

## DNC Down Converter Series

The Bel Power Solutions' DC/DC converters allow for high voltage DC bus voltages to be utilized to drive low voltage automotive accessories. They replace traditional alternator in hybrid electric and pure electric vehicles. The high power output is ideally matched to medium through heavy duty, on and off highway vehicles.

### Features & Benefits

- Typical efficiency 93%
- Output power up to 4 kW (1 unit) to up to 16 kW (4 units)
- Full galvanic isolation between input and output
- CAN Bus serial interface SAE J1939
- Adaptable to various HVIL input connectors
- Flexible output connectivity
- IP65 and IP67 protection rating
- E-mark compliant / ISO26262 ASIL level B
- Over temperature, output overvoltage and overcurrent protection, input and output reverse polarity protection
- Mating connector kits available:  
350DNC40-CON-KIT-xG and 700DNC40-CON-KIT-xG



| Model                  | Input Voltage Range [VDC] | Output Voltage [VDC] | Output Current [A] | Output Power [W] | Operating Temperature [°C] | Cooling    | Dimensions (W x H x L) [mm / in]                   |
|------------------------|---------------------------|----------------------|--------------------|------------------|----------------------------|------------|----------------------------------------------------|
| <b>350DNC40 Series</b> |                           |                      |                    |                  |                            |            |                                                    |
| 350DNC40-12-8G         | 240 - 430                 | 12                   | 278                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| 350DNC40-12-CG         | 240 - 430                 | 12                   | 229                | 3300             | -40 to +45                 | Convection | 270 x 113 x 342 / 10.63 x 4.45 x 13.46 + heat sink |
| 350DNC40-12-8S103G     | 300 - 450                 | 12                   | 278                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| 350DNC40-24-8G         | 240 - 430                 | 24                   | 143                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| 350DNC40-24-CG         | 240 - 430                 | 24                   | 120                | 3300             | -40 to +45                 | Convection | 270 x 113 x 342 / 10.63 x 4.45 x 13.46 + heat sink |
| 350DNC40-24-8S419      | 300 - 450                 | 24                   | 143                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| <b>700DNC40 Series</b> |                           |                      |                    |                  |                            |            |                                                    |
| 700DNC40-12-8G         | 400 - 800                 | 12                   | 278                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| 700DNC40-12-CG         | 400 - 800                 | 12                   | 229                | 3300             | -40 to +45                 | Convection | 270 x 113 x 342 / 10.63 x 4.45 x 13.46 + heat sink |
| 700DNC40-24-8G         | 400 - 850                 | 24                   | 143                | 4000             | -40 to +70                 | Liquid     | 270 x 113 x 342 / 10.63 x 4.45 x 13.46             |
| 700DNC40-24-CG         | 400 - 850                 | 24                   | 120                | 3300             | -40 to +45                 | Convection | 270 x 113 x 342 / 10.63 x 4.45 x 13.46 + heat sink |

## BDC Bi-Directional Converter Series

The Bel Power BDC Series is a modular 7.5 kW Bi-Directional DC/DC converter series, scalable up to 22.5 kW in a single unit, that creates DC voltages for hybrid electric and pure electric vehicles to power low voltage (48 VDC) accessories while also being able to supplement the high voltage bus from the low voltage side.

### Features & Benefits

- Typical efficiency 96.5%
- Output power up to 22.5 kW (1 unit) to max 90 kW (4 units)
- Full galvanic isolation between input and output
- Output voltage adjustable via CAN Bus
- Over temperature, output overvoltage and over-current protection, input and output reverse polarity protection
- SAE J1939 compliant CAN bus communication interface
- SAE J1455 compliant environmental standards
- IP67 protection rating
- Mating connector kit 700BDC150-CON-KIT-8G available



| Model           | Input Voltage Range [VDC] | Output Voltage [VDC] | Output Current [A] | Output Power [kW] | Operating Temperature [°C] | Cooling | Dimensions (W x H x L) [mm / in]       |
|-----------------|---------------------------|----------------------|--------------------|-------------------|----------------------------|---------|----------------------------------------|
| 700BDC150-56-8* | 500 - 800                 | 48 - 57              | 268                | 22.5              | -40 to +70                 | Liquid  | 626 x 447 x 101 / 24.65 x 17.60 x 3.98 |
| 700BDC75-56-8*  | 500 - 800                 | 48 - 57              | 156                | 7.5               | -40 to +70                 | Liquid  | 626 x 447 x 101 / 24.65 x 17.60 x 3.98 |

\* Contact Bel Power Solutions for availability (A-Sample Stage)

