

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



### 400W AND 600W 12-24V UNITS

The latest addition to the range includes two high current (17 and 25 Amps output) units. These use state of the art designs with efficiency up to 93% and practically all components are 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.

### CASING FORMATS

12V-24V converters are available in two casing formats. Units from 72-240W use the standard Alfatronix aluminium casings with polycarbonate end-caps and three point mounting cradle. The larger 400W and 600W units occupy a larger heat-sink casing and utilise the heavy duty Phoenix connector. Installation is by way of the larger four point "I" shaped mounting cradle.

### 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.



### PRODUCT CODING

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

<b>DD</b>	DC input and output
<b>12-24</b>	Denotes 12V input, 24V output
<b>072</b>	Denotes wattage
<b>-RU</b>	Denotes IP65 version

# CHOOSE YOUR DD SERIES PRODUCT

Part Number	Power	Nominal Voltage	Dimensions	Weight
DD12-24 072	72W (3A) Non-Isolated	12Vdc input, 24Vdc output	89 x 87 x 50mm	300g
DD12-24 168	168W (7A) Non-Isolated	12Vdc input, 24Vdc output	167 x 87 x 50mm	640g
DD12-24 240	240W (10A) Non-Isolated	12Vdc input, 24Vdc output	217 x 87 x 50mm	800g
DD12-24 400	400W (16A) Non-Isolated	12Vdc input, 24Vdc output	233 x 125 x 74mm	1510g
DD12-24 600	600W (25A) Non-Isolated	12Vdc input, 24Vdc output	283 x 125 x 74mm	1800g

Other output voltage configurations are available as special orders, please ask our sales team

## TECHNICAL DATA

Input voltage range	12Vdc +/- 30%
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 12V and 24Vdc commercial vehicles
Electrostatic voltage protection	Meets ISO10605
Output noise	<100mV pk-pk at continuous load
Off load current (quiescent current)	<20mA (400W and 600W 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 IP53. Ruggedised versions also available to IP65.
Connections	Four 6.3mm push on flat blade connectors (72W - 240W) Five terminal connector with screw tightening with mating half supplied (400W 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 400W 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	2014/30/EU The general EMC directive Regulation 10 The automotive directive 93/68/EEC The CE marking directive
Designed to	EN50498, ISO 7637-2
Markings	CE and E (automotive) marked