

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.

A Comprehensive Range

There are 11 products in the range from 3A to 50A 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.

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



All PowerVerterers 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.

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 engineer and speeds fault finding.



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

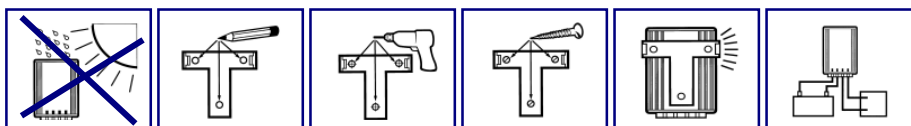


Easy 6 step Installation Method

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 PowerVerterers 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

Automotive, Communications

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 | -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 +100°C |
| 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 | 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 |



ELECTROSÓN