RIPEENERGY
The Power Conversion Company

PSBC-MIL 1200 AC/DC POWER SUPPLY / CHARGER

The input current of PSBC-MIL 1200 AC/DC is power factor corrected and designed for optimum utilization of weak power sources such as portable generators. The efficiency is very high due to soft switching technology.

The RS-485 bus can be used for control, monitoring and setup. Detailed status and statistics can be retrieved. The bus is also used for interconnecting multiple units in a redundant or parallel system. The signal connectors provide several signals in addition to the RS-485 bus: alarm relay outputs and input for battery temperature sensor.

Temperature compensated charging ensures full battery capacity over the entire temperature range. PSBC-MIL 1200 AC/DC can be configured to charge different battery technologies such as Li-Ion, LiPo, lithium iron phosphate and lead-acid.

PSBC-MIL 1200 AC/DC can be software configured according to customer specification. The firmware is user upgradeable for future battery technologies and facilities.

PSBC-MIL 1200 AC/DC is protected from overvoltage, overcurrent, short circuit, reversed polarity and over temperature.

FUNCTIONS

Over temperature
The unit is protected from over temperature by derating the output current. It shuts down if the temperature continues to rise. The unit automatically starts up again when the temperature drops.

Input circuit breaker
The input circuit breaker is for failure protection and is also used as ON/OFF switch.

Display
The display can be toggled between output voltage, output current and alarm/error codes.

Input voltage
When the input voltage is below the safe operating range, the converter is shut off. When the voltage returns, the converter is turned on again.

Grounding
Available in the front and back

Acoustic noise
At ambient temperatures below 45°C the acoustic noise is 45 dBA.

Cooling
Forced air by temperature controlled fan

FEATURES

- PFC
- RS-485 bus
- Active load sharing
- Battery temperature compensated charging
- Alarm relay outputs
- Environmentally Tolerant
- IP67
- RoHS compliant

SPECIFICATIONS

Electrical data	
Input voltage	99 - 276 VAC / 45 - 430 Hz
Power Factor (PF) Load: 28 VDC 40 A, Vin: 50/60 Hz	Typical 0.99
Input current Load: 1250 W Vin: 50/60 Hz	≤ 15 A @ 99 VAC ≤ 12 A @ 120 VAC ≤ 6 A @ 230 VAC
Total Harmonic Distortion (THD) @ 28 VDC 40 A, Vin: 115/230 VAC, 50/60 Hz	≤ 14%
Efficiency at full load	≥ 86% @ 120 VAC ≥ 88% @ 230 VAC
Nominal output voltage	28 VDC
Adjustable output voltage	20.0 - 34.0 VDC
Overvoltage protection (OVP)	36.5 V
Nominal output current	42 A
Adjustable current limit	5 - 42 Amps
Short circuit current	≤ setting of current limiter +1 A
Load sharing	≤ 2 Amps deviation
Output voltage ripple and noise	≤ 100 mV p-p, 20 MHz bandwidth
Load regulation	Typical: 50 mV
Line regulation	Negligible

Standards	
Electromagnetic Interference	The power supply meets the requirements of MIL-STD-461E and F; Ground Army; CE101, CE102, RE101, RE102, RS103, CS101, CS114, CS115 and CS116
Electrical systems in vehicles	The power supply meets the requirements MIL-STD-1275D for: Imported voltage surge 40 V and 100 V and ripple 14 V
Electrostatic discharge	The power supply meets the requirements of EN 61000-4-2 for ESD
Safety	CE marked

Environmental	
High temperature	Operation MIL-STD-810G: Method 501.5, Procedure II, +60°C Storage MIL-STD-810G: Method 501.5, Procedure I, +71°C
Low temperature	Operation MIL-STD-810G: Method 502.5, Procedure II, -40°C Storage MIL-STD-810G: Method 502.5, Procedure I, -51°C
Temperature shock	MIL-STD-810G: Method 503.5, -51°C - +71°C non-operational
Humidity	MIL-STD-810G: Method 507.5, Procedure II, operational
Vibration	MIL-STD-810G, Method 514.6C Table 514.6C-VI. Composite wheeled vehicle vibration exposures figure 514.6C-3 . MIL-STD-810G: Method 514.6D, Category 20, Ground Vehicles, Wheeled/Tracked/Trailer, Procedure I
Shock	MIL-STD-810G, Method 516.6, Procedure I, functional Shock, 40g 11ms
Fungus	MIL-HDBK-454: Analysis of the degree of inertness to fungus growth of the components
Salt Fog	MIL-STD 810G: Method 509.5, 24 h spray, 24 h dry, 2 times
Altitude	Operational MIL-STD-810G: Method 500.5, Procedure II, 4572 m (15000 ft) at 57.2 kPa Storage MIL-STD-810G: Method 500.5, Procedure I, 12192 m (40000 ft) at 18.8 kPa
Encapsulation	The power supply is designed to meet the requirements of IP67 and has been tested by immersion in 1 m water for 30 minutes.

Dimensions, Weight and Connectors	
W x D x H Weight	220 x 420 x 88 mm 11.1 kg
Mounting	Any direction
AC input DC output Alarm 1 Alarm 2 NTC/COM	MS3102E-16-10P or equivalent. Threaded, RoHS MS3102E-22-2S or equivalent. Threaded, RoHS Binder 09-0404-30-02 Binder 09-0412-30-04 2 pieces Binder 09-0416-30-05

RIPENERGY
The Power Conversion Company

RIPEnergy AG
Wägitalstrasse 24
CH-8854 Siebnen
Switzerland

Phone +41 43 818 53 85
www.ripenergy.ch