

# DBC12406LFPBD



Universal Dual Battery Charger and Power Supply

DIN rail mounting

100W for Lithium-iron and Pb lead-acid 12/24VDC

order part number:

**DBC12406LFPBD**

## High Power up to 100W

12VDC-6A | 24VDC-3A

## Wide input voltage range

100 to 204VAC 50-60Hz

## Plug&Play

## Compact size

Maximize available space

## Battery charger and Power Supply

Charger for Pb-Lead Acid: 12V and 24V (AGM, GEL, WET)

Charger for Lithium-iron –LFP-LiFePO<sub>4</sub>: 12.4V and 24.8V

Power Supply –PSU- Mode: 12 and 24V

## Flexible Mounting

DIN rail mounting

## High efficiency

Specially designed for off-grid solar systems and back-up systems connected to the grid and streetlights.



Universal dual battery charger and power supply  
100W | 12/24V | input:1-phase



The DBC12406LFPBD is a battery charger and a power supply in one device. It is a charging rectifier for charging optimally lead and lithium-iron (LFP) batteries and also have power supply function 12/24V selectable.

Advanced charging algorithms to optimize and extend battery life  
Its compact size, slim and easy to configure makes it ideal for a multitude of applications.

DIN rail mounting and screw connector terminals.



DBC12406LFPBD

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## Technical specifications

|  |  |
|--|--|
| Part number  | DBC12406LFPBD  |
| Input voltage range  | 100 V AC ... 240 V AC  |
| Input Frequency range (f <sub>N</sub> )                                      | 50 Hz ... 60 Hz  |
| Input Current  | 1.3A MAX.  |
| Input and Output Connections   | Screw connectors<br>Cable cross section: 0.35 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>   22 AWG .... 14 AWG<br>Stripping length: 6.5 mm<br>Tightening torque: 0.56 N•m   5 Lb•in  |
| <b>Output</b><br>Operating modes<br>Nominal output voltage (U <sub>N</sub> ) | <ol style="list-style-type: none"> <li>OFF</li> <li>Power Supply (PS) mode: 12 V DC</li> <li>Battery charger (CHG) mode Li-iron: 12.4 V nominal</li> <li>Battery charger (CHG) mode Pb: 12 V nominal</li> <li>Power Supply (PS) mode: 24 V DC</li> <li>Battery charger (CHG) mode Li-iron: 24.8 V nominal</li> <li>Battery charger (CHG) mode Pb: 24 V nominal</li> </ol>  |
| Nominal output current (I <sub>N</sub> )                                     | 6 A at 12 V DC   3 A at 24 V DC  |
| Output power (P <sub>N</sub> )   | 100W   |
| Charging process   | Battery technology: Pb VRLA, VRLA-WTR, LI-ION (LiFePO <sub>4</sub> )<br>Optimally designed for SOLARX and SOLARX-LITHIUM Series (XUNZEL)<br>Charge characteristic curve: IUI<br>Nominal capacity range: 7 Ah ... 240Ah<br>Charge voltage maximum: 32V DC<br>Charge current typical: 6 A  |
| LED Status and diagnostic indicator  | LED GREEN: Power supply (PS) mode 12/24V / Battery fully charged<br>LED AMBER: Charging (CHG) mode<br>LED RED: Protection mode Error (over current, short circuit, reverse connection, over temperature, under voltage and over voltage)   |
| Signal Alarm terminals   | NO1 – NO2: Normally Open relay terminals   Voltage free contact activated when net connection available<br>→ Contact close means charger is ON = Input Power ON (100 ... 240 V AC)<br>→ Contact open means charger is OFF = Input Power OFF (0 V AC)<br>Contact rating (Res. load): 2A 30VDC   0.5A 125VAC   |
| Power consumption  | Maximum no-load power dissipation: <2 W (for 230 V AC)<br>Power loss nominal load max.: <15 W (for 230 V AC)   |
| Overvoltage category IEC/EN 61010-1  | OVC II   |
| Efficiency (for nominal values)  | 89 % ... 95 %  |
| Protection Index / Protection class  | IP20 / Class I   |
| Operating Temperature   Humidity   | -40 to +70 °C (-40 to +158 °F) (derating: 2.5 %/K)   5% to 90% RH (at +25degC non-condensing)  |
| Storage Temperature  | -40 to + 85 degC (-40 to +185 °F)  |
| Altitude   | max. 4000m   |
| Dimensions   Weight  | 100 x 90 x 40 mm (3.94 x 3,54 x 1.57")   330gr (11.64oz)   |
| Protections  | Short Circuit Protect, Over Current Protect, Over Temperature Protect, Reverse/Over Voltage Protect  |
| Installation   | DIN-rail mounting  |
| Standards  | EMC CE directive 2014/30/EU   IEC/EN 55032, IEC/EN 61000-3-2, IEC/EN 61000-3-3, IEC/EN 55035<br>EMC UKCA regulations SI 2016/1091     BS/IEC/EN 55032, BS/IEC/EN 61000-3-2, BS/IEC/EN 61000-3-3, BS/IEC/EN 55035<br>FCC CFR Title 47 Part 15 Subpart B ANSI C63.4-2014 (Federal Communications Commission USA)<br>LVD CE directive 2014/35/EU   IEC/EN 62368-1<br>LVD UKCA regulations 2016   BS/IEC/EN 62368-1<br>RoHS Compliant Directive 2011/65/EU Annex II amending Annex (EU) 2015/863   IEC/EN 62321-3-1, IEC/EN 62321-5, IEC/EN 62321-4, IEC/EN 62321-7, IEC/EN 62321-6, IEC/EN 62321-8<br>REACH Compliant |

