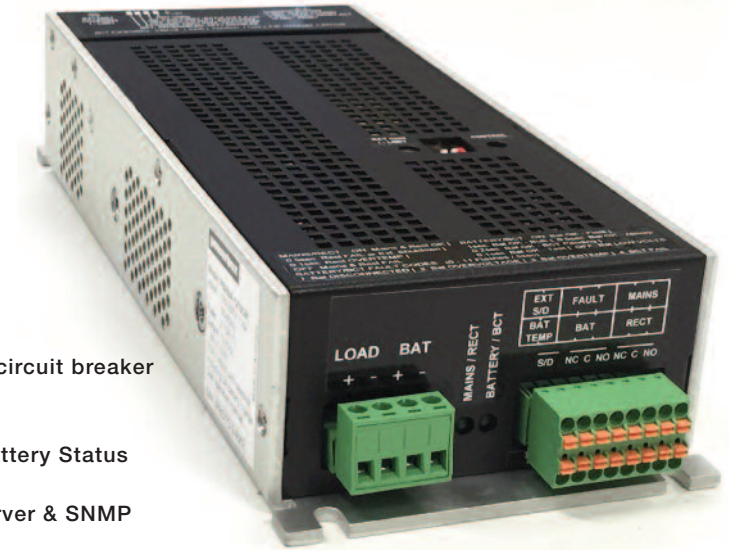


PB356 Series

PSU FOR BATTERY BACKUP SYSTEM

FEATURES

- Ultra-low noise output
- Independent rectifier & battery charging current limiting
- Externally adjustable battery charging current limit
- Advanced monitoring and control
- 2 step float charger or 3 step fast charger switch selectable
- Automatic battery connections and fuse fail testing
- Automatic and manual battery condition testing (BCT)
- Two multifunction alarm/ status LEDs
- AC Mains & Rectifier Status, Battery and BCT Status
- Battery low voltage disconnect switch with internal electronic circuit breaker
- Optional battery temperature probe for battery float voltage temperature compensation
- Four form-C alarm relays AC Mains Status, Rectifier Status, Battery Status and Battery Fault
- Optional Ethernet interface with embedded HTML webpage server & SNMP



SPECIFICATIONS

INPUT

Input Voltage	190-.264Vac, or 190-.400Vdc
Frequency	45 to 65 Hz
Input Current	1.4 max
Inrush current	15A on cold start

OUTPUT - AC MAINS OPERATION

Output Voltage	13.8Vdc, 27.6Vdc
Output Current	See Selection Table
Line regulation	0.2% typical
Load regulation	2% typical
Current limit type (Rectifier circuit)	Constant current > LVD volts Foldback & hiccup < LVD volts
Current limit type (Battery charging)	Constant current Externally adjustable
Short circuit protection	Indefinite auto resetting
Overvoltage protection	15.5-19.5V latching (13.8V output) 31.5-39V latching (27.6V output)
Ripple & Noise	25mVp-p (13.8Vdc output) 45mVp-p (27.6Vdc output)
Efficiency	83.5% typical

STANDARDS

Safety	AS/NZS 60950.1, Class 1
RF Emissions	AS/NZS CISPR11, Grp 1, Class B
Harmonic current	AS/NZS 61000.3.2
Isolation	Input to output: 4242Vdc 1min Input to ground: 2121Vdc 1min Output to output: 707Vdc 1min

OPTIONS

Battery temperature probe	Provides float voltage temperature compensation of -3.3mV/°C / cell Add -T to model for 2.5m cable and -T5 to model for 5m cable
Ethernet Interface	Internal card providing 10BaseT / 100BaseTx Ethernet interface supporting an embedded HTML webserver and SNMP V1 Add -N to model number
Heatsink	Option H: Supplementary heatsink
Conformal Coating	Option CC: Tropic protection for moist areas

MECHANICAL

Input Connector	AC Mains 10A Class 1 IEC60320 power inlet
Output and Battery Connector	4 way pluggable screw terminal block. Suitable for up to 1.5mm ² wire
Alarms Connector	16 way pluggable screw terminal block Suitable for up to 1.5mm ² wire
Case size	235 L x 93 W x 46 H (mm)
Weight	900g
Security Cabinet	WMBB-C-S Security Cabinet

ALARMS AND CONTROLS

ALARMS

RELAYS	Four voltage-free form-C contacts
AC Mains status	OK / Fail
Rectifier status	OK/ Fail, overtemp or shutdown
Battery relays	Determined by DIP switch
Battery status relay	DIP switch = OFF (Default) OK / Battery low voltage DIP switch = ON OK / Battery low voltage, battery disconnected of fuse fail, battery overvoltage battery overtemperature or BCT fail
Battery fault relay	DIP switch = OFF (Default) Battery disconnected or fuse fail, battery overvoltage battery overtemperature of BCT fail DIP switch = ON BCT in progress / not in progress

CONTROLS

External shutdown	Input for ext. voltage-free contact Closure shuts off rectifier
Control button	1s push: clear BCT or bat discon, alarm 5s push: manually start or abort BCT 10s push: reset microcontroller
LEDS	Two green alarm / status LED's ON: Mains & rectifier OK 0.5s flash: Rectifier fail or ext shutdown 0.1s flash: Rectifier overtemp limit OFF: Mains fail
Mains and rectifier status	

PB356 Series

PSU FOR BATTERY BACKUP SYSTEM

ALARMS AND CONTROLS

CONTROLS

Battery and BCT status	ON: Battery OK, charger = float 1s flash: Battery OK, charger = bulk 0.5s flash: Battery OK, charger = absorp 0.2s flash: Battery OK, BCT pending 0.1s flash: Battery OK, battery test or BCT OFF: Battery low voltage
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Fault codes	Battery fault: 1-11 flashes in 5 seconds 1 flash: Battery disconnected or fuse fail 2 flashes: Battery overvoltage 3 flashes: Battery overtemperature 4 flashes: BCT fail
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BATTERY MANAGEMENT

Battery connection test	Battery connections & fuse tested automatically every 5 minutes
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Battery charger	2 or 3 step selected by DIP switch
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2 Step	Bulk / Float
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3 Step	Bulk / Absorption / Float
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Parameters	Float voltage: 2.30V/cell @ 25C Absorption voltage: 2.40V/cell @ 25C Max absorption time: 2hrs Absorption taper current: 4% I rated Absorption enable threshold: 2.0V/cell
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BATTERY MANAGEMENT

Battery Condition Test (BCT)	Enabled/disabled by DIP switch State of battery tested by allowing battery to power the load for a period of time while monitoring battery voltage.
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Parameters	Automatic BCT interval: 1 week BCT duration: 60 minutes BCT fail threshold: 2.04V/cell Float time before BCT: 24 hours
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Battery overtemperature	50°C
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Battery overvoltage alarm	2.50V/cell, temperature compensated
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Battery low voltage disconnect	1.75V/cell
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Battery overload protection	Auto-resetting electronic circuit breaker
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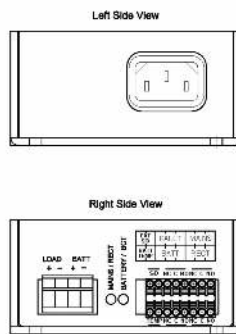
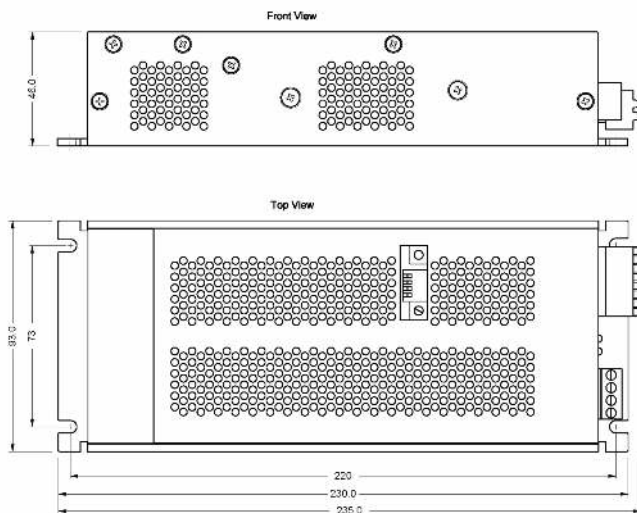
Battery reverse polarity protection	Internal fuse
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Battery to load voltage drop	0.4V (13.8V output) 0.2V (27.6V output)
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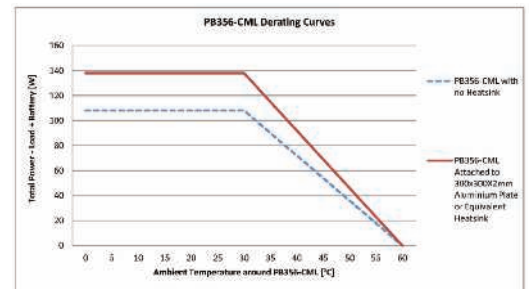
Battery low voltage alarm	1.80V/cell, internally adjustable
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SELECTION TABLE

MODEL NUMBER	OUTPUT VOLTAGE	RATE TOTAL OUTPUT CURRENT	MAXIMUM LOAD CURRENT	BATTERY CHARGING CURRENT LIMIT	OUTPUT POWER	NOTES
PB356-12CML	13.8 Vdc	8.0A	8.0A	0.5 to 8A Setpoint = 2.0A	110W	No heatsink
		10.0A	10.0A	0.5 to 10A Setpoint = 2.0A	138W	Attached to 300 x 300 x 2mm A1 plate
PB356-24CML	27.6Vdc	4.0A	4.0A	0.5 to 4A Setpoint 1.0A	110W	No heatsink
		5.0A	5.0A	0.5 to 5A Setpoint 1.0A	138W	Attached to 300 x 300 x 2mm A1 plate



- NOTES:
1. Mounting Centres: 220 x 73mm, Suitable for M4 Hardware
 2. AC Mains: 10A Class 1 IEC60320 power inlet
 3. Output and Battery: 4W Pluggable Screw Terminal Block. Suitable for up to 1.5 sq. mm wire.
 4. Alarms: 16W Pluggable Cage Clamp Terminal Block. Suitable for up to 1.5 sq. mm wire.



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