



5-Bay Battery Charger Product Specifications

PBT-5BAY-01

Overview

This 5-Bay Battery Charger is a customized charging station for Pliant rechargeable Li-Poly batteries. This charger is an accessory to Tempest and CrewCom wireless products. When ordering, reference Part Number PBT-5BAY-01.

SPECIFICATIONS*

Input

Voltage Range	85–264 VAC
Frequency Range	50/60 Hz
Input Current	0.8 A max
Standby Power	1 W max
Input Fuse	N/A

Output (per bay)

Voltage	0–4.2 V
Current	0–1 A
Power	6 W Maximum
Voltage Tolerance	± 1%
Current Tolerance	± 5%
Leakage Current	<1 mA
Ripple & Noise (3)	<120 mV pk-pk
Protection	Short circuit, Over temperature, Reverse polarity, 4-hr time limit

Environmental

Cooling	Convection cooled
Temperature	Operating: 0°C to 40°C; Non-Operating: -40°C to 70°C
Altitude	Operating: -382 m to 2000 m; Non-Operating: -382 m to 4570 m
Humidity	5% to 95% relative humidity non-condensing

General

AC Input Connector	IEC60320 C14 (3-in)
DC Input Connector	L712A Locking barrel
DC Cable Length	6 feet
Efficiency (5)	>80% at full load ROHS2002/95/EC
Green Procurement	WEEE2002/96/EC
MTBF	>25000 hours at 25°C and full load per MIL HDBK 217F
Indicator	Red-green bicolor LED per bay
Battery Temp Monitoring	Read TEMP register (0x07 – 0x06) of BQ27000 in battery pack
PCB Visibility	<0.020" around perimeter of battery-mating connector
RoHS COMPLIANCE	In compliance with the European Directive 2011/65/EC on the Restriction of Hazardous Substances (RoHS)

Charge Phases and Indicators

Current Phase	Description	RED LED	GREEN LED
Pre-charge	Until the battery voltage is above 3.3 V, 100 mA current will be used	Flashing	Flashing
Fast Charge	Normal CCCV charge mode	On	On
Charge Complete	Battery is fully charged	Off	On
Fault	Short circuit, over temperature, reverse polarity or exceeded time limit	On	Off
Standby	No battery inserted	Off	Off
Self Test	At power up, the five red LEDs will light for 1 second and then the five green		



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SPECIFICATIONS* CONT.

Charge Termination Methods

Cutoff	Charge is terminated when the charge current is less than 100 mA at a charging voltage of 4.2 V
Timer	The charge should be terminated after four hours of charging
Temperature	Charge is terminated if the measured battery voltage exceeds 50°C

Safety & EMC

Directive 2006/95/EC	Low Voltage Equipment
EN 60950-1:2006	Information technology equipment—Safety
Directive 2004/108/EC	Electromagnetic Compatibility

Emissions

EN 61000-6-4:2007	Part 6-4: Generic standards—Emission standard for industrial environments
EN 61000-3-2:2006/A2:200X	Part 3-2: Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-3-3:2008	Part 3-3: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

Immunity

EN 61000-6-2	Part 6-2: Generic immunity standard
EN 61000-4-2	Electrostatic discharge (ESD)
EN 61000-4-3	Radio-frequency electromagnetic field
EN 61000-4-4	Electrical fast transients/burst
EN 61000-4-5	Surges
EN 61000-4-6	Conducted high frequency disturbances
EN 61000-4-8	Power-frequency magnetic fields
EN 61000-4-11	Voltage variations, dips and interruptions

FCC

Part 15	Nonintentional Radiated & Conducted Emissions, Class A limits
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Mechanical Details

Dimensions (Charger) (L×W×H)	176.5 × 74 × 40 mm
Weight (Charger)	0.65 lb (295 g)
Dimensions (power supply) (L×W×H)	120.5 × 56 × 32.3 mm
Weight (power supply)	0.55 lb (250 g)

Notes

1. Ambient temperature $T_a = 20^\circ\text{C}$ unless otherwise indicated.
2. Load regulation is measured at the battery connector.
3. Measured with a $0.1\mu\text{F}$ ceramic capacitor and a $47\mu\text{F}$ Tantalum capacitor across the output terminals.
4. Total regulation tolerance includes initial set accuracy, line and load regulation.
5. Power losses of input and output cables are not considered here.
6. The rms method is used for leakage current measurements.

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* Notice About Specifications: While Pliant makes every attempt to maintain the accuracy of the information contained in this document, this information is subject to change without notice. Please check our website for the latest system specifications and certifications.

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