# Amberroot Systems Private Limited

| Rehub-12/24-40 | | |
|---|---|---|
| Operating principle | **High efficiency MPPT Based Solar Charger to enable addition of Solar PV to existing home inverters. Monitors the net battery current to ensure optimal charging rate and maximizes the usage of Solar** | |
| Battery System Voltage | **12V** | **24V** |
| Recommended Solar module STC Wp | 500W | 1000W |
| Output Current – Continuous , Max | 40A | 40A |
| PV Open Circuit Voltage (VOC) | 90V | 90V |
| PV MPPT Voltage range | 17-65 V | 30-75 V |
| Input Current PV ( Max) | 30 A | |
| Power Conversion Efficiency (typical) | 95% typ | 95% Typ |
| Full load output voltage | Same as battery voltage | |
| Float Mode Charge Voltage | 13.5 V ( Factory Configurable) | 27V (Factory Configurable) |
| Bulk Mode Charge Voltage | 14.4 V ( Factory Configurable) | 28.8V (Factory Configurable) |
| Ambient temperature range | -10°C to 60°C | |
| Ports | 1PV -Ve input<br>1PV and Battery Common +Ve<br>1Terminal to connect Inverter Battery Negative<br>1 Terminal to connect Battery -Ve<br>1 15A and 6A 3 Pin Socket<br>1 15A 1 Meter long wire with 3 Pin Plug<br>1 External temperature sensor port<br>1 Override Switch<br>1 Modbus port with RJ45 connector | |
| Display | 16 X2 Backlit character LCD to display system state, Instantaneous Power and cumulative energy generated from Solar PV | |
| Dimension | 134X253X106mm | |
| Weight | ~3 Kgs | |
| **Protections** | | |
| Battery Reverse polarity | Electronically protected | |
| PV Reverse and Short circuit | Electronically protected | |
| Over current protection | System shutdown, recovers with a timeout | |
| Over temperature protection | System shutdown, recovers with a timeout | |

a. It is possible to add more than the recommended Wp as long as the Voc limits are taken care of. What would happen is that in periods when the Solar Panels deliver power more than REhub's rated output, the output power is limited to that of the rated power. Since a typical PV Panel delivers less than the nameplate Wp rating, installing PV more than the rated power could be beneficial because then the continuous output is as per the rated value.