

# DCDC Converters Family

The Turntide DC/DC Converters are suitable for all electric powered vehicles and are designed to be fitted on-board the vehicle and connected permanently to the battery. These fully encapsulated converters deliver a stable isolated high power, low voltage DC supply for accessories such as lights, horns, and wipers. This eliminates inefficient battery taps and fragile, expensive high voltage accessories.



## Features

- + High Frequency: silent operation
- + Output power 500W or 300W
- + Protection from short circuit overload and reverse polarity
- + Output on/off enable on some models
- + Fully isolated
- + P67 protection
- + Parallel connection of multiple units (some models require an additional diode)
- + Integrated fuse holder on some models
- + UL approved parts available



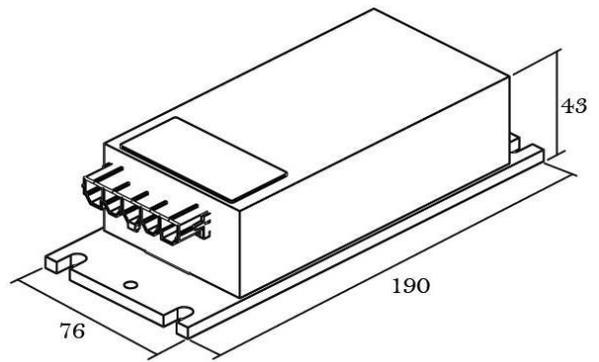
## Input and Output Voltages

The DC/DC is available in various part numbers, each offering a different combination of input and output voltage.

Power rating of 500W or 300W.

- + Typical nominal input voltages: 36V, 48V, 72V, 80V, 96V.
- + Typical regulated output voltage options: 12V, 13.5V, 14.5V.

\* Contact your local Turntide representative with your input and voltage requirements for further advice and recommended part number.



## Output Power Rating & Installation

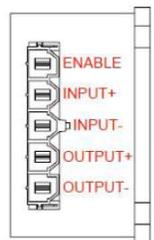
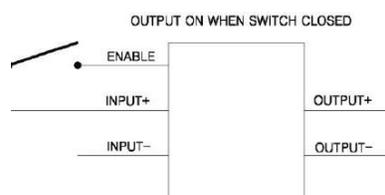
The DC/DC units have a peak power rating of either 500W or 300W depending on the model selected. This peak power, and the continuous power rating is influenced by the installation and the ambient temperature.

Thermal performance of the DC/DC converter is highly dependent on ambient temperature and heatsinking, it is recommended that the converter is mounted to a suitable heatsink using thermal interface material or grease. For reliable operation the DC/DC converter case temperature must not exceed 80 deg C when tested in the end application under worst case environmental conditions.

It is recommended to fit a suitably rated fuse in series with the output+ line to help ensure that required output current is not exceeded.

## Output Enable

Available on selected models with a 5 pin connector is the Output Enable function. This feature allows users to turn on/off the output voltage of the DC/DC unit. In order to switch ON the output voltage, connect the ENABLE pin to INPUT+ of the DC/DC. Open circuit connection of the ENABLE pin will turn OFF the DC/DC output voltage.



\*ENABLE voltage must be referenced to the system supply INPUT+ voltage level for unit to function correctly.

## Isolated Output

Safer than direct battery connection, this converter provides an electrically isolated output for ancillary equipment.

### TURNTIDE TECHNOLOGY FOR SUSTAINABLE OPERATIONS

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries.