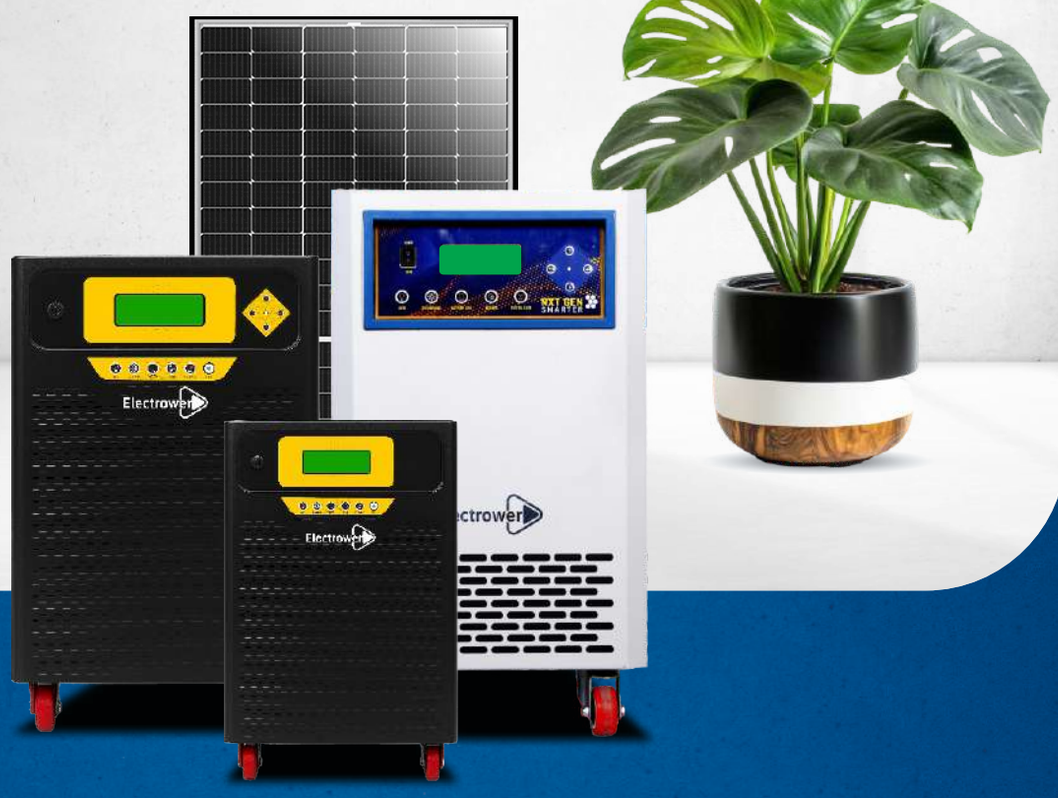
Electrower

WIDEST RANGE OF SOLAR SOLUTIONS

www.electrowersolar.com

VIRAJ SOLAR MPPT PCU

- Big Display for Data
- Safety & Protections
- Built-in Energy Meter
- Multi Battery Selection
- Wide Range MPPT Input
- Sleek & Aesthetic design
- 6 Stage Battery Charging
- IGBT based design & Fast Charging
- RS-232 (Industrial Standard MODBUS)
- 40% less panel required than other PCUs
- Incorporated with Microchip & ST DSP Engines
- Maximized Solar Usage through Intelligent Modes
- Works as stand alone Solar Inverter in case of No-Grid



True MPPT

User Friendly LCD Display

Remote Monitoring

Pure Sine Wave

Advanced DSP Technology

Intelligent Modes

Ai Charge Sharing

Smart Solar Optimization

TECHNICAL SPECIFICATIONS

VIRAJ SERIES- SOLAR MPPT PCU

Model	SMP				
Rating	KVA	3KVA	5KVA	10KVA	25KVA
Operating DC Voltage	Volts	24	48	120	240
System Capacity	KW	2.4	4	8	16
Battery Capacity (Min/Max)	AH	100-250			
SPV Parameters					
SPV Open Circuit Voltage Range (Min-Max)	Volts	36-100	72-200	180-500	360-600
Max SPV Power	KW	3	5	10	20/25
Solar Charge Controller Rating	A	70	70	70	70
Compatible SPV Panels	36/60/72 Cell				
MPPT Based Charge Controller					
Switching Element	MOSFET		IGBT Module		
Controller	DSP				
Type of Charger	MPPT				
MPPT Battery Current Limiting (Default)	25A		40A		
Efficiency	>95%				
Parameters		**Battery**	**Default Value**		
PCU Working Mode Selection by Dip Switch/ Selection Switch	Mode	SMART	MODE SELECTION: HYBRID | PCU | SMART, INV. | UPS SELECTION		
Grid Disconnect Solar Present (PCU/Smart)	Volts	TUBULAR	According Battery 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/Batt+/-2%			
Boost Charging Volt by SPV TUB/SMF	Volts	14.8V +/-2%			
Grid Boost Charging Volt TUB/SMF	Volts	14.4V +/-2%			
Float Charging Voltage	Volts	13.7V +/-2%			
Grid Charging Current Enable by Dip Switch(Normal)	Amps	NA			
Grid Charging Current Enable by Dip Switch(High)	Amps	High			
Grid Charging Current Disable by Dip Switch	Amps	Enable			
Output					
Output @ No Load	Volts	230+/-2%			
Output Frequency	Hz	50+/-2%			
Overload	Amps	10.4	17.3	34.7	69.5
Overload Retry UPS Mode	-	NA			
Overload Retry Inverter Mode	-	3 Times			
Grid					
Battery Charging Stages	-	5(Softstart, Boost, Absorption, Float, Equalize)			
No of Phase	-	1 Phase-3 Wire, P, N, E			
Voltage Range(Inverter)	V	100-280 +/-2%			
Voltage Range(UPS)	V	175-255 +/-2%			
Frequency Range	Hz	45-55+/-2%			
Display					
Display	Alphanumeric	16x4 LCD	20x4 LCD		
Parameters	Output(Inverter)	Voltage, Current, Power & Frequency			
	Input(Grid)	Voltage & Frequency			
	Solar	Voltage, Current, Power & Energy (Optional)			
	Battery	Voltage, Current			
	Status/Faults	Invert Status, Mains Status, Charger Status, Solar Status & Battery Status/Charging Stages/Over Temp, System Uptime			
Inverter					
INV/UPS (IT Mode)	-	By Dip Switch	Front Switch		
Output Voltage	Volts	220+/-2%	230+/-2%		
Efficiency	-	≥85%			
Output Waveform	-	Pure Sine Wave			
Frequency	Hz	50Hz			
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	-	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 & Transient Protection (MOV Varistors), Reverse Polarity of Battery, Over Temperature Protection, Under Voltage & Over Voltage Protection			
Cooling	-	Forced Air Cooling (Temperature Controlled)			
Operating Temperature	c	0-50			
Operating Humidity	%	95			

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

LITHIUM PCU

- Wall Mount & Table Top
- An Inverter with Lithium Inbuilt Battery
- Fast Charge 70% in 2 Hour
- Extra Long Backup for 3 Hours @ Load 40%
- 1000VA Pure Sine Wave Inverter with Integrated 1280 watt hour Lithium-Ion Battery For Home, Office & Shops

- Uninterrupted Green Energy
- User Friendly LCD Display
- Long Life
- No Maintenance
- Reliability
- No Operating Expenses
- No Additional Manpower Required
- Safety & Protection

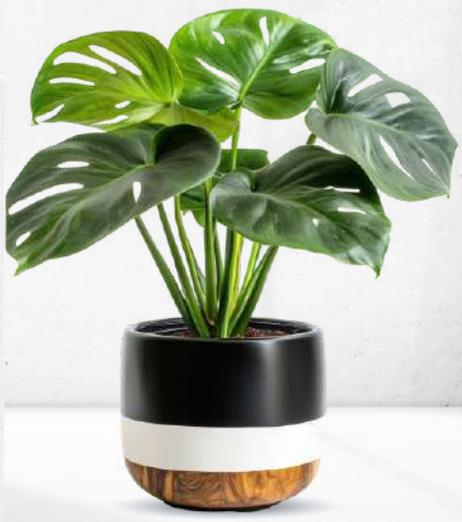
TECHNICAL SPECIFICATIONS

LITHIUM SERIES- SOLAR LITHIUM PCU			
Model	ESS	1KVA	3KVA
Operating DC Voltage	Volts	12.8	24
Battery Capacity(Min/Max)	AH	25.6	100
SPV Parameters			
SPV Open Circuit Voltage Range (Min-Max)	Volts	18-50	36-90
Max SPV Power	KW	1	3
Solar Charge Controller Rating	A	60	70
Compatble SPV Panels		36 / 60 / 72 Cell	
MPPT Based Charge Controller			
Switching Element		Mosfet	
Controller		DSP	
Type of Charger		MPPT	
MPPT Battery Current Limiting(Default)		25A	
Efficiency		> 95%	
Parameters		**Battery**	**Default Value**
PCU Working Mode Selection by Dip Switch / Selection Switch	Mode	SMART| HYBRID| PCU	SMART
Grid Disconnect Solar Present (PCU/Smart)	Volts	According Battery Type Achieve Boost (Mains Disconnect After 2Min)	TUBULAR
Grid Reconnect (SMART/PCU)	Volts	11.8 /Batt ±2%	
Low Cut Off	Volts	11	22
Low Cut Off Recovery by SPV	Volts	13.2	26.4
Low Buzzer	Volts	11.2	22.4
High Cut Off	Volts	17	34
High Cut Off Recovery	Volts	15	30
Charging Voltage GRID	Volts	14	28
Charging Voltage SPV	Volts	14.2	28.4
Grid Charging Current Enable by Dip Switch	Amps	12A ±2%	
Grid Charging Current Enable by Dip Switch	Amps	15A\±2%	
Grid Charging Current Disable by Dip Switch	Amps	0Amp	
Output			
Output Voltage Noload	Volts	230 ±2%	
Output Frequency	Hz	50 ±2%	
Overload	Amps	3.4	10.4
Over Load Retry UPS Mode	-	NA	
Overload Retry Inverter Mode	-	3 Times	
Grid			
Battery Charging Stages	-	5 (Softstart, Boost, Absorption, Float, Equalize)	
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 (Op?onal)	
	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	
INV/UPS (IT mode)		By Dip Switch	Front Switch
Output voltage	Volts	220 ±2%	230 ±2%
Effciency		≥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	

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

HYBRID SOLAR MPPT INVERTER

- Output Power Factor 1.0(Unity)
- Inverter can run without battery
- One-Key restoration to factory Settings
- WIFI & GPRS available for IOS and Android
- Pure Sine Wave Solar Inverter(ON/OFF Grid)
- Built-in-Lithium Battery automatic activation
- Built-in 160A MPPT Solar Charge (for 8.2kw and 10.2kw)
- High PV input voltage range(90~500VDC)
- Built-in anti-dusk kit for harsh environment
- Smart battery change design to optimize battery life
- Dual Output



True MPPT

RGB
RGB Lights

Remote Monitoring

Pure Sine Wave

120A
Max PV Charging

Built In Anti Dust Kit

Works With & Without Battery

Smart Solar Optimization

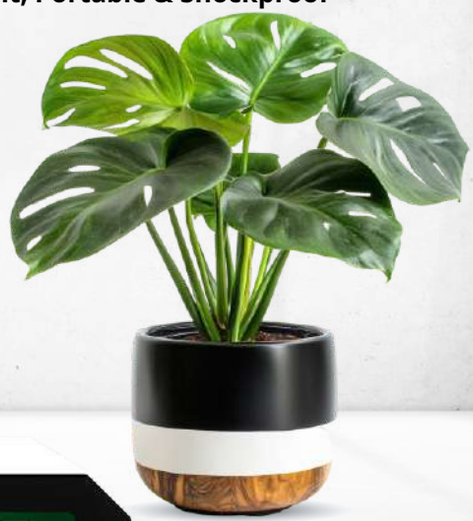
TECHNICAL SPECIFICATIONS

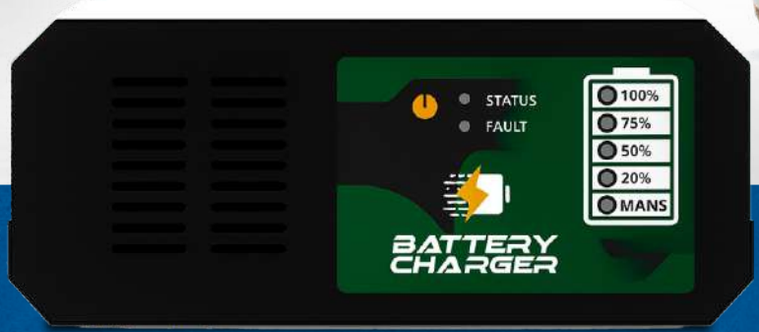
HYBRID SOLAR MPPT INVERTER				
MODEL		3.6KW	5.5KW	10.2KW
Phase	-	Single Phase		
Maximum PV Input Power	W	6200	5500	10200
Rated Output Power	W	3600	6200	10200
Max. Solar Charging Current	A	120		140
Grid-Tie Operation				
PV Input(DC)				
Nominal DC Voltage/Max. DC Voltage	VDC	240/500		360/500
Start-up Voltage/Initial Feeding Voltage	VDC	90/120		90/160
Max. DC Voltage	VDC	60-500		60-500
Number of MPPT Trackers/Max. Input Current	A	1/27		1/54
Grid Output(AC)				
Nominal Output Voltage	VAC	220/230/240		
Output Voltage Range	VAC	195.6~253		
Nominal Output Current	A	15.7	27.0	44.3
Power Factor	-	>0.99		
Feed-in Grid Frequency Range		49~51+/-1		
Efficiency				
Max. Conversion Efficiency(Solar to AC)	Mode	98%		
Two Load Output Power (V2.0)				
Full Load	W	3600	6200	7200
Maximum Main Load	W	3600	6200	7200
Maximum Second Load(Battery Mode)	W	1200	2067	3400
Main Load Cut Off Voltage	VDC	22	44	
Main Load Return Voltage	VDC	27	54	
AC Input				
AC Start-up Voltage/Auto Restart Voltage	VAC	120-140/180		
Acceptable Input Voltage Range	VAC	90-280 or 170-280		
Maximum AC Input Current	A	30	40	
Nominal Operating Frequency	Hz	50/60Hz		
Surge Power	W	7200	12400	12400
Battery Mode Output(AC)				
Nominal Output Voltage	VAC	220/230/240		
Output Waveform	-	Pure Sine Wave		
Efficiency(DC to AC)	-	97%		98%
Battery & Charger				
Nominal DC Voltage	VDC	24	48	
Maximum Charging Current(Solar to AC)	A	120		160
Maximum AC Charging Current	A	100		140
Physical				
Dimension DxWxH(mm)	A	110x310x420		130x390x537
Net Weight	Kg	9	10	11
Interface				
Communication Port	-	RS232/WIFI/GPRS		
Environment				
Operating Temperature	*C	-10~50*C		

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

E RICKSHAW CHARGER & EV LITHIUM CHARGER

- Surge Protection
- Force Air Cooling
- Longer Battery Backups
- High-Frequency PWM Circuit
- Excellent Transient Response
- Spark Free Anderson Connector
- 100AH - 140AH Battery Supported
- Standard EMI/EMC Compliance
- Over Temperature Shut Down
- 70% more Battery Life by Optimized Charging
- Protection Against Input surge & Inrush current
- Compact, Lightweight, Portable & Shockproof





PFC Charger

Fast 20A/25A Charging

Increased Mileage

Microcontroller SMPS Charger

Advanced DSP Technology

Short Circuit Protection

Guaranteed Safety

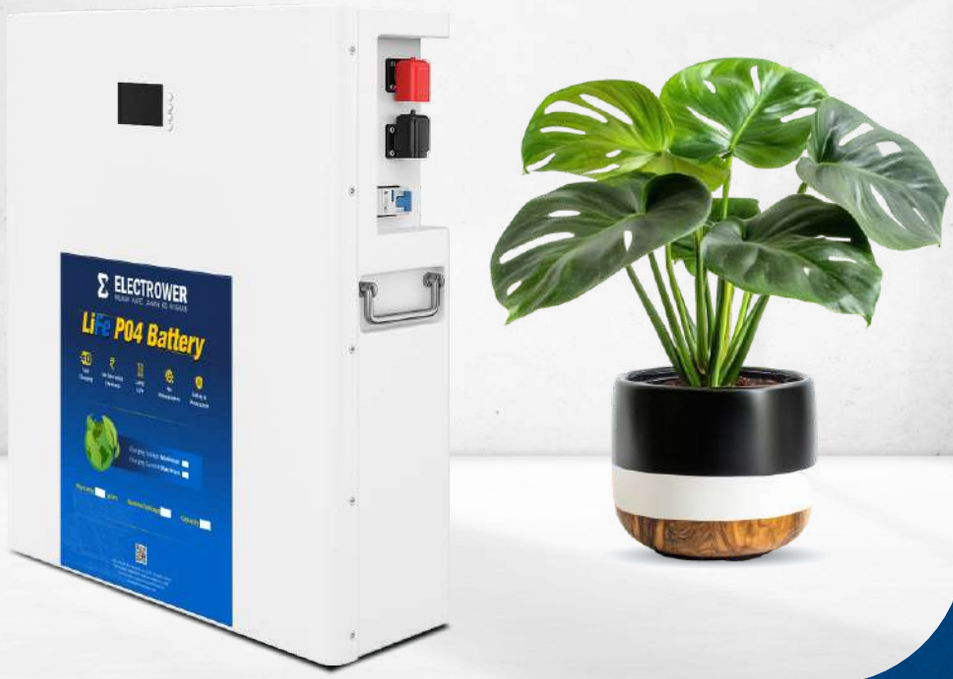
TECHNICAL SPECIFICATIONS

Lithium Battery EV Charger		
Parameters	Units	Rating
Model	EV CHG	EV5120
Rating	Volts	51.2
	AMP	20
	Cell	16
CC-CV Mode Changeover	V	54.4
CV Mode Cutoff	V	58.4
Over Voltage Cutoff	V	59
CV Mode Run Time	Hours	1.5
Current Cutoff	A	0.5
Ripple Voltage pk-pk	%	2
Grid Parameters		
No of Phase	-	1Phase-3Wire P,N,E
Voltage Range	V	160-280 +/-2%
Frequency Range	Hz	50 +/-2%
Input Power Cord		3Pin Power Plug 15A
Output Power Cord		Anderson Cable 60A
Protection	-	Reverse Polarity
	-	Short Circuit
	-	Over voltage
	-	Over current
	-	Over temperature
	-	Surge and Transient protection
Cooling	-	Forced Air cooling(Temp Controlled)
Operating Temp	C	0-50
Operating Humidity	%	95
Protection Class	-	IP20

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

LITHIUM BATTERY FOR SOLAR INVERTER

- Zero maintenance
- No Performance Degrade
- Environment Friendly
- Inbuilt With Inverter
- 50% Smaller Size
- 5% Power Loss in each cycle
- Fast Charging (70% Charging in 1 Hour)



Uninterrupted Green Energy

Fast Charging

Upto 4000 Life Cycle

No Maintenance

Reliability

No Operating Expenses

No Additional Manpower Required

Safety & Protection

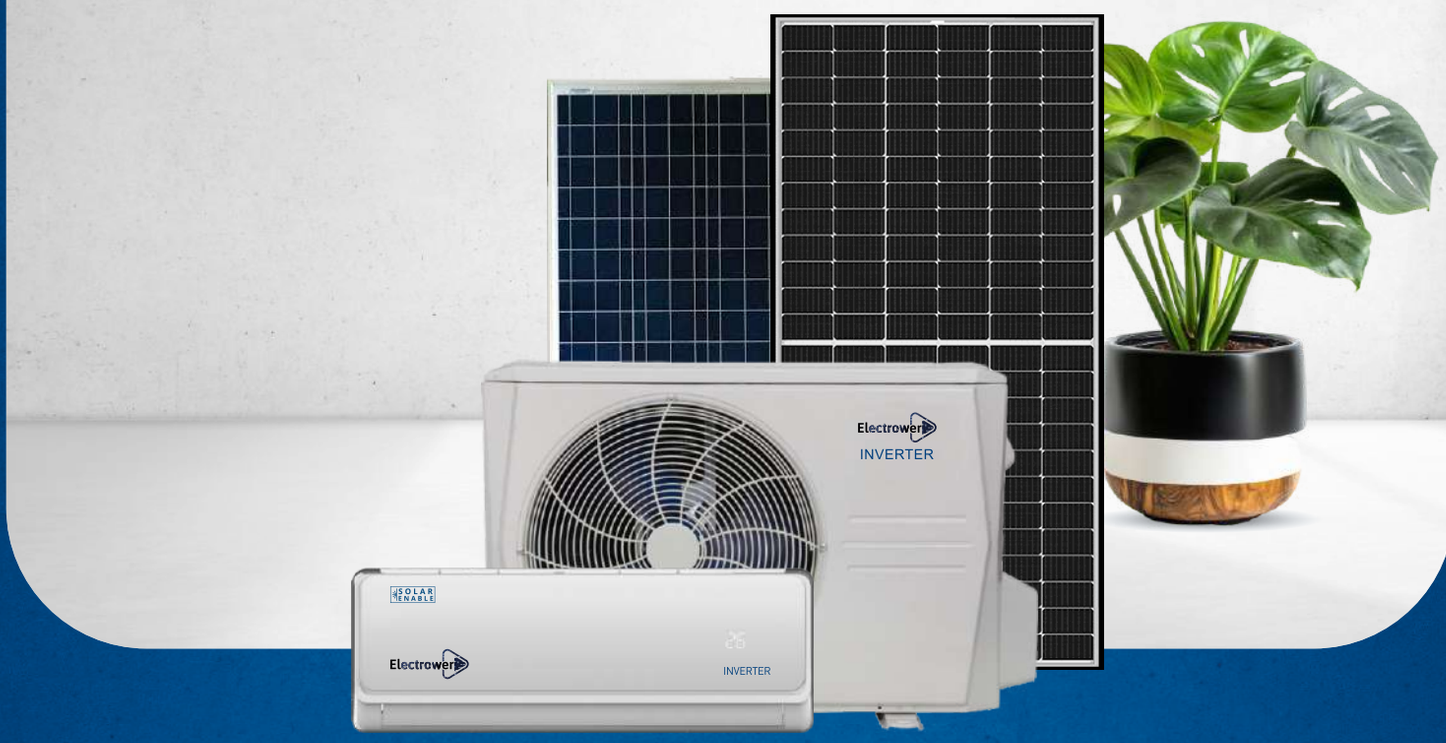
TECHNICAL SPECIFICATIONS

Li-ION Series - Lithium Battery			
Chemistry		LFP	LFP
Nominal Voltage	V	25.6	51.2
Capacity	Ah	100	100
Configuration		8S	32S
Specific Energy	Wh	2560	5120
Cycle Life		>2500 at 100% DOD	
Electrical Characteristics			
Cell Balancing		Yes	
Charging Mode		CC-CV	
Charge Current	A	25	
Max Charge Current	A	50	
Discharge Current	A	50	
Max Discharge Current	A	100	
Peak Discharge Current	A	200	
Voltage Range	V	21-29	43.2-57.6
Over Temperature Protection In Discharging	C*	60°	
Over Temperature Protection Recovery In Discharging	C*	50°	
Over Temperature Protection In Charging Mode	C*	50°	
Over Temperature Protection Recovery In Charging	C*	40°	
Effeciency	%	>=98%	
Connector Type		Customized	
Mechanical Characteristics			
Operating Temperature		-10°--55°	
Storage Temperature		0°--35°	
Humidity	(RH)	<90% (Non Condensing)	
Dimensions	(Wx Dx H)	As per Requirement	
Protections			
Under Voltage Protection level	V	2.5	
Under Voltage protection recovery level	V	2.7	
Over Voltage protection level	V	3.65	
Over Voltage protection recovery level	V	3.4	
Charging Over Current Protection	A	50	
Discharging over current Protection	A	200	
Output short circuit Protection		Yes	
Cell Temperature Protection In Discharging Mode		Yes	
Applicable Standards			
Transportation		UN/DOT 38.3	
Safety		IEC 62133 - 2 : 2017/IS 16046-2018	

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

SOLAR AIR CONDITIONER

In Inverter Type Air Conditioners, Temperature Is Adjusted By Changing Motor Speed Without Turning The Motor On And Off. Compare To Non-inverter Type Air Conditioners, Air Conditioners With Inverters Have Less Power Loss & Can Save In Energy.



- **Good Quality Product**
- **Air Filter For Fresh Air**
- **Best Cooling Compressor**
- **Easy To Install**
- **Power Efficient To Save Electric Bill**
- **VFD Based Compressor**

TECHNICAL SPECIFICATIONS

SOLAR AIR CONDITIONER			
	Model No.	**VAYU2.0-INDOOR**	**INDRA2.0-INDOOR**
AC Compressor Warranty		10 Year	
Complete AC Warranty including PCB		1 Year	
Installation Charges		Installation Is Not Included	
Installation issue under warranty		Not Included	
Solar Connection with Device		As per Installation Guide with Solar Inverter	
BEE Star Rating	-	3	3
Power Supply	V/Hz/Ph	230V / 50 / 1	230 / 50 / 1
Capacity	Tonnage	1.5	1.5
Variant	-	Variable Speed	Inverter
Cooling Capacity(Full Load)	W	5,000	5000
Cooling Capacity(Half Load)	W	2,500	2500
Heating Capacity	W	N/A	4900
Power Consumption (Full Load)	W	1,470	1550
Power Consumption (HalfLoad)	W	590	610
Current Input (Full Load)	A	6.60	6.73
Current Input (Half Load)	A	3.70	4.06
ISEER	W/W	4.10	3.93
Indoor Unit			
Indoor Coil Type	Copper	2 Row/7mm & Grooved	2Row/7mm(16hp)Gold
Airflow Volume	CMH (mÂ³/hr)	1060	1020
Fan Speed T/H/M/L	RPM	900	1350/1300/1180/850
Noise Level	dBA	<50	< 47
Dimensions (LXHXW)	mm	900*300*240	
Packing (L*W*H)	mm	1000*370*345	
Net / Gross Weight	kg	10.6 (Net)/ 13.3(Gross)	10.6/13.5
Outdoor Unit			
Condenser Type	Copper	1.5Row/760mm	1.7Row/7mm(Gold)
Compressor	-	GSD102SKQA6JT6B / Highly	GSD113RKQF6JV6B /Highly
Compressor Type	-	Rotary	
Airflow Volume	CMH (mÂ³/hr)	1060	2180
Noise Level	dBA	<58	
Refrigerant Type / Charge	Type / Kg	R-32 / 0.780	R-32 /0.770
Dimensions (WXHXD)	mm	835x555x295	
Packing (W*D*H)	mm	925x625x355	
Net / Gross Weight	kg	25.8 (Net) / 303. (Gross)	
Piping Connection	meter	3	
Approx. Cooling Area	Sq. ft.	150-180	
Features			
Indoor Unit Display Type	-	Hidden Display	
Airflow Control Type	-	Yes	
Remote Control	-	Wireless LED	
Self Cleaning	-	Yes	
Express Cool 52 *C	-	Yes	
Vitamin C Filter	-	Yes	
Silver Ion Filter	-	Yes	
Dust Filter	-	Yes	
Hot+Cool	-	N/A	Heat+Cool
Digital AC Ser Control System			
Input Voltage		220V	
Input Frequency		50/60HZ	
Input Current		4A	
Output Speed		4500RPM	
Output Power		550W	
Max Torque		4.0 N.m	

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

Electrower

ELECTROWER TECHNOLOGIES PVT LTD

GST Details: 06AAECE3862D1ZW.

www.electrowersolar.com

slaes@electrowersolar.com

+91-9250419563, +91-9289520907, +91-9318412711

22/1, Mathura Rd, Industrial Area, 22, NH-19, Nathu Colony, Radha Nagar, Ballabhgarh, Faridabad, Haryana 121004 (The Printer Houe Pvt. Ltd. Campus) Near Nahar Singh Metro Station, Ballabhgarh