

# DD Series 12-24V 'UP' Voltage Converters

## 12V-24V 'UP' Converters for a wide range of applications

If you need to fit 24V equipment onto a 12V electrical system, then an 'up' converter from the DD Series offers a fast and easy way to configure your system. Now with a range from 72W (3A output) to 600W (25A output), these products offer state of the art designs for fast installation and long term reliable operation.

### A Wide Range of Applications

Typical applications include the installation of 24V equipment on 12V vehicles and installation of specialist equipment requiring higher operating voltages.



The 12V-24V units from 72-240W are available in this format and casing.

## NEW 400W and 600W 12-24V units

The latest addition to the range includes two high current (17 and 25Amps output) units. These use state of the art designs with efficiency up to 93% and practically all components mounted using computer controlled surface mount technology (SMT). The result is a robust product with low component mass. The mechanical aspects include a brand new casing profile designed for maximum heat dissipation as well as a new design of our highly successful mounting cradle that allows the unit to be fully wired before being 'clicked' into place. This provides for a faster installation time with mechanics capable of withstanding long term vibration with no risk of screws falling out.



The new 400W and 600W 12V-24V units shown here with the new Phoenix connector. Supply INCLUDES the mating half and further eases installation while providing a secure connection reinforced with additional pull resistance.

## Also available in IP65 format

The DD Series 12-24V products are available in either standard IP53 format (like most Alfatronix converters) or the Ruggedised IP65 versions. Just add -RU to the part number. These are suitable where the installation is in a particularly hostile environment and subject to increased water and dirt exposure.



The 12V-24V converters have been used for a variety of applications including bus ticketing systems on mini buses and for 24V bow thrusters on leisure craft.



### Product Coding

The product code is developed as follows taking the DD 12-24 072-RU as an example:

DD	DC input and output
12-24	Denotes 12V input, 24V output
072	Denotes Wattage
-RU	Denotes ruggedized IP65 version

For 24-12V products, see **POWERVERTER** leaflet.  
For other DC-DC variants, see **DD SERIES** leaflet

## Choose your DD Series 12-24V 'UP' Product

Part Number	Power	Nominal Voltage	Dimensions	Weight
DD 12-24 072	72W (3A) Non-Isolated	12Vdc input, 24Vdc output	89 x 87 x 50mm	300g
DD 12-24 168	168W (7A) Non-Isolated	12Vdc input, 24Vdc output	167 x 87 x 50mm	640g
DD 12-24 240	240W (10A) Non-Isolated	12Vdc input, 24Vdc output	217 x 87 x 50mm	820g
DD 12-24 400	400W (16A) Non-Isolated	12Vdc input, 24Vdc output	233 x 125 x 74mm	1610g
DD 12-24 600	600W (25A) Non-Isolated	12Vdc input, 24Vdc output	283 x 125 x 74mm	1860g
<b>Other output voltage configurations are available as special orders, please ask our sales team</b>				

## Technical Data

Input voltage range	12 Vdc nominal (10.0V-15.0V)
Output voltage	27.2Vdc +/-5% at extremes of temperature, load, input tolerance, etc.
Continuous current rating	3A – 25A depending on model.
Intermittent rating	Continuous rating +20%, taken for a maximum of 2 minutes followed by 8 minutes rest
Transient voltage protection	Meets ISO7637-2 International standard for 24Vdc commercial vehicles
Electrostatic voltage protection	Meets ISO10605, ISO14892, >8kV contact, 15kV discharge
Output noise	<100mV pk-pk at continuous load.
Off load current (quiescent current)	<20mA (400W and 600W versions enable off), less than 100mA (72-240W units)
Power conversion efficiency	Typically: 93%
Operating temperature	-25°C to +30°C to meet this specification table +30°C to +80°C de rate linearly to 0A
Storage temperature	-25°C to +70°C
Operating humidity	95% max., non-condensing
Casework	Anodised aluminium, glass filled polycarbonate, dust water and impact resistance to IP533. Ruggedised versions also available to IP65
Connections	Four 6.3mm push on flat blade connectors (72-240W) Five terminal connector with screw tightening with mating half supplied (400 and 600W units)
Output indicator	Green LED adjacent to output terminals
Mounting method	'Click 'n' fit mounting clip, fitted separately using 3 hole fixing (4 hole on 400 and 600W)
Safe area protection: Over current	Limited by current sensing circuit
Over heat	Limited by temperature sensing circuit
Transients	Protected by filters and rugged component selection
Input/Output over voltage protection	Controlled by internal circuitry
Catastrophic failure	Protected by internal input and output fuses
Approvals	2004/108/EC The general EMC directive 2006/96/EC The automotive directive 93/68/EEC The CE marking directive
Markings	CE and e marked



**Alfatronix Limited**, 29 Newtown Business Park, Poole, Dorset, BH12 3LL, England  
 Telephone: +44 (0)1202 715517. Fax: +44 (0)1202 715122  
 Website: [www.alfatronix.com](http://www.alfatronix.com) E mail: [sales@alfatronix.com](mailto:sales@alfatronix.com)  
 An ISO9001:2000 Registered Company