

# Power Conditioning Unit



Static PCU are bidirectional solar inverter with MPPT based charger to extract maximum energy from PV modules to charge batteries and also supply load at same time. Static uses inhouse developed DSP technology for its MPPT and solar inverters, which enables it to configure the system to share the solar power with battery power to produce desired output to drive load.



MPPT chargers rating are selected to charge the battery and deliver the current to load. These PCU are capable of being configured for priority of solar, battery or mains.

1. When solar energy is sufficient then output of MPPT charge batteries along with feeding inverter to produce AC to meet load demand.
2. When MPPT output is not sufficient to meet demand of load, then DC source is combination of MPPT output and batteries.
3. If battery has low voltage condition then load is shifted to main grid and batteries are charged through MPPT.



If MPPT is not capable of charging batteries then mains charger become active to charge the batteries and load is fed from mains. Once the batteries are fully charged load is automatically shifted to inverter operating on solar & batteries.

Static PCU are available from 1-15KVA, Single phase input and single phase output. Static PCU with peak grid demand are available on request.

# Applications

1. Government Buildings
2. Manufacturing Industries
3. Commercial Buildings
4. Society Flats
5. Petrol Pumps
6. Schools & Colleges
7. Rural Electrification
8. Hospitals and Health Sectors
9. Residential Homes
10. Farm Houses
11. Resorts
12. Toll Booths
13. Airports
14. Shopping Malls
15. Cold Storage



## Technical Specification

	Rating	1KVA	2KVA	3KVA	5KVA	6KVA	7.5KVA	10KVA	15KVA
1	DC Voltage	24/48V	48V	48V	96V	96V	96V	120V	180V
2	Input range	22-30V for 24V, 44-60V for 48V	44-60V	44-60V	85-115V	85-115V	85-115V	108-144V	162-216V
3	Nominal O/P	230V, ±2%, 50Hz.	230V, ±2%, 50Hz	230V, ±2%, 50Hz	230V, ±2%, 50Hz	230V, ±2%, 50Hz	230V, ±2%, 50Hz	230V, ±2%, 50Hz	230V, ±2%, 50Hz
4	DC-AC efficiency	>85%	>87%	>87%	>87%	>87%	>87%	>88%	>90%
5	Standby power	<50W	<50W	<50W	<200W	<200W	<200W	<200W	<300W
6	THD	<5%	<5%	<5%	<5%	<5%	<5%	<5%	<5%
7	Load PF	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity	Lag 0.8 to unity
8	PV voltage	50-75V/75-140V	75-140V	75-140V	120-230V	120-230V	120V-230V	150-280V	200-350V
9	PV capacity	>1Kwp	>1Kwp	>2Kwp	>5Kwp	>6Kwp	>7.5Kwp	>10Kwp	>15Kwp
10	MPPT efficiency	>94%	>94%	>94%	>94%	>94%	>94%	>95%	>95%
11	Over load	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip	125%- 60 sec., 150%- 30 sec., >150% Immediate trip
12	Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections	• All Standard Protections
13	Surge Protection	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder	MOV at all input/output feeder
14	Display	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored	• All system configuration can be monitored
15	Operating temp. range	0-55°C	0-55°C	0-55°C	0-55°C	0-55°C	0-55°C	0-55°C	0-55°C
16	Storage Temp.	-10°-60°C	-10°-60°C	-10°-60°C	-10°-60°C	-10°-60°C	-10°-60°C	-10°-60°C	-10°-60°C

## Static Energy

**Reg. Office :** 508, 5th Floor, Shivam Ansal Building, RDC, Raj Nagar, Ghaziabad - 201002,  
**E-mail :** dk@staticenergy.in, info@staticenergy.in , **Website :** www.staticenergy.in, **Mobile :** +91 8800 808 375, +91 9711 190 270  
**Work Office :** S-119, Harsh Compound, Loni Road, Site - II, Mohan Nagar, Ghaziabad