PowerVerter *24Vdc* to *12Vdc* Voltage Converters



24Vdc – 12Vdc Voltage Converters

These products offer a convenient way to operate mass produced 12Vdc equipment such as cell phones, in car entertainment, professional communication and telematics equipment, refrigerators, televisions etc. from the 24Vdc mobile electrical systems found on diesel engined vehicles and vessels.



3Amp units are excellent for charging mobile phones, while 6A units suit a variety of mobile radio applications





All PowerVerters are enclosed in a rugged aluminium extrusion. The low mass Surface Mount Technology components are also less prone to damage from vibration and shock, further increasing the reliability of the units.

A Comprehensive Range

There are 10 products in the range from 3A to 24A in isolated or common earth configurations. They have been optimised for high volume 24Vdc to 12Vdc applications such as on heavy goods vehicles, coaches, buses, construction, forestry and agricultural vehicles, commercial and leisure marine vessels.

Tamper Proof

There are no ventilation holes to permit stray objects, dust or water droplets to enter the case. There are no external fuses to be tampered with. Fuses will only blow if there is a fault so there is no need to make them accessible.

Fast Installation

All the units consume an off load current of less than 15mA, which is probably less than the self discharge current of the vehicle's battery. In most cases this can be ignored, speeding the installation by removing the need to fit a remote switch.

All products fit onto a 'Click 'n' Fit mounting clip which is fixed in three points allowing it to be mounted on uneven surfaces. It is easy to fit the clip into awkward places and then simply click the unit into position.

A red LED indicates when there is output from the converter. This gives reassurance to the installation enginer and speeds fault finding.



Galvanically isolated units are suitable for marine applications and come complete with the green tamperproof label for petrochemical applications.

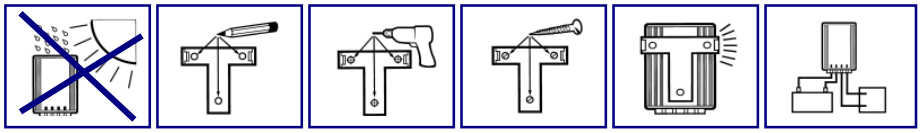






Easy 6 step Installation Method

1. **Find a convenient location away from sun and rain.**
2. **Using the mounting clip as a template, mark fixing positions.**
3. **Drill screw holes.**
4. **Fix bracket using screws provided.**
5. **Clip PowerVerter to mounting bracket.**
6. **Correctly connect to load.**



Product Variants

Many PowerVerters and DD Series products can be configured with alternative output voltages etc., for specialist applications. Please call our sales team to discuss your requirements.

Power Conversion *for* Automotive, Communications *and* Marine Applications

Choose your *PowerVerter* Product

Part Number	Cont/Int Power	Nominal Voltage	Dimensions	Weight
PV3s	3A/6A non-isolated	24Vdc input, 12Vdc output	67 x 87 x 50mm	225g
PV6s	6A/10A non-isolated	24Vdc input, 12Vdc output	89 x 87 x 50mm	270g
PV12s	12A/18A non-isolated	24Vdc input, 12Vdc output	127 x 87 x 50mm	405g
PV18s	18A/22A non-isolated	24Vdc input, 12Vdc output	167 x 87 x 50mm	620g
PV24s	24A/30A non-isolated	24Vdc input, 12Vdc output	167 x 87 x 50mm	635g
PV3i	3A/6A Isolated	24Vdc input, 12Vdc output	89 x 87 x 50mm	290g
PV6i	6A/10A Isolated	24Vdc input, 12Vdc output	127 x 87 x 50mm	410g
PV12i	12A/18A Isolated	24Vdc input, 12Vdc output	167 x 87 x 50mm	590g
PV18i	18A/22A Isolated	24Vdc input, 12Vdc output	217 x 87 x 50mm	835g
PV24i	24A Isolated	24Vdc input, 12Vdc output	217 x 87 x 50mm	850g
PV12s-A	12A/18A Non-isolated	24Vdc-12Vdc dual output	127 x 87 x 50mm	420g
DD 24-12 600	50A/60A Non-isolated	24Vdc input, 12Vdc output	300 x 76 x 110mm	1180g
Other input and output voltage configurations are available as special orders, please ask our sales team				

Technical Data

Input voltage range	17-32Vdc
Output voltage	13.6Vdc +15% -20% at extremes of temperature, load, input tolerance, etc.
Intermittent output power	As stated, 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	<50mV pk-pk (100mV on 24V units) at continuous load. Meets CISPR25 and VDE0879-3
Off load current (quiescent current)	<15mA
Power conversion efficiency	Typically: 90% for non-isolated units, 85% for isolated units
Isolation	>400Vrms between input, output and case, on isolated products only
Mean time between failures	>162 years (HRD4)
Operating temperature	-25ºC to +30ºC to meet this specification table +30ºC to +80ºC de rate linearly to 0A
Storage temperature	-25ºC to +100ºC
Operating humidity	95% max., non-condensing
Casework	Anodised aluminium, glass filled polycarbonate, dust water and impact resistance to IP533
Connections	Four 6.3mm push-on flat blade connectors
Output indicator	Red LED adjacent to output terminals
Mounting method	'Click 'n' fit mounting clip, fitted separately using three hole fixing
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
Catastrophic failure	Protected by internal input and output fuses
Approvals	89/336/EEC The general EMC directive 95/54/EC The automotive directive 93/68/EEC The CE marking directive VIDG5 AES for use on police and fire vehicles
Markings	CE and e marked; e11 020894, e13 023114

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

Made in the European Union by Alfatronix Ltd, Great Britain GB
EU-EN-PV-0710