# Non-isolated DC/DC Converter DNB Series

200–454 Vdc input · 500–900 Vdc output · 150 kW bidirectional



## Product Introduction

- 8-phase interleaved Buck-Boost topology, 45° phase shift per phase
- Bidirectional power flow
- Galvanic isolation between control circuit and power stage
- SiC devices for low switching loss and high frequency
- Switching frequency up to 70 kHz, ultra-low output current ripple
- Peak efficiency > 98.5%
- Soft-switching design, high power density and good EMC performance

## Typical application

- For drivelines of HEV, BEV and FCV
- Interconnects on-board energy sources of different voltages, e.g. supercapacitors and batteries
- Enables paralleling of multiple battery clusters to DC link
- Acts as power interface between fuel cells and high-voltage batteries for power distribution

Typical model **DNB150-454-750**

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Technical parameters · DNB150-454-750

## Technical parameters

| Typical model | DNB150-454-750 |
|---|---|
| **Low-Side Electrical Parameters** | |
| **Voltage Range** | 200-454Vdc |
| **Maximum Input Current** | 350A |
| **Output Parameter** | |
| **Output Voltage Range** | 500-900Vdc |
| **Rated Input Power** | 150kW |
| **Rated efficiency** | > 98% |
| **Auxiliary Power Parameters** | |
| **Power Supply Voltage Range** | 18～36VDC |
| **Auxiliary power consumption** | ≤20W |
| **Operating Modes** | |
| Bidirectional CV: CV on high-side and low-side<br>CC: CC on low-side<br>CP: CP on low-side and high-side | |
| **Protective Function** | |
| Undervoltage protection; Overvoltage protection; Overcurrent protection;<br>Communication fault protection; Overtemperature protection; Output short-circuit protection | |
| **Environmental Adaptability** | |
| **Protection Level** | IP67 |
| **Operating Temperature Range** | -40～65℃ |
| **Altitude** | 2000m |
| **Cooling Method** | liquid cooling |
| **Communication Method** | CAN2.0B |
| **Reference Standards** | GBT24347-2021, EN 62477, ECE-R10, EN 50121, GB/T 18488<br>GB/T 18384, QC/T 413, QC/T 895,GB/T 18655, GB/T 17619 |
| **Dimensions and Weight** | |
| **Dimensions (W×D×H mm)** | 410×360×125 |
| **Reference Weight** | 25±0.5kg |
| **Optional Functions** | |
| EIS (Electrochemical Impedance Spectroscopy)；ISO (Insulation Monitoring)；<br>Input pre-charging circuit；Stack discharge；PDU (Power Distribution Unit)；Direct copper busbar connection | |