

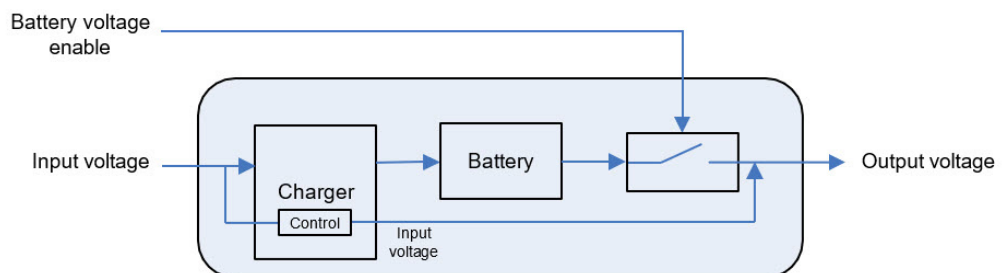
## Ruggedized Rechargeable Backup Battery

### Description

The **AB50000** is an external rechargeable backup battery. When no external power is available, the backup battery keeps supplying power to the load.

The battery can be used in AccuBeat's Atomic Clocks where there is a need to maintain the TOD (Time of Day). Disconnection of the power can cause the clock to shut down and lose the TOD. To avoid such cases, the backup battery should be assembled between the power source and the clock's power input. When no power input is available, the battery will continue to provide power to the atomic clock.

The AB50000 is available in two versions: A Standard unit that provides backup power for approximately 2 hours and an Extended unit that provides backup power for approximately 4 hours. Both units have the same mechanical and electrical interfaces.



Block Diagram of the AB50000

All specs are @ 25°C, quiescent conditions and sea level ambient unless otherwise specified

## Specifications

Parameters	
Input Voltage Range	24 – 32V DC
Output Voltage Range	22 – 32 V DC
Operating time	Standard unit - 2 hours backup time Extended unit - 4 hours backup time (The battery is designed to operate on AccuBeat's products that draw up to 0.5A current)
Charging time	Standard unit - 5 hours Extended unit - 8 hours

Environmental & EMC	
Temperature range – charge	0°C + 65°C
Temperature range – discharge	-20°C + 70°C
Temperature range (storage)	-30°C + 70°C
Humidity	95%, 26°C
Salt fog	Mil STD 810E, Meth 509.5, Proc I
Fungus	MIL HDBK 454B, Guideline 4
Transportation Vibration	Mil STD 810G, Meth 514.6, Cat 4
Mechanical shock / Transit drop	Mil STD 810G, Meth. 516.6, Proc IV
Mechanical shock / Bench handling	Mil STD 810G, Meth. 516.6, Proc V
Crash shock	MIL STD 810G, Meth. 516.6, Figure 516.3-1 (40g, 6-9ms, 45Hz)
Acceleration	MIL STD 810F, Table 513.5III Operational: 7g Non Op. & Crash hazard:10g
Drip proof	Mil STD 810E, Meth. 514.4, Cat 1
Sand and Dust	Mil STD 810G, Meth. 510.5, Proc I&II Mil STD 810E, Meth. 510.3 (dust)
Altitude	Operation: 25K feet Non operating.: 40K feet
Explosive atmosphere	MIL STD 810G, Meth. 511.5
Altitude temperature	MIL STD 810G, Meth. 520.3, Proc III

LEDs indication	
LED indication on front panel indicates the charging status	Green – Battery capacity is above 25% Red - Battery capacity is below 25% No LED lit - Battery is completely discharged / battery disconnected

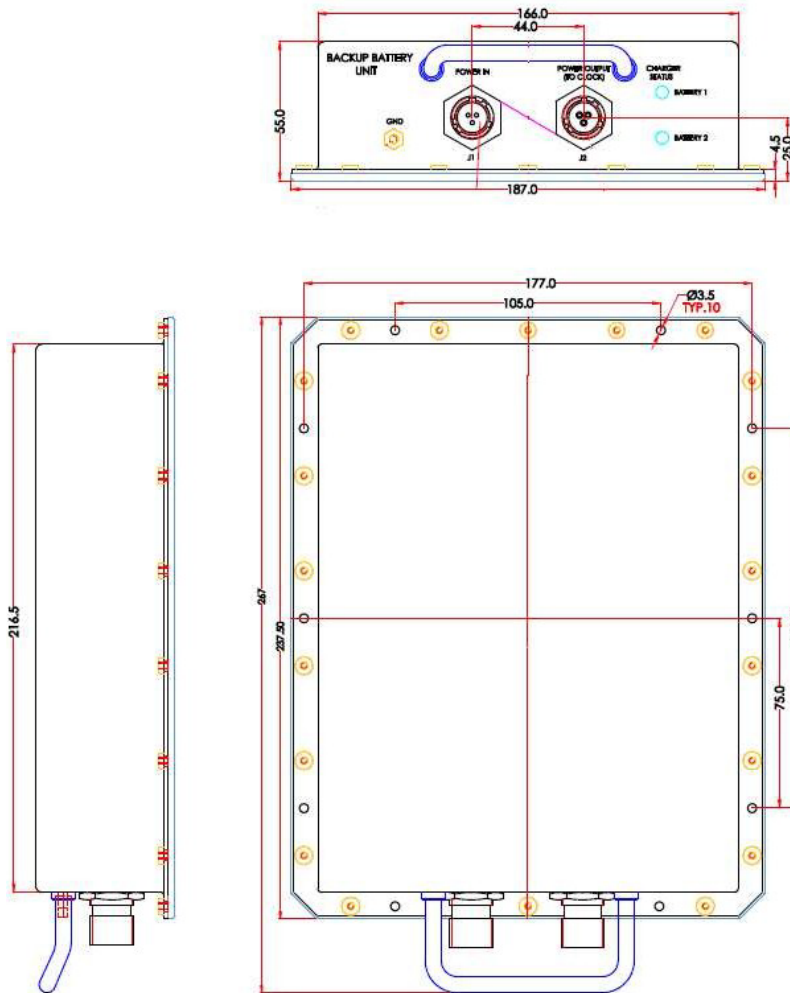
Weight	
Standard Unit	~ 2 Kg
Extended Unit	~ 3.5 Kg

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## Electrical ICD

Connector	Description	Note
J1	Power supply input	
	Output control	Open collector input: Floating – internal backup battery is connected to the output Ground - internal backup battery is disconnected to the output
J2	Power supply output	

## Mechanical ICD



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**HOW TO ORDER**

AccuBeat P/N	Description	Special Features
TBD	Standard Unit	~2 hours backup time
TBD	Extended Unit	~ 4 hours backup time

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