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DDL4848-48

Centrally organised performance management for mobile applications.

COMPACT

182*138*45mm³



typ. 97% efficiency



INTELLIGENT

real-time system parameters

POWER 5 kW

≤ 55 VDC **PORT A**

PORT B ≤ 55 VDC

INTERFACE CAN 2.0

Detailed technical data and explanations of the ports can be found on page 3.

FLEXIBLE

configurable parameter



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Product benefits for use in mobile applications.

RECUPERATION

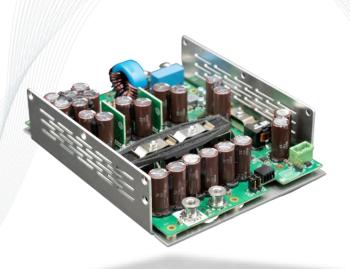
The DC/DC converter controls the energy flow in both directions with up to 100A. **Bidirectionality** allows energy to be fed back during braking or discharging processes and increases the efficiency of the application.

BATTERY CHARGE

Due to the **controllable current-limited charging function** of the converter, various battery storage systems or supercap modules can be optimally charged and discharged.

SUPPLY OF CONTROL ELECTRONICS

An additional 24VDC output with 150W power can be used to supply connected **control units, fans or sensors**.



ENERGY-SAVING

The converter has a configurable **sleep mode function** to minimise the energy requirement during maintenance work or rest periods.

CONTROLLABLE

The **CAN bus system is fully configurable** by the user and allows all parameters to be set and all measured values and status messages to be queried.

SAFETY

The converter is **overtemperature**, **open-circuit** and **short-circuit proof**. In addition, an energy storage device can be monitored using sense lines and the energy flow can be adjusted accordingly.



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Technical Data.

Description

The DDL4848-48 is a non-isolated high-power DC/DC Converter handling energy transfer between two ports (Port A and Port B) in either direction. During power transfer from Port A to Port B, the converter operates in buck mode and provides a reduced voltage level at Port B. In the reverse direction, the converter works in boost mode and increases the voltage level on port A.

The dedicated input Port C in parallel to Port A is equipped with a circuitry limiting the inrush current. Therefor a connected power supply is prevented from high current load during startup.

An additional +24V constant voltage output features a power supply for a lot of applications. With the CAN interface, a variety of parameters can be set individually. Several safety functions e.g., overvoltage, overcurrent and overtemperature protection are integrated.

Input Voltage

Current Limit

20 ... 55 VDC

nom. 100 A

Specification

The following parameters are valid for operation at 25°C and under nominal conditions, unless specifically stated otherwise. Nominal condition includes in particular UC > UB, UA > UB and UA > 20V.

| Port A | | +24V Output | | Communication |
|-------------------------|------------|-------------------|-------------|-----------------|
| Input Current Limit | 100 A | Output Voltage | 24 V | CAN2.0A und B |
| Output Voltage Setpoint | 20 55 VDC | Voltage Tolerance | +/-0.72 V | Bandwidth |
| Output Current Limit | 33 A | Output Current | up to 8 A | Environment |
| Output Power Limit | 300 3000 W | Output Power | nom. 150 W | Ambient Temp. |
| Output Efficiency | typ. 95 % | Output Efficiency | >95 % | Baseplate Temp. |
| | | | | Humidity |
| Port B | | Monitoring | | |
| Input Current Setpoint | 15 85 A | Sense Resolution | 12 Bit | |
| Output Voltage Setpoint | 6 55 VDC | Sense Bandwidth | 50 Hz | |
| Output Current Setpoint | 15 100 A | Certifications | | |
| Output Power Limit | 500 5000 W | | | YO YO |
| Output Efficiency | typ. 97 % | Safety | EN62368-1 | |
| Dropout Voltage | < 2 V | Emission | EN61000-6-4 | |
| Port C | | | | |

Compatible

0 ... 80 °C

0 ... 55 °C 20 ... 95 %

max. 1 Mbit/s



We look forward to hearing from you.