

# PB251A-RM Series

## BATTERY CHARGER SYSTEM

### FEATURES

- 220 - 330W Battery Charger System
- DC UPS Connectable
- Digital Display System
- Rack Mounting
- Constant Float Voltage & Current Limit
- Independent Battery Charging Output
- DC OK & Battery OK Alarms with Relays
- Battery Connected Test Battery Low Volts Disconnect
- Optional Battery Charge Current Limit
- Optional Network Connected
- Optional Battery Temperature Probe
- OPERATIONS INSTALLATION HANDBOOK AVAILABLE



### SPECIFICATIONS

| INPUT                       |   |
|-----------------------------|---|
| Input Voltage:              | 190 to 264Vac, or 225 to 400Vdc   |
| Frequency                   | 45 to 65 Hz   |
| Input Current:              | 1.4A maximum  |
| Inrush current:             | 10A maximum   |
| Line regulation:            | 0.2% typical  |
| OUTPUT                      |   |
| Output Voltage              | 13.8Vdc, 27.6Vdc  |
| Output Power                | 275W - 330W   |
| Output Current              | 13.8Vdc: 20A<br>27.6Vdc: 12A  |
| Load regulation             | 0.5% typical  |
| Ripple & noise              | 100 MHz bandwidth 28mVp-p (13.8Vdc output)<br>55mVp-p (27.6Vdc output)  |
| Efficiency                  | > 80%   |
| PROTECTION                  |   |
| Current limit               | Load circuit - Constant current<br>Battery circuit - Constant current   |
| Short circuit protection    | Indefinite, auto-resetting  |
| Over-voltage protection     | 17.5 to 20V latching (13.8Vdc output)<br>31.5 to 39V latching (27.6Vdc output)  |
| Isolation                   | Input to Output: 4.2Kvdc 1 min<br>Output to Ground: 2.1Kvdc 1 min<br>Output to Ground: 700Vdc 1 min                                   |
| ENVIRONMENT                 |   |
| Operating temperature       | 0 to 70°C ambient<br>Derating from 40°C at 2.5%/°C  |
| Humidity                    | 5 to 90% relative humidity (non-condensing)   |
| Over-temperature protection | Automatic & auto-resetting  |
| Cooling requirement         | Natural convection  |
| STANDARDS                   |   |
| C-Tick                      | AS/NZS CISPR11 Group 1 Class A.   |
| Safety                      | Complies with AS/NZS 60950, class 1,<br>NSW Office of Fair Trading Approval N20602  |
| EMC                         | Emissions comply with AS/NZS CISPR11, Group<br>1, Class B. Complies with ACA EMC Scheme,<br>Safety & EMC Regulatory Compliance Marked |

| ALARMS & BATTERY                    |  |
|-------------------------------------|--|
| DC Ok alarm                         | Green LED : ON=OK voltage free change over relay contacts (32V,1A) Alarms on loss of AC mains power or failure of off-line AC/DC converter / battery charger   |
| Charger voltage OK alarm            | Green LED : ON=OK voltage free change over relay contacts (32V,1A) Alarms on battery low voltage, failure of battery fuse or battery disconnected. Alarm cancelled when fuse or battery replaced, or AC input restored |
| Battery low voltage disconnect(LVD) | Low voltage disconnect 10.5V for 12V battery, 21V for 24V battery, adjustable 1.6 to 2.0V / cell all models  |
| Charger over-load protection        | Auto-resetting electronic circuit breaker  |
| Reverse polarity protection         | Internal battery fuse  |
| Battery to load voltage drop        | 0.2 to 0.35V typical model dependant   |
| OPTIONAL FEATURES                   |  |
| Battery Charging Limit              | Option BCL: Factory set to maximum of the total rated output current. The BCL charging current based on A/H battery size and make of battery.  |
| Network enabled                     | Option N: Internal network card in conjunction with PB251A becomes a network enabled device combining the benefits of SNMP V1, XML and embedded webpage.   |
| Analogue meters                     | Option M: Load voltage, load current, battery charge and discharge.  |
| Temperature compensation            | Option T: 2.5m cable probe<br>Option T5: 5m cable probe<br>Float voltage set to 2.3V/cell at 25°C with compensation of 3.3mv/°C cell   |
| Battery Capacity Test               | Contact Powerbox for further information   |
| MECHANICAL                          |  |
| Input connector                     | IEC60320 inlet, 10A Class 1<br>2 meter IEC mains cord with Australian plug is supplied with each unit  |
| Output and battery connector        | PB251A-RML: M4 screw terminals<br>PB251A-B: Hirose HS28R-4A.<br>Mating connector is Hirose HS28P-4A (not supplied)   |
| Alarm terminal                      | PB251A-RML: M3.5 screw terminals<br>PB251A-B: DB25 female  |
| Enclosure                           | 19" Rack Mount, 2RU height, 232mm<br>Mounting slots suitable for M6 hardware   |
| Weight                              | 5.5kg  |

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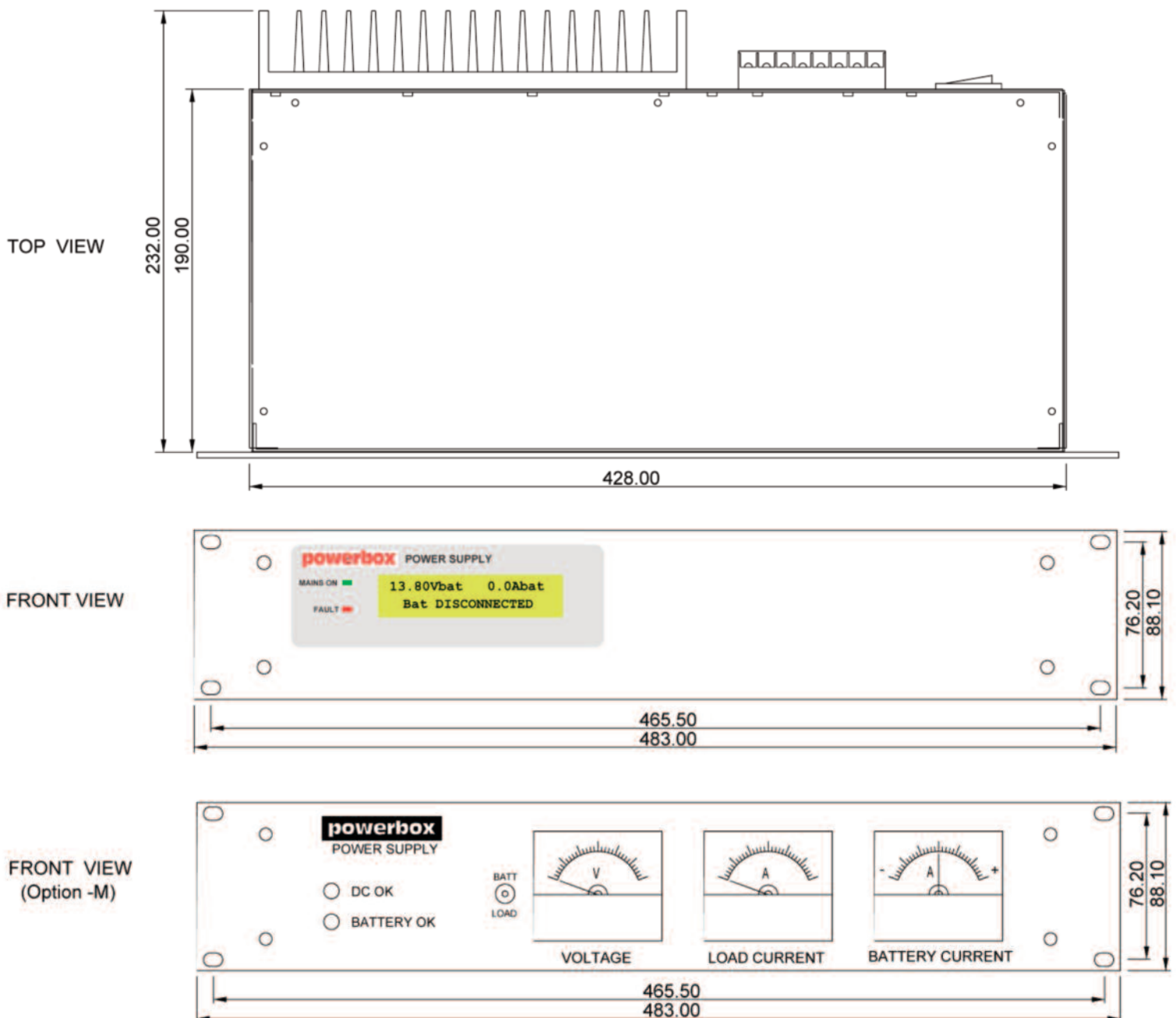
### SELECTION TABLE

| MODEL NUMBER | OUTPUT VOLTAGE | TOTAL CURRENT | BATTERY CURRENT | OUTPUT POWER | MECHANICAL                    |
|--------------|----------------|---------------|-----------------|--------------|-------------------------------|
| PB251A-12RML | 13.8V          | 20A           | 4A              | 275W         | Rack Mount / Screw terminals  |
| PB251A-24RML | 27.6V          | 12A           | 2A              | 330W         | Rack Mount / Screw terminals  |
| PB251A-12B   | 13.8V          | 20A           | 20A             | 275W         | Rack Mount / Hirose connector |
| PB251A-24B   | 27.6V          | 12A           | 12A             | 330W         | Rack Mount / Hirose connector |

### NOTES

- 1). Total output current is sum of load and battery charging current.
- 2). Other BCL option, Battery Charging Limits, available on request, factory set.
- 3). Example models number, PB251A-12RML-M-10, Includes analogue meters and 10A battery charge current.
- 4). PB251A-B versions, in standard unit the battery current limit set to maximum.

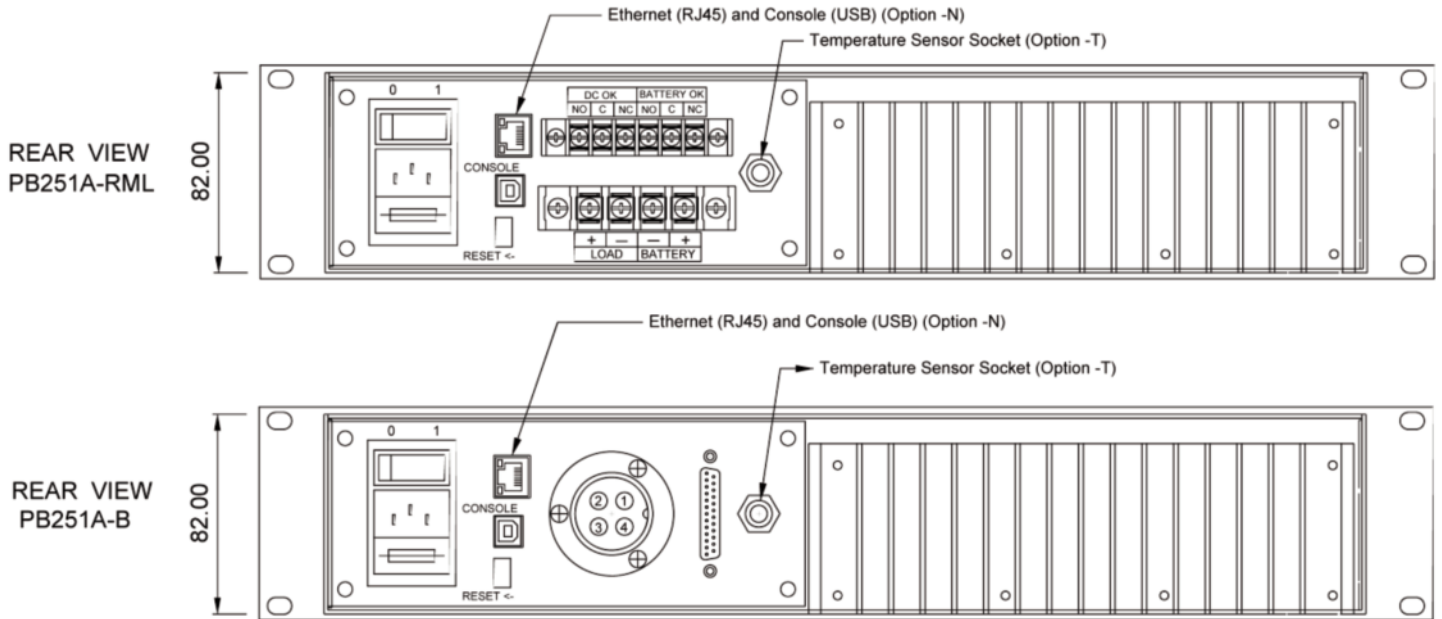
### TECHNICAL ILLUSTRATIONS



# PB251A-RM Series

## BATTERY CHARGER SYSTEM

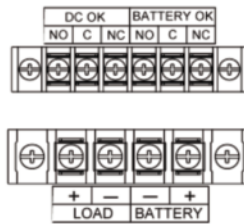
### TECHNICAL ILLUSTRATIONS



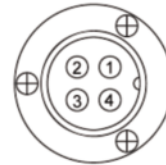
#### NOTES:

1. 2RU x 19" rack enclosure per IEC297
2. Mounting slots are suitable for M6 hardware.
3. Input connector is a 10A Class 1 IEC60320 inlet.
4. 2 meter IEC mains cord with Australian plug is supplied with unit.
5. PB251A-B alarm terminal is DB25 female.
6. PB251A-B output and battery connector is Hirose pn. HS28R-4A. Mating connector is Hirose pn. HS28P-4A (not supplied).
7. PB251A-RML output terminals are M4 screws suitable for ring or fork lugs up to 9.5 mm wide.
8. PB251A-RML alarm terminals are M3.5 screws suitable for ring or fork lugs up to 8 mm wide.

PB251A-RML ALARM AND OUTPUT TERMINALS



PB251A-B OUTPUT & BATTERY CONNECTOR



- PIN1: + OUTPUT
- PIN2: - OUTPUT
- PIN3: + BATTERY
- PIN4: - BATTERY

PB251A-B ALARM CONNECTOR



- PIN 1: COMMON
- PIN 6: DC OK (NC)
- PIN 15: BATTERY OK (NO)