp.Gr} \times 100 / 3960 \times \text{HP}$$

$$\text{Eff} = \text{Efficiency (\%)}$$

Q = Capacity delivered by the pump

H = Head developed by the pump

Sp. Gr = Specific Gravity of liquid being pumped

HP = Horsepower required by the pump

3600 RPM Performance				3000 RPM Performance			
GPM	HEAD	% EFF	HP	GPM	HEAD	% EFF	HP
0	249		0	0	173		
89	255		10	74	177		
155	255.5	52	19	129	177	52	11
200	245	60	21	167	170	60	12
250	236	67	22	208	164	67	13
325	216	67	26	271	150	67	15
425	174	59	32	354	121	59	18
512	133	52	33	427	92	52	19
550	74			458	51		



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