

Solar Power Conditioning Unit



- Advanced microprocessor to optimize operation processes
- LCD display
- Inbuilt MPPT/ PWM technology charge controller
- Solar prioritisation
- High efficiency
- Wall mountable

These Solar Power Conditioning Units are a new generation of inverters, changing DC energy from solar modules into clean, stable AC power. Phocos-PCUs are designed for highest efficiency: Integrated advanced microprocessor technology combined with pure sine wave output makes

them the perfect choice to use with high-end electronics and electrical equipment. We combined high quality MOSFETs with MPPT-technology and added Solar Prioritisation as an additional feature to offer you a device that is clearly ahead of its competitors.

Charging priority chart

| PV | Grid | Battery status | Charging by | Output mode |
|------|-----------|------------------|-------------|-------------|
| >85% | Available | 11.8 V to 13.5 V | PV | Inverter |
| >85% | Available | > 14.2 V | PV | Inverter |
| >50% | Available | 11.8 V to 13.5 V | PV + Grid | Inverter |
| >50% | Off | 11.8 V to 13.5 V | PV | Inverter |
| >50% | Off | > 14.2 V | PV | Inverter |
| Off | Available | 11.8 V to 13.5 V | Grid | Grid |
| Off | Available | > 14.2 V | No charging | Inverter |
| Off | Off | > 14.2 V | No charging | Inverter |
| >50% | Available | <10.5 (Low bat) | PV + Grid | Grid |
| >50% | Off | <10.5 (Low bat) | PV | Off |
| Off | Available | <10.5 (Low bat) | Grid | Grid |
| Off | Off | <10.5 (Low bat) | No charging | Off |

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Solar Power Conditioning Unit

| Type | 300 W | 500 W | 1000 W | 1500 W |
|---------------------------------|--|-----------------|----------------|---------------|
| Mode | UPS Mode | | Inverter Mode | |
| Mains AC lower voltage cut-off | 170 V ± 5 V | | 100 V ± 5 V | |
| Mains AC higher voltage cut-Off | 255 V ± 5 V | | 270 V ± 5 V | |
| Output Voltage | 220 V ± 5 V AC | | 220 V ± 5 V AC | |
| Change Over time | <15ms | | <40ms | |
| Battery charging Current | 1A to 13A Programmable in steps of 1A Direct Main , Priority always Solar (max current shared from Solar) | | | |
| Normal charging current | 5 A | 6.5 A | 10 A | 13 A |
| Boost Charging voltage | 14.4 V ± 0.2V | 14.4 V ± 1 0.2V | 28.8 V ± 0.2V | 28.8 V ± 0.2V |
| Float Charging voltage | 13.8 V ± 1 0.2V | 13.8 V ± 1 0.2V | 27.6 V ± 0.2V | 27.6 V ± 0.2V |
| Battery lower voltage cut-off | 10.8 V | 10.8 V | 22.6 V | 22.6 V |
| No. of batteries(12V) | Single | Single | Double | Double |
| Charging method | Constant current / constant voltage method | | | |
| Out put wave form | Pure sinewave < 3% THD | | | |
| SPV Charging : | | | | |
| Nominal SPV input voltage | 12 VDC | | 24 VDC | |
| Max. charge current | 20A | | 40 A | |
| Float charge | 13.7 | | 27.4 | |
| Main charge | 14.4 | | 28.8 | |
| Power Factor | 0.8 PF | | | |
| Output frequency | 49 to 51 Hz | | | |
| Peak efficiency (@ Full load) | >85% | | | |
| Operating temperature | -25 °C to +55 °C | | | |
| LCD Display Indications | Mains status, solar status, charging status, battery status, load status, error status | | | |
| Audible alarm | Low battery, over load, change over, fault and sleep | | | |
| Protections | Battery over/under charge, output short circuit, over load, phase reversal, mains high/low voltage cut-off, high temperature, battery wire removal | | | |
| Optional feature | LED, RS232 Interface, no load sleep, | | | |
| Mounting | Wall mounting / bench top | | | |
| Cooling | Forced air cooling | | | |
| Dimension (L x W x H)mm | L 298 x W 93.8 x H 319 mm | | | |
| Noise level | <40dBA | | | |
| Standard warranty | One year | | | |
| Weight | 5 Kgs | | | |

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