

Overview

Daytech Energy's high-performance DT-BCON Series of Solar Battery MPPT Charge Controllers offer a premium solution for your off-grid, stand-alone power or remote solar power system needs. With advanced MPPT (maximum power point tracking) control algorithm for solar power optimisation, die-cast aluminium housing design for maximum heat dissipation and battery charge control and protection features, the DT-BCON is reliable, safe, and practical.

The charge controller is usable for a wide variety of situations, allowing fast and accurate tracking for the best use of your photovoltaic array. You need a high-quality charge controller, to obtain the maximum solar energy to safely charge your 12V or 24V batteries within a shorter time period. The DT-BCON delivers on this promise, remarkably improving energy efficiency. The DT-BCON provides safety features and allows your batteries to last significantly longer.



With Modbus communication over RS485, it is convenient to expand and scale applications with multiple charge controllers for synchronisation and to integrate with external systems. Remotely or locally monitor your system with a local computer plugin interface, or another monitoring device, such as Daytech's IoT-SmartNode. All-round electronic fault detection, self-test and diagnostic function and enhanced electronic protection functions reduces the possibility of damages to the system components resulting from installation errors or system failures.

Applications



Solar Car



Solar Home



Solar Backpack



Solar Boat



Solar Street Light



Solar Power Generator

- Personal Power Plants / Battery Systems – for Home, Automotive, Marine & Commercial.
- Off-Grid Buildings, Homes, Sheds, Facilities, offices, barns, rural and agricultural.
- Energy Storage: UPS, backup, renewable energy, power station, solar lighting, solar pumping.
- EV / RV / Camper: Caravan, 4x4, golf trolleys, electric scooters.
- Solar/Wind Power Off-grid System, Domestic/Commercial/Industrial Energy Storage.
- Telecommunications Base Stations, IoT Gateways, Digital Signage, Environmental Monitoring.
- Portable power equipment.

Features

- Advanced Maximum Power Point Tracking (MPPT) technology, with efficiency greater than 99.5%.
- Reliable automatic limit function of PV input power, ensuring wide voltage range and no overloads.
- Die-cast aluminium design, ensuring excellent heat dissipation.
- 12/24VDC Battery charging, automatically identifying system voltage or user-defined working voltage.
- Simple and clear LED indicators showing system status. Large terminals for easy and safe wiring.
- Multiple load control modes: manual control, ON/OFF control, light On + Timer and time control.
- Supports 4 charging options: Sealed, Gel, Flooded and User Defined (for Lithium Chemistries).
- Battery temperature sensing and compensation function. Real-time energy statistics function.
- RS-485 communications and Modbus protocol, available for PC monitoring and connecting to external display units like the Daytech MT50, for accurate real-time data and configuration of settings.
- Highest quality batch manufactured for Daytech Energy (Australia). Every Unit is Quality Tested and Approved by Daytech's factory technicians before dispatch.

Daytech Pty Ltd

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Head Office & Factory: 614-616 Marion Road, Park Holme, SA 5043

Daytech Pty Ltd | ABN: 84 602 165 024

Technical Specifications

Battery Charger Chemistry	Sealed, Gel, Flooded and User Defined – Can program for various chemistries, such as Li-ion, Lithium Iron Phosphate (LiFePO4), LTO, etc.
Nominal System Voltage	12VDC / 24VDC Auto Detect
Rated Charge Current	DT-BCON-20: 20A DT-BCON-30: 30A DT-BCON-40: 40A
Max. Discharge current	DT-BCON-20: 20A DT-BCON-30: 20A DT-BCON-40: 20A
Battery Voltage Range	9VDC ~ 32VDC
MPPT Voltage Range	Input Voltage: Battery Voltage + 2VDC to maximum 108VDC
Max PV Input Power	DT-BCON-20: 260W(12VDC) / 520W (24VDC) DT-BCON-30: 390W(12VDC) / 780W (24VDC) DT-BCON-40: 520W(12VDC) / 1040W (24VDC)
Self-Consumption	≤60mA(12VDC) / ≤30mA(24VDC)
Discharge Circuit Voltage Drop	≤0.15VDC
Communication Interface	RS485 (RJ45)
Grounding	Common Negative
Dimensions (mm)	DT-BCON-20: 216.6 x 142.6 x 56 DT-BCON-30: 280.7 x 159.7 x 60 DT-BCON-40: 302.5 x 182.7 x 63.5
Mounting Dimensions (mm) With 4.7mm mounting hole	DT-BCON-20: 130 x 204 DT-BCON-30: 147 x 268 DT-BCON-40: 170 x 290
Power Cabling	Use flex panel wire for higher Current Carrying Capacity. DT-BCON-20: 10mm ² DT-BCON-30: 16mm ² DT-BCON-40: 25mm ²
Weight	DT-BCON-20: 1.5kg DT-BCON-30: 2.2kg DT-BCON-40: 2.9kg
Temperature Range	Operating Temperature: -30 ~ +55°C Storage Temperature: -30 ~ +75°C
Humidity Range	≤95% (N.C.)
Package material	Cast Aluminium Housing, powder coated
IP Rating	IP30, requires enclosure for outdoor use.
Warranty	2 years Limited*

* Limited Warranty – Warranty applies for use within specified temperature, current and voltage parameters ONLY.

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Product Photos – DT-BCON-20A



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