

Rechargeable lithium-ion battery BB-2590/U SMBus

Extreme performance

The Saft BB-2590 SMBus battery is a high performance lithium-ion battery with two independent 15V sections that can be connected externally for 30V or 15V operation. The Saft BB-2590 implements SMBus v1.1 communication and utilizes Smart Battery technology that protects against over-current, over-voltage, over-temperature, under-voltage, and short circuit.

Benefits

- Tested to MIL-PRF 32052, TRCECOMBB01
- Wide operating temperature range
- High energy density
- Operational life greater than 300 cycles to 80% capacity at 100% DoD

Key Features

- SMBus v1.1, SBSDData v1.1 compliant
- Individual 5-segment LCD State-of-Charge indicators with constant display
- Flexible output voltage
- High power
- Robust molded plastic case

Typical Applications

- SINGARS & ATCS (AN/PRC-104, 117, 119)
- Falcon (PRC-138,117) KY-57
- MXF430(V), AN/PSC-5, M22
- Surveillance/Sensors
- Robots

Replaces/Compatible with:

- BB 2590/U, BB 390B/U, BB 490/U, BB 590/U
- BA 5390/U, BA 5590/U

Technology

- Lithium-ion



Electrical characteristics	15 V mode	30 V mode
Nominal voltage (0.5 A @ +21°C)	14.8 V	29.6 V
Typical capacity (+21°C / +70°F)	15.6 Ah	7.8 Ah
Typical energy (+21°C / +70°F)	230 Wh	230 Wh
Mechanical characteristics	Metric	Imperial
Length maximum	112 mm	4.4 in
Width maximum	63 mm	2.4 in
Height maximum	127 mm	5.0 in
Weight maximum	1.5 kg	3.2 lbs
Battery casing	High impact plastic	
Operating conditions	15 V mode	30 V mode
Charge voltage	16.8 V	33.6 V
Charge current maximum*	8 A	4 A
Charge method	CC / CV	
Charge temperature range*	0°C to +45°C	+32°F to +113°F
Discharge current maximum	20.0A	10.0 A
Discharge temperature range*	-30°C to +60°C	-22°F to +140°C
References		
Connector	6 pin socket SC-C 179495	
Mating connector	ITT CA110821-6	
NSN	6140-01-490-4316	
Saft part number	38186502400	

*Consult Saft before operating the product outside of the published limits



SAFT

BB 2590/U

Protection

- Over-voltage: 4.25 V / cell
- Under-voltage: 2.4 V / cell
- Over-current: 20 A each side
- Over-temperature on Charge activates at 70°C, resets at 50°C (+/-5°C)
- Over-temperature on Discharge activates at 75°C, resets at 50°C (+/-5°C)
- Over-temperature (one-shot): 93°C(+/-5°C)
- Short circuit (not re-settable): > 21 A each side

Smart Functions

- SMBus v1.1 communications
- Cell balancing
- 5-segment LCD fuel gauge display in 20% increments for each side

Storage

- Allowable: -30°C to +50°C / -22°F to +122°F
- Recommended: +10°C to +30°C / +50°F to +86°F
- Store battery at ~50% SOC
- For long term storage contact Saft

Transportation

- UN/DOT 38.3 Miscellaneous Class 9

Schematic

