

# 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

### XUNZEL ENERGY

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XU92250130MA

## Technical specifications

|                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Part number                                                          | DBC12406LFPBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Input voltage range                                                  | 100 V AC ... 240 V AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Input Frequency range ( $f_N$ )                                      | 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 ( $U_N$ ) | <ol style="list-style-type: none"> <li>1. OFF</li> <li>2. Power Supply (PS) mode: 12 V DC</li> <li>3. Battery charger (CHG) mode Li-iron: 12.4 V nominal</li> <li>4. Battery charger (CHG) mode Pb: 12 V nominal</li> <li>5. Power Supply (PS) mode: 24 V DC</li> <li>6. Battery charger (CHG) mode Li-iron: 24.8 V nominal</li> <li>7. Battery charger (CHG) mode Pb: 24 V nominal</li> </ol>                                                                                                                                                                                                                                                    |
| Nominal output current ( $I_N$ )                                     | 6 A at 12 V DC   3 A at 24 V DC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Output power ( $P_N$ )                                               | 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                                                            | <p>EMC CE directive 2014/30/EU   IEC/EN 55032, IEC/EN 61000-3-2, IEC/EN 61000-3-3, IEC/EN 55035</p> <p>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</p> <p>FCC CFR Title 47 Part 15 Subpart B ANSI C63.4-2014 (Federal Communications Commission USA)</p> <p>LVD CE directive 2014/35/EU   IEC/EN 62368-1</p> <p>LVD UKCA regulations 2016   BS/IEC/EN 62368-1</p> <p>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</p> <p>REACH Compliant</p> |



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