

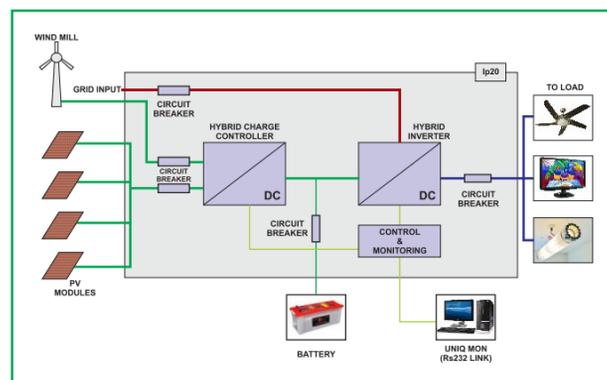
Unique Vivid Series Solar Power Conditioning Unit

MODEL	Unique Vivid Series Solar Power Conditioning Unit						
Array Rating	1 kW	2 kW	3 kW	4 kW	5 kW	6 kW	10 kW
Array Input	56 V to 88 V DC			112 V to 88 V DC			140 V to 220 V DC
Charger Controller Type	PWM MPPT						
Battery Voltage	48 V DC			96 V DC			120 V DC
Battery Type	SMF / Lead Acid						
Max DC Charging current	18 A	35 A	52 A	35 A	44 A	52 A	52 A
Inverter Type	Bi-directional						
Output Power Capacity	1KVA	2KVA	3KVA	4KVA	5KVA	6KVA	7KVA
Load Power Factor	0.8 lag to Unity						
Grid Input Voltage Range	110V-275V AC			160V-275V AC			
Nominal Output Voltage	Four Steps AVR 220V +3% -17%			Same as Input Voltage			
Regulation (Inverter mode)	+2%, -5%						
Frequency	50 Hz (+/- 0.5 Hz) in Stand alone mode						
Waveform	True Sine Wave						
Total Harmonic Distortion	< 3% max. for Linear load						
Overload Capacity	125% for 2 min., 150% for 30 seconds						
Inverter	MOSFET based PWM with INSTANTANEOUS SINE WAVE CONTROL						
Duty	Continuous						
Inverter Efficiency	>85%						
Operating Modes	Stand alone / Grid Interactive / Offline						
Acoustic Noise Level	< 55 dBA @ 1 meter						
Service Temperature	0 to 40°C						
Storage Temperature	-25 to 55°C						
Relative Humidity	up to 95% (Non condensing)						
Altitude	< 1000 meter, above sea level (without derating)						
Cooling	Forced Air						
Colour	Black						
Cable Entry	Rear side						
Dimensions (in mm W x D x H)	480*194*335		530*240*510		555*360*720		
Approx Weight in kg	25	32	55	60	68	82	124
LED indications	Inverter ON Grid ON Battery Low		Inverter UV / OV Inverter Over Load				
Protections	Input Surge Voltage Input Under Voltage Input Over Voltage Low / High frequency		MCB at Output Battery Low Trip Over temperature		Output Under Voltage Output Over Voltage Output Overload Output Short Circuit		
Optional Features	*Alarms are provided for all important protections Inverter ON / OFF switch Manual bypass switch RS 232 port for monitoring		Load Surge Current Array blocking diode Sleep mode with auto restart		Auto restart in case of overload shut down		

LCD DISPLAY & FAULT DISPLAY

LCD Display	Battery Voltage	Battery Charge (%)	Grid frequency	PV Voltage (Optional)	PV Wattage (Optional)
	Output Voltage	Output Load (%)	Output Frequency	PV Current (Optional)	Generated Units (Optional)
	Grid Voltage				
Faults Displayed on LED	Output under voltage	Output over voltage	Inverter Overload		
	Battery Low Pre Alarm	Battery Low trip			

*Specifications and cabinet subject to change without prior notice



Applications

- ✓ Electrification of Homes in Remote Areas
- ✓ Mobile/Radio Towers
- ✓ Office lighting
- ✓ Petrol pumps
- ✓ Hospitals
- ✓ Malls/Multiplex
- ✓ Rail/Road Signals
- ✓ Satellite Earth stations
- ✓ ATM
- ✓ Street Lighting
- ✓ Small Shops
- ✓ Ticket Reservation stations
- ✓ Resorts

Manufactured by:

UNIQUE MAX

EL-120, Unique House, Electronic Zone, MIDC,
Mahape, Navi Mumbai - 400710, Maharashtra, India.

Tel : 91-22-27620173 / 74 / 76

Email : sales@uniqueups.com
bumesh22@gmail.com

Website : www.uniqueups.com



UNIQUE MAX
GATEWAY TO PURE POWER

Unique Vivid Series Solar Power Conditioning Unit

Solar PCU Operation

There is DC high cutoff (battery fully charged) and DC Low regain (Buffer backup voltage) points in Solar PCU. Once Solar PCU is with PWM/MPPT Charge controller (PWM/MPPT CC), will Charge batteries simultaneously along with Grid Charger. At this time load will be on grid. Once battery voltage reaches grid charger cut off preset voltage then grid charger stops charging. Now PWM/MPPT CC will charge batteries through Solar power. Load will be on grid. (Preset value as per customer requirement). When battery voltage reaches DC high cutoff voltage (Battery is fully charged). Then Solar PCU disconnects grid supply and Load is transferred to Inverter in 4ms. Now Solar gives power to inverter and for battery charging. Solar PCU will work through solar until solar is healthy. When solar power not sufficient PCU will take deficit power from battery.

When battery voltage reaches DC Low regain (preset value as per customer requirement) (Buffer backup voltage) Solar PCU will shift load from Inverter to grid. Buffer backup is for emergency use in case of grid power failure. Now grid charger will charge battery up to buffer backup level for emergency and load will be on grid. Once Solar power is available then PWM/MPPT CC will charge the Batteries and the process continues.

Emergency Battery Backup

Solar PCU will not deep discharge the Batteries. On PCU Operation Battery Discharge level is customer adjustable. While PCU DC Low Regain Condition, If Grid supply is not available then battery will give power to load. If the Battery is fully discharged and tripped. Solar PCU will automatically starts its Operation Once Solar/ Grid available.

Sleep Mode

Solar PCU Continuously Monitors Output
If Load is Less than 30w then Solar PCU will go to Sleep Mode
Once Load is above 30W it will Initialize and Starts its Operation

Dusk down Operation (Optional for Evening/Night Load Condition)

Solar PCU starts giving output where load runs only in the Evening / Night (When Solar is not available)
Once solar power is available it stops giving output to the load. Thus No no load discharge and saves generated solar energy to its fullest.

Salient Features

- ✓ Maximum Power Point Tracking (MPPT) / PWM Design
- ✓ PWM based Pure Sine wave Technology.
- ✓ Low Total Harmonic Distraction.
- ✓ High Surge handling Capacity up to 300%
- ✓ Highly Efficient and Reliable.
- ✓ Battery Reverse Polarity Protection.

- ✓ The new Inverter Sleep Mode Function to save power.
- ✓ Real Time Short circuit Protection.
- ✓ Inbuilt Galvanic Isolation Transformer.
- ✓ Four step Automatic Voltage regulator (AVR) in mains mode (110VAC – 275VAC).
- ✓ Very Less Transfer Time (less than half cycle), From grids to Inverter mode.
- ✓ Cold Start Operation.
- ✓ Provision for Emergency Battery Backup.
- ✓ User Friendly LCD Display with I/P, O/P, battery, PV and Generated Solar Power.
- ✓ Easy to understand Audio and Visual Indications.
- ✓ Noiseless operation less than 40db.
- ✓ Specialized Design to Meet our climate / operating condition.
- ✓ Power Factor Corrected PWM Grid Charger.
- ✓ Auto Reset On battery Low Trip when solar is back.
- ✓ Advanced Thermal Protection.
- ✓ Rs232 / Ethernet Interface for remote monitoring.
- ✓ Easy to Install.