ORIENT
Solar

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S series
Excellence Unleashed
150AH

36 Months Warranty

High-efficiency | Durable | Ultra Low Maintenance | Eco-friendly

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Orient Solar is a group company of the TPH Orient group of companies. Orient Solar is owned and managed by top industry professionals with immense experience in mechanical and electrical engineering, bringing over 70 years of experience in the same.

Orient Solar was founded on the principles of bringing the power of renewable energy to the average population at an affordable price through a strong belief in local manufacturing and expertise. With this goal in mind, Orient Solar boasts one of the largest fully automated panel manufacturing capacities and is one of the leading panel suppliers in the country. This includes M-10 , M-6 and the most cutting edge panels available in the market today.

Our core principles rooted in innovation have also led to the creation of a host of smart city products for the average population and our societies everyday infrastructure. These products include inverters, batteries, solar benches, solar street lights, solar water pumps etc. Orient Solar also acts as a principle and lead EPC solution provider for ensuring the completion of each Solar Plant from concept life of a Solar Power Plant. These products use solar energy to create a more sustainable and future ready society and are necessities in todays world to ensure a sustainable future for us as a populous.

What We Have

Orient Renewables has a 800 MW solar panel manufacturing plant in Delhi NCR which is currently expanding to 1.2 GW. This is a fully automated plant capable of producing the highest efficiency modules available anywhere in the world.

We have adopted best-in-class technology platforms and have collaborated with leading technology providers. We manufacture module sizes starting from 2.5 Wp to 700 Wp. These modules are used for various on-grid and off-grid applications. We have a sole aim to procure the best quality raw material, to produce the most immaculate PV panels available. We have a vendor-agnostic approach, which allows us to recommend the best solution for all. Our broad-reaching procurement process guarantees you the best technology and our manufacturing infrastructure ensures the best quality. We also have in-house inverter and battery manufacturing capacity.

Why Choose Us

We are an IEC UL Certified Company. We are also impaneled with the Ministry of New & Renewable Energy(MNRE) for all segments including Solar Rooftop, Solar farming & other applications. We are also a BIS & ISO Certified Company, and are doing complete EPC Solutions for our patrons.

Our Infrastructure is one of the most technically advanced setups achieving global standards. Our team and years of technical expertise along with state of the art infrastructure and distinguished clientele allows us to be leaders in our segmentand an ideal solar energy partner for our customers.
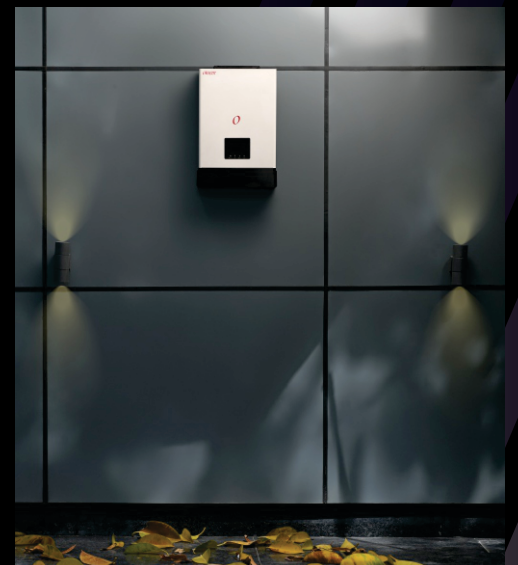
Orient Solar Inverter — Helios Series

Cutting edge solar inverters ensuring reliability along with immense efficiency.

Take control of your own energy!

Solar off grid systems refer to solar energy systems that produce and store energy independently using a solar panel, inverter, and battery storage. As such, with an off grid system, as the name suggests, you would not rely on the grid to provide you any energy and be completely energy independent.

PREMIUM QUALITY PRODUCT

An efficient maximum power point tracking (MPPT) method plays an important role to improve the efficiency of a photovoltaic (PV) generation system. This study provides an extensive review of the current status of MPPT methods for PV systems which are classified into eight categories. The category is based on the tracking characteristics of the discussed

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ORIENT HELIOS SERIES – MPPT SYSTEM

Technical Specifications

Parameters	Units	Rating						
Model	HELIOS	2.5 KVA / 3.5 KVA	5 KVA	6 KVA / 7.5 KVA	10 KVA	15 KVA	15 KVA	20 KVA
Operating DC Voltage	Volts	24	48	96	120	180	240	240
System Capacity	KW	2	4	5/6	8	12	12	18
Battery Capacity (Min/Max)	AH				165 – 200			

SPV Parameters

	Volts/KW/A							
SPV Open Circuit Voltage Range (Min-Max)	Volts	36-100	72-200	144-400	180-450	270-450	360-600	360-600
Max SPV Power	KW	2.5	5	6 / 7.5	10	10	15	20
Solar Charge Controller Rating	A	50	70	60	70	60	60	70
Compatible SPV Panels								

MPPT Based Charge Controller

Switching Element		Mosfet	IGBT Module
Controller		DSP	
Type Of Charger		MPPT	
MPPT Battery Curent Limiting(Default)		25A	40A
Efficiency		> 95%	

Parameters		Battery		Default Value		
PCU Working Mode Selection by Dip Switch / Selection Switch	Mode	SMART| HYBRID| PCU		SMART	Mode Selection: Hybrid / PCU / Smart, INV / UPS Selection	
Grid Disconnect Solar Present (PCU/Smart)	Volts	According Battry Type Achive Boost (Mains Disconnect After 2Min)		TUBULAR	According Battry Type Achive Boost (Mains Disconnect After 2Min)	TUBULAR
Grid Reconnect (SMART/PCU)	Volts	11.8 /Batt ±2%			11-12V	12V
Low Cut Off	Volts			10.5 / Batt ±2%		
Low Cut Off Recovery by SPV	Volts			11.5 / Batt ±2%		
Low Buzzer	Volts			10.7 / Batt ±2%		
High Cut Off	Volts			16.5/ Batt ±2%		
High Cut Off Recovery	Volts			15.0 / Batt ±2%		
Boost Charging Volt by SPV TUB/SMF	Volts	SMF 14.2V±2%	TUB	14.8V Batt ±2%	SETABLE THROUGH LCD	
Grid Boost Charging Volt TUB/SMF	Volts	14.0V±2%		14.4V±2%		
Float Charging Voltage	Volts	13.5V±-2		13.7V±2%		
Grid Charging Current Enable by Dip Switch (Normal)	Amps	12A ±2%		NA		
Grid Charging Current Enable by Dip Switch (High)	Amps	15A±2%		High		
Grid Charging Current Disable by Dip Switch	Amps	0Amp		Enable		

Output

Output Voltage Noload	Volts				230 ± 2%			
Output Frequency	Hz				50 ± 2%			
Overload	Amps	8.6	10.4 / 17.3	17.3/26	26/34.7	34.7	52.2	69.5
Over Load Retry UPS Mode	-				50 ± 2%			
Overload Retry Inverter Mode	-				50 ± 2%			

Grid

Battery Charging Stages	-	5 (Softstart, Boost, Absorbtion, Float, Equalise)
No of Phase	-	1Phase-3Wire P,N,E
Voltage Range(Inverter Mode)	V	100-280 ±2%
Voltage Range(UPS Mode)	V	175-255 ±2%
Frequency Range	Hz	45 - 55 ±2%

Display

Display	Alphanumeric	16X2 LCD	20X4 LCD With Switch Configuration
Parameters	Output (Inverter)	Voltage, Current, Power and Frequency	
	Input (Grid)	Voltage and Frequency	
	Solar	Voltage, Current, Power and Energy (Optional)	
	Battery	Voltage, Current	
	Status/Faults	Inverter Status, Mains Status, Charger Status, Solar Status and Battery Status/Charging Stages/Over Temp, System Uptime	

Inverter

Switching Element	-	MOSFET	IGBT
INV/UPS (IT mode)		By Dip Switch	Front Switch
Output voltage	Volts	230 ±2%	
Efficiency		≥80%	≥85%
Phase	-	1Phase-3Wire P,N,E	
Output Waveform	-	Pure Sine Wave	
Frequency	Hz	50 ±2%	
Changeover (Mains to Inverter)	ms	<10ms	
Output Power Factor	Pf	0.8	
Switches	-	System ON/OFF, Modes Selection: Hybrid / PCU / Smart, INV / UPS Selection	
Indication (LED)	-	Inverter On, Mains In Range, Battery Low/High, Charger On, Overload, Faults	
Alarm (Audible)	-	Battery Low, Overload, Charger On, Inverter On, Solar Charger On	
Protection	-	Overload, Short Circuit Protection, Over Voltage, SPV Surge and Transient protection (MOV Varistors), Reverse Polarity of Battery, Over temperature Protection, Under Voltage and Over Voltage Protection	
Cooling	-	Forced Air cooling(Temp Controlled)	
Operating Temp	C	0-50	
Noise @ 1Meter Distance	-	50dB	
Operating Humidity	%	95	
Protection Class	-	IP20	
Dimension (LXWXH)	mm	432x382x216	470x400x500	600x400x610	680x400x810	730x730x830
Net Weight	kg	18	27.5	28	39.42/49.93	53.50/83.73	84.6	86.7	100

Note: *Technical Specs are subject to change with prior notice, because of continuous development and improvement in design and technology.

Orient Solar Inverter — Kian Series

Cutting edge solar inverters ensuring reliability along with immense efficiency.

Most homes use alternating current (AC) energy, not DC, so the energy produced by your solar panels isn't useful on its own. When your solar panels collect sunlight and turn it into energy, it gets sent to the inverter, which takes the DC energy and turns it into AC energy.

PREMIUM
QUALITY
PRODUCT
★ ★ ★

Features

* Intelligent logic control
* Pure sine wave UPS with 85% Efficiency ISOT: Intelligent solar optimization technique Inbuilt charge controller with 98% efficiency Intelligent battery monitoring
* Battery charging commences at 110 Volt AC&DC Output

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KIAN SERIES - PWM SYSTEM

Technical Specifications

Parameters	Unit	Rating		
Model	KIAN	1100 (850VA)	1550 (1000VA)	2150(1500VA)
Operating DC Voltage	Volts	12	12	12

SPV Parameters

Parameters	Unit			
Solar Working Mode Selection by Dip Switch		SMART	HYBRID	
SPV Open Circuit Voltage Range (Min-Max)	VOC	16–30/–2V	16–30/–2v	32 – 60+/–2v
Max SPV Power	W	600	800	1200
Max Batt Current	Amps	50	60	50
Recommended Panel Cell	CELL	36	36	60/72

PWM Based Charge Controller

Parameters		
Switching Element		MOSFET
Controller		DSP
Efficiency		95%

Battery

Parameters	Unit						
Low Cut Off	Volts	10.5/Batt +/-2%					
Low Cut Off Recovery by (SPV Charging)	Volts	11.5/Batt +/-2%					
Low Buzzer	Volts	10.7/Batt +/-2%					
High Cut Off	Volts	15.5/Batt +/-2%					
High Cut Off Recovery	Volts	15.0/Batt +/-2%					
Battery Selection by Dip Switch	Volts	TUB	14.4V+/-2%	SMF	14V+/-2%	SETABLE THROUGH LCD	
Boost Charging Volt by SPV	Volts	TUB	14.8V+/-2%	SMF	14.4+/-2%		
Boost Charging Volt by Grid	Volts	TUB	14.4V+/-2%	SMF	14V+/-2%		
Float Charging Volt by Grid	Volts	TUB	13.8+/-2%	SMF	13.5V+/-2%		
Grid Charging Current selection by Dip Switch / Configuration Setting	Normal	10A +/-2%	High	12A +/-2%	Disable	0A	

Output

Parameters				
Output@ No load		230 +/- 2%		
Output Frequency		50 +/- 2%		
Overload		680w	800w	1.6KW
		3.1	3.6	6.9
		55	67	67
Typical Efficiency		≥82%	≥82%	≥82%

Display

Parameters			
Display	Alphanumeric	16X2 LCD	
Parameters	Output (Inverter)	Voltage, Current (Load%) and Frequency	
	Input (Grid)	Voltage and Frequency	
	Solar	Voltage, Current	
	Battery	Voltage, Current	
	Status/Faults	Inverter Status, Mains Status, Charger Status, Solar Status and Battery Status/Charging Stages, OverHeat, CHG Enable/Disable, CHG High/Low, SMF/Tubular	

Grid

Parameters	Unit		
No of Phase	-	1Phase-3Wire P,N,E	
Voltage Range(Inverter)	V	100-280 +/-2%	
Voltage Range(UPS)	V	175-255 +/-2%	
Frequency Range	Hz	45-55 +/-2%	
Battery Charging Stages		5 (Softstart, Boost, Absorbtion, Float, Equalise)	

Inverter

Parameters	Unit		
Switching Element	-	MOSFET	
Output voltage	V	230 +/-2%	
Phase	-	1Phase-3Wire P,N,E	
Output Waveform	-	Pure Sine Wave	
Frequency	Hz	50	
Changeover (Mains to Inverter)	ms	<10ms	
Output Power Factor	Pf	0.8	
Overload Retry	-	3 Times	
Switches	-	ON/OFF, Mode: Hybrid / Smart/PCU, INV /UPS, TUB/SMF, CHG.LO/CHG.HI, CHG. EN/CHG.DIS, Scroll Off	Switch Configuration Setting
Indication	-	Inverter On, Mains In Range, Battery Low/High, Charger On, Overload, Faults	
Alarm	-	Battery Low, Overload, Charger On, Inverter On, Solar Charger On	
Protection	-	Overload,Short Circuit Protection,Over Voltage,SPV Surge and Transient protection (MOV Varistors), Reverse Polarity of Battery,Over temperature Protection,under voltage and over voltage Protection	
Cooling	-	Forced Air cooling(Temp Controlled)	
Operating Temp	C	0-50	
Operating Humidity	%	95	
Protection Class	-	IP20	
Noise @ 1Meter Distance	-	50dB	
Weight	Kg	11.2 15.73	15.96
Dimension LxWxH (mm)	LWH	350x342x215	432x381x215

Note: Technical Specs are subject to change with prior notice, because of continous development and improvement in design and Technology.

Orient Solar Inverter — Kian Series

Cutting edge solar inverters ensuring reliability along with immense efficiency.

Pulse Width Modulated Inverters (PWM Inverter) have a wide range of applications. Practically these are used in power electronics circuits. The inverters based on the PWM technology and possess MOSFETs in the switching stage of the output.

Features

- DSP-based; fewer components, small size less electricity bill more efficiency.
- Soft Start features; protects appliances at startup.
- Last Fault Display and record: the system records the last fault and you can analyze it.
- The adaptive loss reduction process gives a more efficient charging system.
- 5-stage battery charge control system for lower gassing and faster Charging
- In-built SBM (Smart Battery Management) system to provide a higher degree of battery production & life Battery usage data is recorded for better evaluation of the battery.
- Supply the highest quality pure sine wave power; protects your expensive

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KIAN SERIES - PWM SYSTEM

Technical Specifications

Parameters	Unit	Rating		
Model	KIAN	2800 (2000 VA)	4150 (3500VA)	5550(5000VA)
Operating DC Voltage	Volts	24	48	48

SPV Parameters

Solar Working Mode Selection by Dip Switch		PCU		
SPV Open Circuit Voltage Range (Min-Max)	VOC	32–60+/-2V	64–120+/-2V	64–120+/-2V
Max SPV Power	W	1600	2800	4000
Max Batt Current	Amps	60	80	80
Recommended Panel Cell	CELL	36/72	60/72	60/72

PWM Based Charge Controller

Switching Element	MOSFET
Controller	DSP
Efficiency	95%

Battery

Low Cut Off	Volts	10.5/Batt +/-2%					
Low Cut Off Recovery by (SPV Charging)	Volts	11.5/Batt +/-2%					
Low Buzzer	Volts	10.7/Batt +/-2%					
High Cut Off	Volts	15.5/Batt +/-2%					
High Cut Off Recovery	Volts	15.0/Batt +/-2%					
Battery Selection by Dip Switch	Volts	TUB	14.4V+/-2%	SMF	14V+/-2%		SETABLE THROUGH LCD
Boost Charging Volt by SPV	Volts	TUB	14.8V+/-2%	SMF	14.4+/-2%		
Boost Charging Volt by Grid	Volts	TUB	14.4V+/-2%	SMF	14V+/-2%		
Float Charging Volt by Grid	Volts	TUB	13.8+/-2%	SMF	13.5V+/-2%		
Grid Charging Current selection by Dip Switch / Configuration Setting	Normal	10A +/-2%	High	12A +/-2%	Disable	0A	

Output

Output@ No load		230 +/- 2%		
Output Frequency		50 +/- 2%		
Overload		1.6KW	3KW	4KW
		6.9	13	17.3
		67	83	83
Typical Efficiency		≥85%	≥85%	≥85%

Display

Display	Alphanumeric	20x4 LCD
Parameters	Output (Inverter)	Voltage, Current (Load%) and Frequency
	Input (Grid)	Voltage and Frequency
	Solar	Voltage, Current
	Battery	Voltage, Current
	Status/Faults	Inverter Status, Mains Status, Charger Status, Solar Status and Battery Status/Charging Stages, OverHeat, CHG Enable/Disable, CHG High/Low, SMF/Tubular

Grid

No of Phase	-	1Phase-3Wire P,N,E
Voltage Range(Inverter)	V	100-280 +/-2%
Voltage Range(UPS)	V	175-255 +/-2%
Frequency Range	Hz	45-55 +/-2%
Battery Charging Stages		5 (Softstart, Boost, Absorbtion, Float, Equalise)

Inverter

Switching Element	-	MOSFET	
Output voltage	V	230 +/-2%	
Phase	-	1Phase-3Wire P,N,E	
Output Waveform	-	Pure Sine Wave	
Frequency	Hz	50	
Changeover (Mains to Inverter)	ms	<10ms	
Output Power Factor	Pf	0.8	
Overload Retry	-	3 Times	
Switches	-	ON/OFF, Mode: Hybrid / Smart/PCU, INV /UPS, TUB/SMF, CHG.LO/CHG.HI, CHG. EN/CHG.DIS, Scroll Off	Switch Configuration Setting
Indication	-	Inverter On, Mains In Range, Battery Low/High, Charger On, Overload, Faults	
Alarm	-	Battery Low, Overload, Charger On, Inverter On, Solar Charger On	
Protection	-	Overload,Short Circuit Protection,Over Voltage,SPV Surge and Transient protection (MOV Varistors), Reverse Polarity of Battery,Over temperature Protection,under voltage and over voltage Protection	
Cooling	-	Forced Air cooling(Temp Controlled)	
Operating Temp	C	0-50	
Operating Humidity	%	95	
Protection Class	-	IP20	
Noise @ 1Meter Distance	-	50dB	
Weight	Kg	20.55	30.5	46.5
Dimension LxWxH (mm)	LWH	432x381x215	464x406x297	600x400x610

Note: Technical Specs are subject to change with prior notice, because of continous development and improvement in design and Technology.

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Solar on grid systems refer to solar energy systems that do not store the energy independently but supply it back to the grid. As such, in case your solar system over or under produces energy it does not matter as you will be supplied your energy needs from the grid as per normal and the solar energy you produced will be subtracted from your monthly bill.

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Go green with our on grid solar power generating systems.

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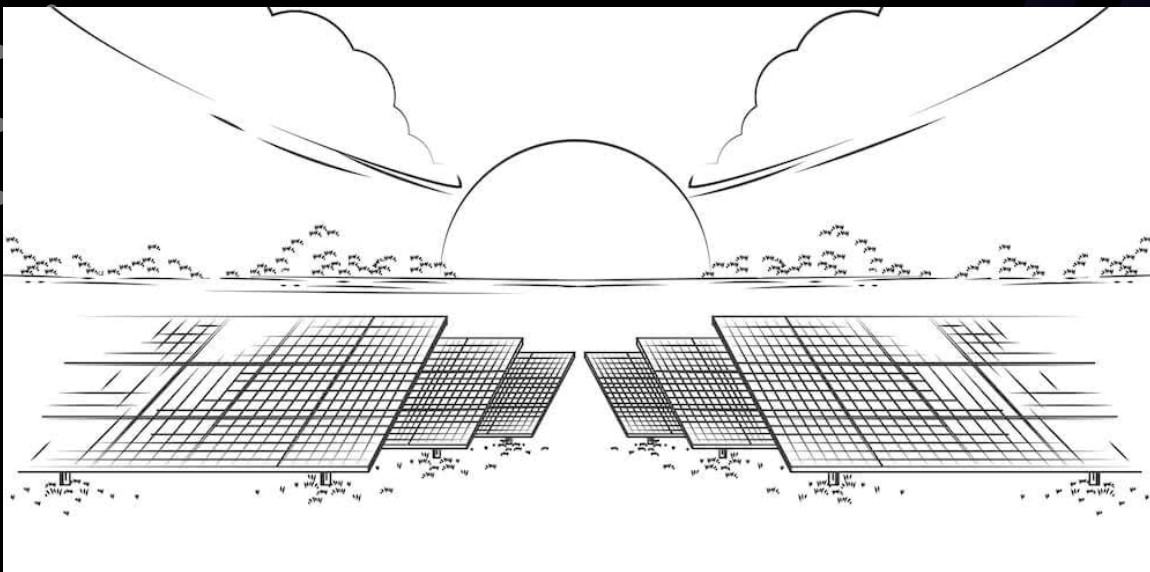
DATA SHEET

Model (KSY)(KW)	Single Phase (1KW – 6.2KW)														
	1	1.2	2	2.3	3	3.3 / 3.4	4	4.2	4 / 4.2	4.4/4.6	5	5.2	5.4	6	6.2
Input (DC)															
Max Peak DC Input Power (KW)	1.2	1.44	2.4	2.76	3.3	3.60	4.0	4.2	4.6	4.80	6			7.0	
Max. DC I/P (V dc)	500Vdc						550Vdc		550Vdc						
Max. MPPT I/P Current (A)	16A								13A						
MPPT Short Circuit Current (A)	20A														
MPPT Tracking Voltage (Vdc)	80-500V						80-550V		100-550V						
Min. Start Voltage (V)	80Vdc								100Vdc						
Number of MPPT Tracker	1								2						
Strings per MPPT Trackers	1														
Output (AC)															
Rated output power (kw)	1	1.2	2	2.3	3	3.3 /3.4	4	4.2	4 / 4.2	4.4/ 4.6	5.0	5.2	5.4	6	6.2
Rated Grid Voltage (V)	230V (140V - 300V)														
Nominal Grid Freq.(Hz)	50Hz / 60Hz (47-52Hz) / (57-62Hz)														
Max. output Current AC (A)	4.33	5.22	8.69	10.00	13.04	14.34	17.39	18.26	18.26	20.00	21.7	22.6	23.47	26.08	26.95
AC Connection (With PE)	P + N + E														
THDI (%)	<3% (At Rated Power)														
Output Power Factor (%)	0.8 Leading… 1… 0.8 Lagging														
Efficiency															
Max. Conversion Eff.(%)	98.0														
Max. Euro Efficiency (%)	97.5														
Protection															
Anti-Islanding Protection	Yes Integrated														
Insulation Resistance Detection	Yes Integrated														
Residual Current Monitoring	Yes Integrated														
Over Voltage Protection	Yes Integrated														
DC Switch	Optional														
Surge Protection	MOV / SPD / Filters														
General Data															
Dimensions(W*H*D) mm	297×223×117mm								393×324.5×154mm						
Weight (Kg)	4.8Kg								10Kg						
Noise Emission (db)	<30dB														
Display	LED with LCD Display														
DC Connection Type	MC-4														
AC Connection Type	Plug in Connector / Wire cables														
Communication Interface	WiFi/ GPRS/ RS 485														
Cooling Method	Natural Convection														
Operating Ambient	-25 C - +60°C														
Relative Humidity	0% - 100%														
Max. Operating Altitude(m)	2000 (>2000 Derating)														
Protection Class	IP65														
Night Stand By Power Consumption (w)	<1														
Standard Warranty	8 Year														

BIS ,IEC 62109 -1/2, IEC 61727, IEC 61683, IEC 60068, IEC 62116, IEC 61000 EMC

*Note - All specification are subject to change without notice due to continuous upgradation in Modules Wp capacity

ORIENT ATUM SERIES: ON-GRID SYSTEM

DATA SHEET

Model (KSY)(KW)	Three Phase (3KW – 25KW)											
	3	4	5	6	7	8	10	12(LM)	15	18	20	25
Input (DC)												
Max Peak DC Input Power (KW)	3.60	4.80	6.00	7.20	8.40	9.60	12.00	12.00	18.00	21.60	24.00	27.50
Max. DC I/P (V dc)	1000Vdc											
Max. MPPT I/P Current (A)	13A								26A			
MPPT Short Circuit Current (A)	20A								40A			
MPPT Tracking Voltage (Vdc)	200-1000Vdc											
Min. Start Voltage (V)	200Vdc											
Number of MPPT Tracker	1/2							2				
Strings per MPPT Trackers	1							2				
Output (AC)												
Rated output power (kw)	3	4	5	6	7	8	10	12	15	18	20	25
Rated Grid Voltage (V)	380V-400V (300V - 500V)											
Nominal Grid Freq.(Hz)	50Hz / 60Hz											
Max. output Current AC (A)	4.3	5.8	7.2	8.6	10.1	11.56	14.5	17.32	21.7	26.01	28.90	36.12
AC Connection (With PE)	3P + N + E											
THDI (%)	<3% (At Rated Power)											
Output Power Factor (%)	0.8 Leading... 1... 0.8 Lagging											
Efficiency												
Max. Conversion Eff.(%)	98.0											
Max. Euro Efficiency (%)	97.5											
Protection												
Anti-Islanding Protection	Yes Integrated											
Insulation Resistance Detection	Yes Integrated											
Residual Current Monitoring	Yes Integrated											
Over Voltage Protection	Yes Integrated											
DC Switch	Inbuilt											
Surge Protection	MOV / SPD / Filters											
General Data												
Dimensions(W*H*D) mm	425*346*160mm								425*351*200mm			
Weight (Kg)	13.7Kg								20Kg			
Noise Emission (db)	<30dB											
Display	LED with LCD Display											
DC Connection Type	MC-4											
AC Connection Type	Plug in Connector											
Communication Interface	WiFi/ GPRS/ RS 485											
Cooling Method	Natural Convection / Smart Fan Cooling											
Operating Ambient	-25C - +60°C											
Relative Humidity	0% - 100%											
Max. Operating Altitude(m)	2000 (>2000 Derating)											
Protection Class	IP65											
Night Stand By Power Consumption (w)	<1											
Standard Warranty	8 Year											

BIS ,IEC 62109 -1/2, IEC 61727, IEC 61683, IEC 60068, IEC 62116, IEC 61000 EMC
*Note - All specification are subject to change without notice due to continuous upgradation in Modules Wp capacity

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ORIENT ATUM SERIES: ON-GRID SYSTEM

DATA SHEET

Model (KSY)(KW)	Three Phase (30KW – 60KW)						
	30	33	35	40	45	50	60
Input (DC)							
Max Peak DC Input Power (KW)	36	39.6	42	48	54	60	60
Max. DC I/P (V dc)	1100Vdc						
Max. MPPT I/P Current (A)	30A						
MPPT Short Circuit Current (A)	46A						
MPPT Tracking Voltage (Vdc)	200-1000Vdc						
Min. Start Voltage (V)	200Vdc						
Number of MPPT Tracker	3			4			
Strings per MPPT Trackers	2						
Output (AC)							
Rated output power (kw)	30	33	35	40	45	50	60
Rated Grid Voltage (V)	380V-400V (300V - 500V)						
Nominal Grid Freq.(Hz)	50Hz / 60Hz						
Max. output Current AC (A)	43.35	47.68	50.57	57.80	65.02	72.25	86.70
AC Connection (With PE)	3P + N + E						
THDI (%)	<3% (At Rated Power)						
Output Power Factor (%)	0.8 Leading... 1... 0.8 Lagging						
Efficiency							
Max. Conversion Eff.(%)	98.0			98.7			
Max. Euro Efficiency (%)	97.5			98.3			
Protection							
Anti-Islanding Protection	Yes Integrated						
Insulation Resistance Detection	Yes Integrated						
Residual Current Monitoring	Yes Integrated						
Over Voltage Protection	Yes Integrated						
DC Switch	Inbuilt						
Surge Protection	MOV / SPD / Filters						
General Data							
Dimensions(W*H*D) mm	580*435*242mm						
Weight (Kg)	40Kg						
Noise Emission (db)	<30dB						
Display	LED with LCD Display						
DC Connection Type	MC-4						
AC Connection Type	Terminal Block						
Communication Interface	WiFi/ GPRS/ RS 485						
Cooling Method	Natural Convection / Smart Fan Cooling						
Operating Ambient	-25 C - +60°C						
Relative Humidity	0% - 100%						
Max. Operating Altitude(m)	2000 (>2000 Derating)						
Protection Class	IP65						
Night Stand By Power Consumption (w)	<1						
Standard Warranty	8 Year						

BIS ,IEC 62109 -1/2, IEC 61727, IEC 61683, IEC 60068, IEC 62116, IEC 61000 EMC

*Note - All specification are subject to change without notice due to continuous upgradation in Modules Wp capacity

Get the best of both worlds and see the benefits of solar with our Hybrid Solar Systems.

Solar hybrid systems refer to solar energy systems that produce and store energy independently using a solar panel, inverter, and battery storage and are also tied to the grid. As such, with a hybrid system you get the best of both worlds where you would not rely on the grid for energy and be energy independent but in case you over or under produce energy you would still have the grid and receive the benefits of an on-grid system

PREMIUM
QUALITY
PRODUCT
★ ★ ★

Features
- Intelligent Off-grid & Hybrid modes
- Off-grid seamless switching
- Wide PV input voltage range
- Great battery compatibility
- Single phase / Unbalanced 3-phase
- Support up to 16 pcs in parallel host inverter automatically generated to manage the entire system
- Separated generator port available

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SpecifiCation

INPUT (PV DC)				
Max. PV array power(W)	6000 (3000/3000)	8000 (4000/4000)	8000 (4000/4000)	8000 (4000/4000)
Rated PV input voltage(V)	320			
Number of independent MPPT inputs	2			
PV input voltage range(V)	100□480			
MPPT voltage range(V)	120□385			
Start-up voltage(V)	100			
Max. PV input current per MPPT(A)	17/ 17			
Max. PV short-circuit current input per MPPT(A)	25/25			
Battery				
Compatible battery type	Lithium-ion/Lead-Acid			
Rated battery voltage(V)	48			
Battery voltage range(V)	38.4□60			
Max. charging/discharging current(A)	70	90	110	140
Max. discharging/discharging power(W)	3000	4000	5000	6000
Recomand capacity of battery per inverter	>100AH	>200AH	>200AH	>200AH
Force wake up battery from PV function	YES			
Force wake up battery from Grid function	YES			
Grid				
Rated AC voltage(V)	230			
Rated AC frequency(Hz)	50/60			
Rated AC output current(A)	13.5	17.5	22	26.5
Rated AC output power(W)	3000	4000	5000	6000
Max. AC intput current(A)	26	35	35	39.5
Max. AC intput power(W)	6000	8000	8000	9000
PF	0.99			
THDI	<5%			
Rated AC current of BYPASS relays(A)	40			
UPS				
Rated output power(W)	3000	4000	5000	6000
Rated output voltage(V)	230			
Rated output current(A)	13.5	17.5	22	26.5
Rated output frequency(Hz)	50/60			
Surge power, duration	2Pn, <2S			
Switching time	<15ms@Single/ <30ms@Parallel			
Wave form	Sine wave			
THDV	3%			
Efficiency				
Max. MPPT efficiency	0.99			
Max. efficiency	0.93			
EU efficiency	/			
Max. charging efficiency	0.93			
Max. discharging efficiency	0.93			
Protection				
Over current/voltage protection	YES			
AC Short-circuit current protection	YES			
Grid monitoring	YES			
AC Surge protection Type III	YES			
Battery reverse polarity protection	YES			
General				
Dimensions(W* H* D)	303* 505* 135mm / 11.9* 19.9* 5.3inch			
Weight	14.5kg/32lbs			
Ingress protection rating	IP20			
Operating environment temperature range	0□50℃			
Storage temperature range	-15□60℃			
Relative humidity	5%□95%			
Display & Communication interface	LCD+LED, RS485/Wi-Fi/CAN			
Warranty	2years			
Cooling method	FAN			
Topology	Transformer-less			
Altitude	<2000m			
Noise emission(typical)	<50dB			
Standards & Certification				
IEC 62109-1, IEC 62109-2, IEC 61000				

ORIENT

MONO PERC HALF CUT SOLAR PV MODULE 540-555 W

PREMIUM QUALITY PRODUCT

The Orient Solar X-Cel range is our 10 BB mono perc module. This product is our 540 W module. Orient Solar prides itself on being a renowned supplier of modules which are rigorously tested in accordance to global testing standards
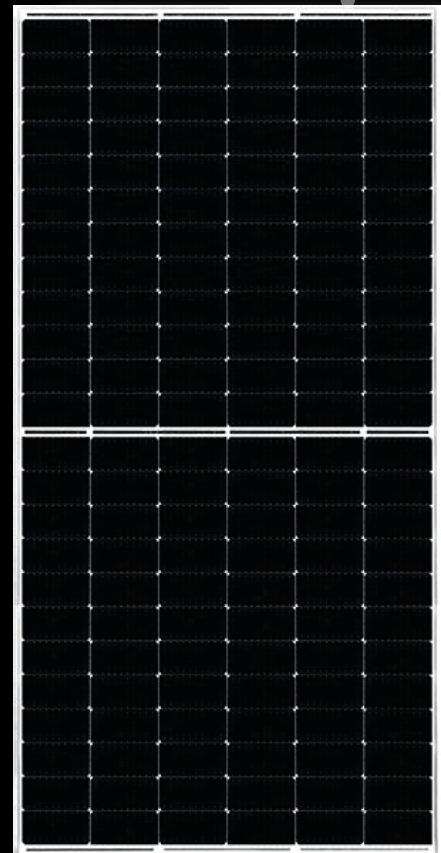
Best in Class Efficiency 21.50%

MBB Technology M10 Half Cut Cells

Non-Destructive Cell Cutting (NDC)

FEATURES

- High Power Generation
- High Efficiency
- 100% Pre and Post EL Inspection
- Undeniable Reliability
- Lower LID / LETID
- Efficient Temperature Coefficient
- Reduced Degradation
- Enhanced Low Light Performance
- Extraordinary PID Resistance

25 Years Performance Warranty[1]

Power Tolerance up to 4.99W

PID Resistant

10 Years Product Warranty[1]

MAKE IN INDIA | IEC | TÜV | ISO International Organization for Standardization | MSME MICRO, SMALL & MEDIUM ENTERPRISES | NSIC | MNRE APPROVED |

*All certifications under test

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ELECTRICAL DATA - STC* & NOCT**

Model	Unit	Orient-540		Orient-545		Orient-550		Orient-555	
Parameters		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Capacity Rating Wp	Pmax	540	399	545	403	550	407	555	410
Max. Power Voltage in V	Vpm	41.64	39.35	41.80	39.50	41.93	39.62	42.05	39.74
Max. Power Current in A	Ipm	12.97	10.15	13.04	10.20	13.12	10.26	13.20	10.33
Open Circuit Voltage in V	Voc	49.60	46.59	49.75	46.74	49.90	46.88	50.00	46.97
Short Circuit Current in A	Isc	13.86	10.87	13.92	10.92	13.98	10.97	14.05	11.02
Module Efficiency	%	20.92		21.12		21.31		21.50	
Power Tolerance	Wp	-0/+4.99							

*STC: Irradiance 1000 W/m^2, cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m^2 according to EN 60904-1. Measurement uncertainty ±3%

**NOCT irradiance 800 W/m^2, ambient temperature 20°C, wind speed 1 m/sec.

MECHANICAL DATA

Dimensions (L x W x H)	2277 mm x 1133 mm x 40mm
Weight	30 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm², 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (144 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film
Frame	Anodized Aluminium Alloy
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

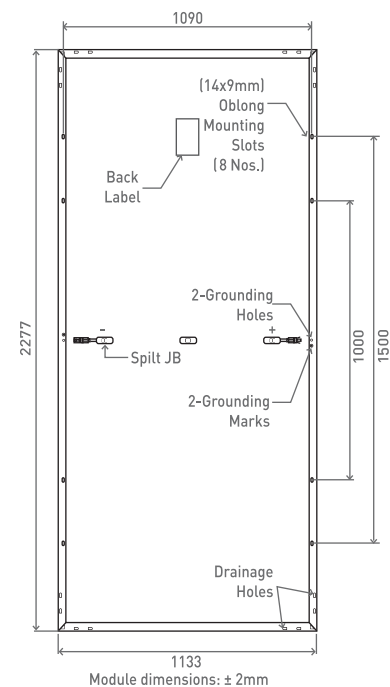|	
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

WARRANTY AND CERTIFICATIONS

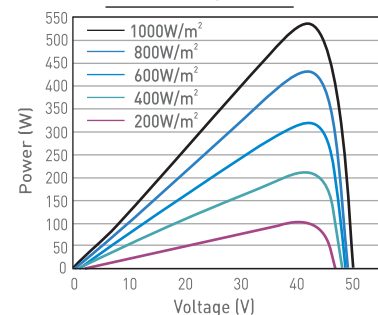|	
Product Warranty	10 years Product Warranty
Performance Warranty	25 year Linear Performance Warranty

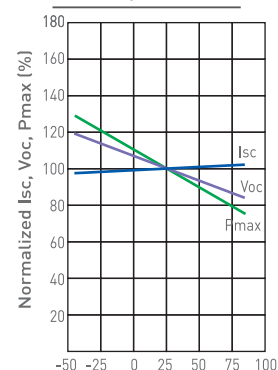General Terms & Conditions are applied

PACKAGING CONFIGURATION

Modules per Pallet	25

* Module dimension / hole to hole dimensions may vary.

Dimension of PV Module
Unit: mm

1090

2277

(14x9mm)
Oblong
Mounting
Slots
(8 Nos.)

Back
Label

2-Grounding
Holes

Spilt JB

1000

1500

2-Grounding
Marks

Drainage
Holes

1133

Module dimensions: ± 2mm

Power-Voltage Curve

1000W/m^2
800W/m^2
600W/m^2
400W/m^2
200W/m^2

Cell Temperature (°C)

Isc
Voc
Pmax

ORIENT

X-AMP SERIES

MONO PERC HALF CUT SOLAR PV MODULE
590 W

PREMIUM QUALITY PRODUCT

The Orient Solar X-Cel range is our 10 BB mono perc module. This product is our 590 W module. ADM Orient prides itself on being a renowned supplier of modules which are rigorously tested in accordance to global testing standards.

Best in Class Efficiency **21.50%**

MBB Technology **M10 Half Cut Cells**

Non-Destructive Cell Cutting (NDC)

FEATURES

- High Power Generation
- High Efficiency
- 100% Pre and Post EL Inspection
- Undeniable Reliability
- Lower LID / LETID
- Efficient Temperature Coefficient
- Reduced Degradation
- Enhanced Low Light Performance
- Extraordinary PID Resistance

25 Years Performance Warranty[1]

Power Tolerance up to 4.99W

PID Resistant

10 Years Product Warranty[1]

MAKE IN INDIA | IEC | TUV | ISO (International Organization for Standardization) | MSME (MICRO, SMALL & MEDIUM ENTERPRISES) | NSIC एन एस आई सी | MNRE APPROVED |

*All certifications under test

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ELECTRICAL DATA - STC*

Model	Unit	ORIENT-590
Parameters		STC
Capacity Rating Wp	Pmax	590
Max. Power Voltage in V	Vpm	45.99
Max. Power Current in A	Ipm	12.85
Open Circuit Voltage in V	Voc	53.51
Short Circuit Current in A	Isc	13.47
Module Efficiency	%	21.5
Power Tolerance	Wp	-0/+4.99

*STC: Irradiance 1000 W/m^2, cell temperature 25°C, Air Mass AM 1.5 according to EN 60904-3. Average efficiency reduction of 4.5 % at 200 W/m^2 according to EN 60904-1. Measurement uncertainty ±3%

**NOCT irradiance 800 W/m^2, ambient temperature 20°C, wind speed 1 m/sec.

MECHANICAL DATA

Dimensions (L x W x H)	2460 mm x 1133 mm x 40mm
Weight	31 kgs
Junction Box	Split JB, IP 68 with 3 bypass diodes
Cable	Solar Cable 4.0 mm², 400 mm (Higher cable option available on request)
Front Glass	3.2 mm, High Transmission, AR coated tempered glass
Solar Cells	Mono PERC Crystalline - M10 (156 pcs Half Cut)
Cell Encapsulation	EVA - Ethylene Vinyl Acetate
Backsheet	Composite Film
Frame	Anodized Aluminium Alloy
Mechanical Load Strength	5400 Pa (Snow Load), 2400 Pa (Wind Load)

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	45°C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C

PERMISSIBLE OPERATING CONDITIONS

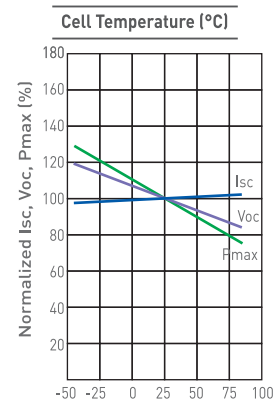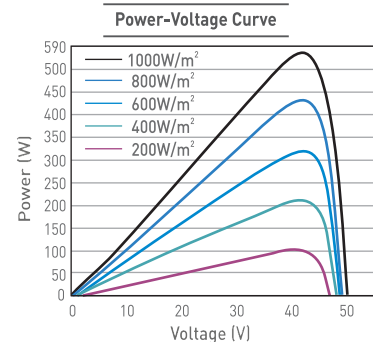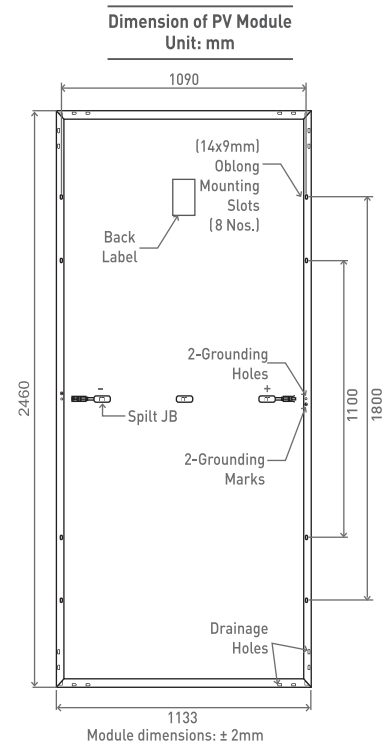|	
Temperature Range	-40°C to +85°C
Maximum System Voltage	1500 V DC
Max. Series Fuse Rating	25 A

WARRANTY AND CERTIFICATIONS

Product Warranty	10 years Product Warranty
Performance Warranty	25 year Linear Performance Warranty

General Terms & Conditions are applied

PACKAGING CONFIGURATION

Modules per Pallet	25

* Module dimension / hole to hole dimensions may vary.

Dimension of PV Module
Unit: mm

1090

(14x9mm) Oblong Mounting Slots (8 Nos.)

Back Label

2460

2-Grounding Holes

Spilt JB

1100

1800

2-Grounding Marks

Drainage Holes

1133
Module dimensions: ± 2mm

Power-Voltage Curve

1000W/m^2
800W/m^2
600W/m^2
400W/m^2
200W/m^2

Power [W]

Voltage (V)

Cell Temperature (°C)

Normalized Isc, Voc, Pmax (%)

Isc
Voc
Pmax

ORIENT

X- NOVA SERIES

BIFACIAL-N TOPCON
144 CELLS (DUAL GLASS)
560W-590W
SGE XXX - 144 TGG (XXX: 560-590Wp)

N - Type with very low LID
Resulting in higher power generation

Positive Tolerance
Power output is guaranteed with a positive tolerance of 0~+4.99Wp

Better temperature coefficent (-0.30%/°c)
higher power generation under higher ambient temperature conditions

Higher Module Efficiency Module Eff. Up-to 22.5%

Advanced Technology MBB - MULTI BUS -BAR(16BB)
HALF-CUT N-TOPCON CELL

EXTENDED WIND AND SNOW LOADS
Wind Load (2400Pascal)
Snow Load (5400Pascal)

Withstanding a harsh environment
Reliable quality leads to better sustainability, even in harsh environments such as deserts, Farms, coastal and the areas with ammonia exposure

Rigorous Testing Criteria
100% EL inspection,ensures defect-free modules

25 Years Performance Warranty[1]
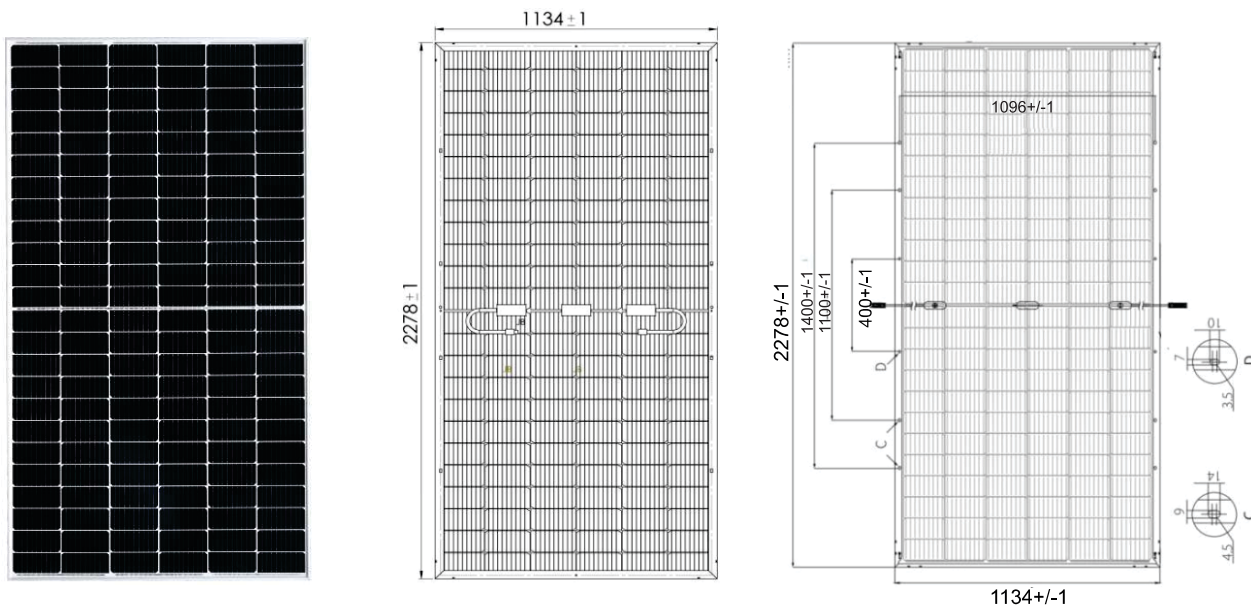
Power Tolerance up to 4.99W

PID Resistant

12 Years Product Warranty[1]

MAKE IN INDIA | IEC. | TUV | ISO International Organization for Standardization | MSME MICRO, SMALL & MEDIUM ENTERPRISES सूक्ष्म, लघु एवं मध्यम उद्यम | एन एस आई सी NSIC | Munich RE | ALMM Approved.

1134±1
2278±1
1096+/-1
2278+/-1
1400+/-1
1100+/-1
400+/-1
1134+/-1

ELECTRICAL DATA PERFORMANCE

Conditions		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Peak Power, Pmax (Wp)	W	560	421	565	425	570	429	575	432	580	436	585	440	590	444
Voltage at Maximum power, Vmp	V	42.41	40.20	42.53	40.32	42.65	39.69	42.82	39.89	42.94	39.98	43.06	40.82	43.18	40.93
Current at maximum power, Imp	A	13.22	10.47	13.3	10.54	13.37	10.80	13.43	10.84	13.51	10.91	13.59	10.78	13.67	10.84
Open circuit voltage, Voc	V	50.68	48.04	50.86	48.22	51.04	48.39	51.22	48.56	51.41	48.74	51.59	48.91	51.77	49.08
Short circuit current, Isc	A	13.88	11.21	13.96	11.27	14.04	11.34	14.10	11.38	14.19	11.46	14.26	11.51	14.33	11.57
Fill Factor	%	80%	78%	80%	78%	80%	78%	80%	78%	80%	78%	80%	78%	80%	78%

Module Efficiency (%)	21.68%	21.87%	22.07%	22.26%	22.45%	22.65%	22.84%

|			
Operating Temperature (°C)	-40°C~+85°C	Temperature coefficients of Isc	+0.046%/°C
Maximum system voltage	1500 VDC	Nominal operating cell temperature (NOCT)	45±2°C
Maximum series fuse rating	30A	Fire Safety	Class-C
Power tolerance (Wp)	0~+3%	Protection Class II	Class-A
Temperature coefficients of Pmax	-0.30%/°C	Safety Class	Class-II
Temperature coefficients of Voc	-0.26%/°C		

200W/m² as per IEC 60904- 1.
**STC: Irradiance 1000W/m² module temperature 25°C, AM =1.5; NOCT: Irradiance 800W/m², ambient temperature 20°C, AM=1.5, Wind Speed 1m/s. Average power reduction of 4.5% at

Linear Performance warranty
Product Warranty 12 Years
Material & Processing First Year
### Degradation up to 90% for 10Years
80% up to balance 20 Years

MODULE MECHANICAL DATA
SPECIFICATION DATA

Cell Type	N-TOPCon, 144 Cells
Dimensions	2278x1134x30 mm
Weight	32 Kgs
Front Cover	2.00 mm
Rear Cover	2.00 mm
Frame Material	"Silver Anodized Aluminum Profile,
J-Box	IP68, 3 diodes
Cable	350 mm, 4 mm²
Connectors	Mc4 Compatible Connector
Standard Packaging	36 Pieces/Pallet
Module Pieces per Container	720 pieces (40*HQ)
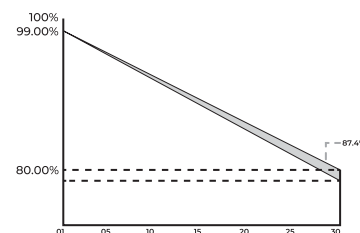
I-V Characteristics At Different Irradiations
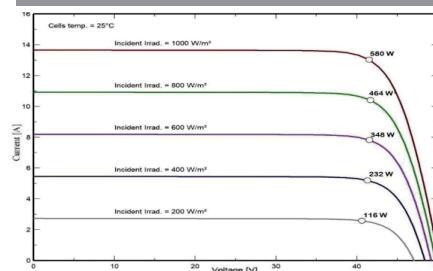

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Storage systems batteries and inverters

A lithium-ion (Li-ion) battery is an advanced battery technology that uses lithium ions as a key component of its electrochemistry. During a discharge cycle, lithium atoms in the anode are ionized and separated from their electrons. The lithium ions move from the anode and pass through the electrolyte until they reach the cathode, where they recombine with their electrons and electrically neutralize.

Lithium Ion batteries have a number of advantages to traditional batteries. lithium ion batteries have one of the highest energy densities of any battery technology today. This means that they can deliver large amounts of current for high-power applications. Li-ion batteries also have low self-discharge rate of around 1.5-2% per month. Li-ion batteries charge almost 4 times faster than their alternatives. Crucially Li-ion batteries are much easier to dispose of and so are better for the environment as compared to their competitors.
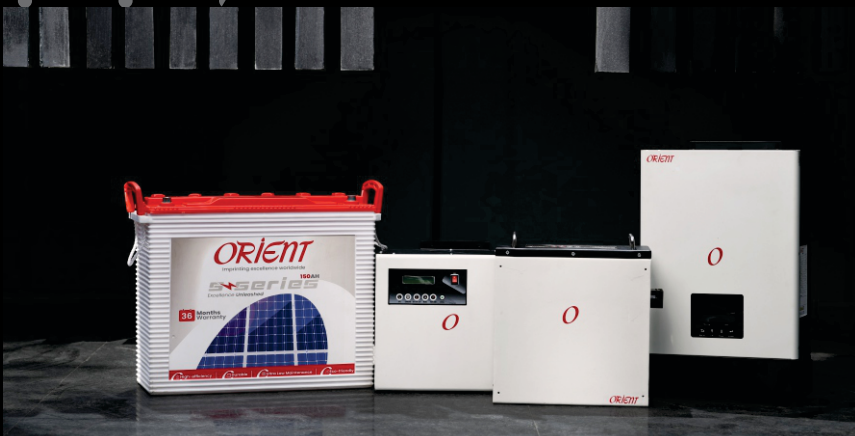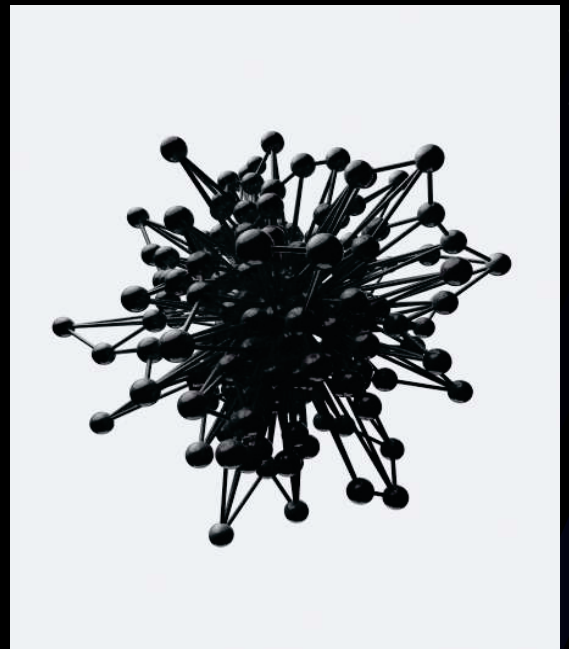
The future is now...
join it with
Orient Solar

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ORIENT

SOLAR APPLICATION

Salient Benefits

- Long Life Cycle
- High Performance
- Eco-Friendly
- Maintenance Free
- High Safety Performance
- Wide operating temperature range
- Completely recyclable

Technical Specification:

Category	Parameter	Value
General Characteristics	Model Name	ORIENT128100ESS
	Nominal Voltage (V)	12.8
	Capacity (Ah)	100
	No. of cell in series	4
	No. of cell in parallel	1
	Total No. of cell	4
	Cell Type	Prismatic
	Chemistry	LFP
Electrical Characteristics	Maximum cut-off voltage (V)	14.6
	Minimum cut-off voltage (V)	11
	Charging Voltage (V)	14.5
	Recommended charging current (A)	30
	Maximum charging current (A)	50
	Maximum discharging current (A)	100
	Cell Discharging Protection level (V)	2.75
	Cell charging protection level (V)	3.65
	Balancing current (mA)	50
	Cycle Life	3000
Protection	Cell under voltage protection	Yes
	Cell over voltage Protection	Yes
	Over current protection	Yes
	Short circuit protection	Yes
	Temperature protection	Yes
Temperature	Working Temperature (°C)	0 – 55
	Storage Temperature (°C)	0 - 45
Others	Dimension (mm)	275x95x245 (mm)
	Weight (Kg)	10 Approx.

Category	Parameter	Value
General Characteristics	Model Name	ORIENT256100ESS
	Nominal Voltage (V)	25.6
	Capacity (Ah)	100
	No. of cell in series	8
	No. of cell in parallel	1
	Total No. of cell	8
	Cell Type	Prismatic
	Chemistry	LFP
Electrical Characteristics	Maximum cut-off voltage (V)	29.2
	Minimum cut-off voltage (V)	22
	Charging Voltage (V)	28.8
	Recommended charging current (A)	30
	Maximum charging current (A)	40
	Maximum discharging current (A)	50
	Cell Discharging Protection level (V)	2.75
	Cell charging protection level (V)	3.65
	Balancing current (mA)	50
	Cycle Life	3000
Protection	Cell under voltage protection	Yes
	Cell over voltage Protection	Yes
	Over current protection	Yes
	Short circuit protection	Yes
	Temperature protection	Yes
Temperature	Working Temperature (°C)	0 – 55
	Storage Temperature (°C)	0 - 45
Others	Dimension of Rack (LxWxH)	TDB.
	Weight (Kg)	25 Approx.
	Wire	Wire gauge 16 sq.mm

Category	Parameter	Value
General Characteristics	Model Name	ORIENT128200ESS
	Nominal Voltage (V)	12.8
	Capacity (Ah)	200
	No. of cell in series	4
	No. of cell in parallel	2
	Total No. of cell	8
	Cell Type	Prismatic
	Chemistry	LFP
Electrical Characteristics	Maximum cut-off voltage (V)	14.6
	Minimum cut-off voltage (V)	11
	Charging Voltage (V)	14.4
	Recommended charging current (A)	30
	Maximum charging current (A)	40
	Maximum discharging current (A)	100
	Cell Discharging Protection level (V)	2.75
	Cell charging protection level (V)	3.65
	Balancing current (mA)	50
	Cycle Life	3000
Protection	Cell under voltage protection	Yes
	Cell over voltage Protection	Yes
	Over current protection	Yes
	Short circuit protection	Yes
	Temperature protection	Yes
Temperature	Working Temperature (°C)	0 – 55
	Storage Temperature (°C)	0 - 45
Others	Dimension of Rack (LxWxH)	TDB.
	Weight (Kg)	30 Approx.
	Wire	Wire gauge 25 sq.mm

Category	Parameter	Value
General Characteristics	Model Name	ORIENT256200ESS
	Nominal Voltage (V)	25.6
	Capacity (Ah)	200
	No. of cell in series	8
	No. of cell in parallel	2
	Total No. of cell	16
	Cell Type	Prismatic
	Chemistry	LFP
Electrical Characteristics	Maximum cut-off voltage (V)	29.2
	Minimum cut-off voltage (V)	22
	Charging Voltage (V)	29
	Recommended charging current (A)	10
	Maximum charging current (A)	20
	Maximum discharging current (A)	20
	Cell Discharging Protection level (V)	2.75
	Cell charging protection level (V)	3.65
	Balancing current (mA)	50
Protection	Cell under voltage protection	Yes
	Cell over voltage Protection	Yes
	Over current protection	Yes
	Short circuit protection	Yes
	Temperature protection	Yes
Temperature	Working Temperature (°C)	0 – 55
	Storage Temperature (°C)	0 - 45
Others	Dimension (mm)	TBD
	Weight (Kg)	55 Approx.
	Backup Duration @ 160Watt	1 Day

Orient Tubular Batteries are manufactured with Heat Sealed Polypropylene Co-Polymer Monobloc casing material. Tubular positive plates are made of highly corrosion-resistant special lead alloy and Pasted Negative Plates with high discharge performance to ensure cycling capabilities and also reduce topping-up frequency. Individual cells are ?tted with Micro Porous aqua-trap ceramic vent plugs with sealed ?oat, which prevent acid mist from coming out from the cells to make it convenient for living room ambiance.

ADM Orient Tubular Plate Batteries are specially designed for inverter applications and are made with ultra-thick charged plates for long life & performance. They are user-friendly batteries with quick initial charging capability, very low internal resistance, and a steady voltage pro?le during short & long-duration discharges. The sealed ?oat and ceramic ?lter plugs help easy maintenance of electrolyte level and ensure no fume emissions. These batteries have great charge acceptance and retention properties even in arduous working conditions.

Features

- Quick charged
- Suitable for frequent power-cuts
- Tubular-designed positive plates provide long life Very low maintenance & long life
- Eco-friendly aqua trap vent plugs to ensure no acid fumes Electrolyte contains special additives to get quick recovery from deep discharge
- Excellent charge acceptance

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SUPER POWER
SUPER BACKUP

SOLAR & INVERTER BATTERY

SPECIFICATIONS

Model	Storage Capacity @C20 27°C	Dimensions in mm			Gross Weight +/- 2%	Application	Warranty
		Length	Width	Height			
S-Series 17000	150Ah	495	185	410	57Kg	Solar & Inverter	36Months
S-Series 18000	180Ah	495	185	410	60Kg	Solar & Inverter	36 Months
S-Series 20000	200Ah	495	185	410	63Kg	Solar & Inverter	36 Months

EPC Services

Orient is a trusted EPC service provider. With decades of engineering expertise along with a robust solar module infrastructure we are a prime partner for your solar plant engineering, procurement , and construction needs. From the concept stage to the entire plants lifespan including execution, running, and maintenance we will support you at every stage .

Our goal is to create a more renewable society and city infrastructure in a timely and cost effective manner

Engineering

Procurement

Construction

Types of EPC projects we cater to

Residential
Be it an apartment building, independent home, estate, or farm house Orient Solar is equipped to provide EPC services to all of the above.

Schools and colleges
The requirement for education institutes to reduce energy costs and use renewable energy is crucial in the years to come.

Corporate
A number of corporate buildings and offices are in dire need for trusted and economically conscious EPC Providers. As such, Orient Solar hopes to fill that void.

Commercial / Industrial
Almost all factories, large or small are considering if they have not already done it, to use the benefits of solar energy to improve energy efficiency, reduce the costs, and make use of renewable energy in its business. Orient Solar aims to help these industrial units achieve those goals.

Government
Various government projects require a dedicated and compliance friendly, knowledgeable team to execute their solar projects. Orient Solar as a certified module manufacturer and expert in this field, we are able fulfill all of the requirements of government projects

Independent Power Projects (IPP's)
Solar energy supply as an independent power producer is a crucial and fast growing business today. These providers require cost efficient and highly qualified EPC providers. Understanding such a need Orient Solar is a key supplier for various IPP projects.

NOTES

ORIENT
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