



MICROMAK RENEWABLE ENERGY



-  MPPT for maximum solar utilisation
-  Less dependency on grid
-  3 modes of priority
-  Optional grid charging
-  LCD display
-  Optional two-way IoT access

1KVA/24V

1-6KVA/48V

5-7.5KVA/96V

5-15KVA/120V

15-20KVA/240V \*

## MPPT-BASED PCU (SINGLE PHASE)

### The Heavyduty Soldier of Solar Inverters

Built for harsh Indian weather conditions. Our MPPT-based PCU uses smart management of renewable solar power, grid supply and battery. This allows it to deliver power seamlessly for all electrical applications- thus significantly reducing diesel consumption and electricity bill. Results: Economical power solution giving benefit of optimal renewable energy-365 days a year

# HIGH VOLTAGE (96-120V) 5-10 KVA SEOG SERIES MPPT-BASED PCU

Our high voltage 5-10 KVA SEOG Series MPPT-based PCU is built to perform steadily in difficult grid conditions. Whether it is the heavy load of a Petrol Pump, the 24-hour demand of your office load, or your school looking to adopt solar power, this heavy-duty inverter will drastically reduce electricity consumption and diesel dependence. Along with a larger LCD display and IoT-readiness, this inverter also offers faster RoI.



## Applications



Petrol Pumps



School



Hotel



Rural Microgrids



Cold Storage



Hospital

| RATINGS                            | 5KVA/96V                                                                                                                                                                                                                                                                                                             | 6KVA/96V        | 7.5KVA/96V      | 5KVA/120V                                                                                                                                                                                                                                     | 7.5KVA/120V     | 10KVA/120V       |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|
| Model NO.                          | SEOG-096-5K0-1P                                                                                                                                                                                                                                                                                                      | SEOG-096-6K0-1P | SEOG-096-7K5-1P | SEOG-120-5K0-1P                                                                                                                                                                                                                               | SEOG-120-7K5-1P | SEOG-120-10K0-1P |
| A.MPPT CHARGER                     |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Type (Buck)                        | MPPT                                                                                                                                                                                                                                                                                                                 |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| PV Nominal Capacity (Total KWp)    | 5                                                                                                                                                                                                                                                                                                                    | 6               | 7.5             | 5                                                                                                                                                                                                                                             | 7.5             | 10               |
| Max PV String in Parallel          | 3                                                                                                                                                                                                                                                                                                                    | 4               | 5               | 3                                                                                                                                                                                                                                             | 5               | 6                |
| No of MPPT Channel/No of Input     | 1/1                                                                                                                                                                                                                                                                                                                  |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Max. Open Circuit PV Volts (Voc)*  | 320                                                                                                                                                                                                                                                                                                                  |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| MPPT Voltage Range (Vmp)*          | 165-280                                                                                                                                                                                                                                                                                                              |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Max Output Current (A)             | 50                                                                                                                                                                                                                                                                                                                   | 60              | 75              | 40                                                                                                                                                                                                                                            | 60              | 80               |
| Peak Charging Efficiency           | ≥94%                                                                                                                                                                                                                                                                                                                 |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| B. SOLAR INVERTER                  |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Nominal Capacity                   | 5KVA                                                                                                                                                                                                                                                                                                                 | 6KVA            | 7.5KVA          | 5KVA                                                                                                                                                                                                                                          | 7.5KVA          | 10KVA            |
| Output Current(A)                  | 17.5                                                                                                                                                                                                                                                                                                                 | 21              | 26              | 17.5                                                                                                                                                                                                                                          | 26              | 35               |
| Battery Voltage(V)                 | 96                                                                                                                                                                                                                                                                                                                   |                 |                 | 120                                                                                                                                                                                                                                           |                 |                  |
| Output Voltage/Freq/Phase          | 230V(±2%)/50Hz/1P+N                                                                                                                                                                                                                                                                                                  |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Peak Efficiency                    | ≥88%                                                                                                                                                                                                                                                                                                                 |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Over Loads: 60sec/ 30sec/ 5sec     | 101-110%/111-150%/151-200%                                                                                                                                                                                                                                                                                           |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Auto Bypass Feature                | Provided                                                                                                                                                                                                                                                                                                             |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| C. GRID CHARGER                    |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Grid Voltage Range (V)             | 230V(+10%&-20%)                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Grid Freq Range(Hz)                | 50Hz (+5%&-5%)                                                                                                                                                                                                                                                                                                       |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Max Grid Import Power              | 7.5KVA                                                                                                                                                                                                                                                                                                               | 9KVA            | 11.25KVA        | 7.5KVA                                                                                                                                                                                                                                        | 11.25KVA        | 15KVA            |
| D. PROTECTIONS & DISPLAY PARMETERS |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| PROTECTIONS                        |                                                                                                                                                                                                                                                                                                                      |                 | LCD PARAMETERS  |                                                                                                                                                                                                                                               |                 |                  |
| PV Side                            | <ul style="list-style-type: none"><li>Reverse Polarity, PV Overload, Surge Protection (MOV)</li><li>Reverse Polarity, O/U Voltage, Current Limit</li><li>O/U Voltage, O/U frequency, Surge Protection (MOV)</li><li>O/U Voltage, Overloads, Short Circuit, Surge Protection (MOV)</li><li>Over Temperature</li></ul> |                 |                 | <ul style="list-style-type: none"><li>Voltage, Current, Power, Energy</li><li>Voltage, Current, Battery Charging/Discharging</li><li>Voltage, Frequency</li><li>Voltage, Current, Frequency, Load%</li><li>Mode of Operation,Faults</li></ul> |                 |                  |
| Battery Side                       |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Grid Side                          |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Load Side                          |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Miscellaneous                      |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| E. MISCELLANEOUS                   |                                                                                                                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Switchgear Protection              | MCB/MCCB provided on PV, Battery, Load & Grid path.                                                                                                                                                                                                                                                                  |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| LED Indications                    | Power ON, Inverter ON, Solar Present/Charging, Load ON Grid, Charging, Battery Low, System Trip                                                                                                                                                                                                                      |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Remote Monitoring                  | GPRS based Modem (at extra cost)                                                                                                                                                                                                                                                                                     |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Ingress Protection                 | IP-20 (Indoor Type)                                                                                                                                                                                                                                                                                                  |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Type of Cooling                    | Forced Cooled (Temp. Controlled)                                                                                                                                                                                                                                                                                     |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Operating Temperature              | 0-50 degree(Without Derating)                                                                                                                                                                                                                                                                                        |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Humidity                           | Max. 95% Non-Condensing                                                                                                                                                                                                                                                                                              |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Altitude                           | 1000m above sea level                                                                                                                                                                                                                                                                                                |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Color shade                        | Black                                                                                                                                                                                                                                                                                                                |                 |                 |                                                                                                                                                                                                                                               |                 |                  |
| Dimensions(H×W×D)                  | 650X375X625                                                                                                                                                                                                                                                                                                          |                 | 550X325X697     | 650X375X625                                                                                                                                                                                                                                   |                 | 550X325X697      |

# HIGH VOLTAGE (120-240V) 10-20 KVA SEOG SERIES MPPT-BASED PCU



Our high voltage 10-20 KVA SEOG Series MPPT-based PCU is built to perform steadily in difficult grid conditions. Whether it is the heavy load of a Pump, the 24-hour-demand of your office load, or your school that is looking to adopt solar power, this heavy-duty inverter will drastically reduce electricity consumption and diesel-dependence. Along with a larger LCD display and IoT-readiness, this inverter also offers faster RoI.

## Applications



Petrol Pumps



School



Hotel



Rural Microgrids



Cold Storage



Hospital

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                 |                  |                  |                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------|------------------|------------------|
| RATINGS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 12.5KVA/120V                                                                                    | 15KVA/120V       | 15KVA/240V       | 20KVA/240V       |
| Model NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SEOG-120-12K5-1P                                                                                | SEOG-120-15K0-1P | SEOG-240-15K0-1P | SEOG-240-20K0-1P |
| A.MPPT CHARGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                 |                  |                  |                  |
| Type (Buck)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | MPPT                                                                                            |                  |                  |                  |
| PV Nominal Capacity (Total KWp)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10                                                                                              | 15               | 15               | 20               |
| Max PV String in Parallel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6                                                                                               | 9                | 5                | 6                |
| No of MPPT Channel/No of Input                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1/1                                                                                             |                  |                  |                  |
| Max. Open Circuit PV Volts (Voc)*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 320                                                                                             |                  | 650              |                  |
| MPPT Voltage Range (Vmp)*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 165-280                                                                                         |                  | 330-570          |                  |
| Max Output Current (A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 80                                                                                              | 120              | 60               | 80               |
| Peak Charging Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ≥94%                                                                                            |                  |                  |                  |
| B. SOLAR INVERTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                 |                  |                  |                  |
| Nominal Capacity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 12.5KVA                                                                                         | 15KVA            | 15KVA            | 20KVA            |
| Output Current(A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 43.5                                                                                            | 52               | 52               | 70               |
| Battery Voltage(V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 120                                                                                             |                  | 240              |                  |
| Output Voltage/Freq/Phase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 230V(±2%)/50Hz/1PN                                                                              |                  |                  |                  |
| Peak Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ≥88%                                                                                            |                  |                  |                  |
| Over Loads: 60sec/ 30sec/ 5sec                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 101-110%/111-150%/151-200%                                                                      |                  |                  |                  |
| Auto Bypass Feature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Provided                                                                                        |                  |                  |                  |
| C. GRID CHARGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                 |                  |                  |                  |
| Grid Voltage Range (V)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 230V(+10%&-20%)                                                                                 |                  |                  |                  |
| Grid Freq Range(Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 50Hz (+5%&-5%)                                                                                  |                  |                  |                  |
| Max Grid Import Power                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 18.7KVA                                                                                         | 22.5KVA          | 22.5KVA          | 30KVA            |
| D. PROTECTIONS & DISPLAY PARMETERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                 |                  |                  |                  |
| <div><div>PROTECTIONS</div><div><div><div>PV Side</div><div>Battery Side</div><div>Grid Side</div><div>Load Side</div><div>Miscelleneous</div></div><div><ul style="list-style-type: none"><li>Reverse Polarity, PV Overload, Surge Protection (MOV)</li><li>Reverse Polarity, O/U Voltage, Current Limit</li><li>O/U Voltage, O/U frequency, Surge Protection (MOV)</li><li>O/U Voltage, Overloads, Short Circuit, Surge Protection (MOV)</li><li>Over Temperature</li></ul></div></div></div> <div><div>LCD PARAMETERS</div><div><ul style="list-style-type: none"><li>Voltage, Current, Power, Energy</li><li>Voltage, Current, Battery Charging/Discharging</li><li>Voltage, Frequency</li><li>Voltage, Current, Frequency, Load%</li><li>Mode of Operation,Faults</li></ul></div></div> |                                                                                                 |                  |                  |                  |
| E. MISCELLANEOUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                 |                  |                  |                  |
| Switchgear Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | MCB/MCCB provided in PV, Battery, Load & Grid path.                                             |                  |                  |                  |
| LED Indications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Power ON, Inverter ON, Solar Present/Charging, Load ON Grid, Charging, Battery Low, System Trip |                  |                  |                  |
| Remote Monitoring                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | GPRS based Modem (at extra cost)                                                                |                  |                  |                  |
| Ingress Protection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | IP-20(Indoor Type)                                                                              |                  |                  |                  |
| Type of Cooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Forced Cooled (Temp. Controlled)                                                                |                  |                  |                  |
| Operating Temperature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0-50 degree (Without Derating)                                                                  |                  |                  |                  |
| Humidity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Max. 95% Non-Condensing                                                                         |                  |                  |                  |
| Altitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1000m above sea level                                                                           |                  |                  |                  |
| Color shade                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Black                                                                                           |                  |                  |                  |
| Dimensions (H×W×D)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 650×450×753                                                                                     | 667.50×500×700   | 650×450×753      | 667.50×500×700   |