

# POWERVERTER

## 24 VDC TO 12 VDC VOLTAGE CONVERTERS



### 24 VDC TO 12 VDC VOLTAGE CONVERTERS

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

### A COMPREHENSIVE RANGE

There are 14 products in the range from 3 A to 50 A in isolated or common earth configurations. They have been optimised for high volume 24 VDC to 12 VDC applications such as on heavy-goods vehicles, coaches, buses, forestry, and agricultural vehicles, as well as commercial, and leisure marine vehicles.

### TAMPER-PROOF

These units are IP53 rated, so there are no ventilation holes to permit stray objects, dust, or water droplets to enter the case. There are also 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.

### PRODUCT VARIANTS

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

### FAST INSTALLATION

All the units consume an off load current of less than 15 mA, 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 fixing kit for din rail installation is also available.

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



PowerVerter USB PVPro-S and PVPro-D single and double outputs.



New PV50s, 50 Amp Converter



Many units in the PowerVerter range are also available as IP65 versions. Please add the suffix -RU to the part number when ordering.

## CHOOSE YOUR POWERVERTER PRODUCT

TAE Part No.	OE No.	Cont./Int. Power	Nominal Voltage	Dimensions	Weight
T286512804	PV3s	3 A/6 A non-isolated	24 VDC input, 12 VDC output	67 x 87 x 50 mm	200 g
T286512802	PV6s	6 A/10 A non-isolated	24 VDC input, 12 VDC output	89 x 87 x 50 mm	250 g
T286512801	PV12s	12 A/18 A non-isolated	24 VDC input, 12 VDC output	127 x 87 x 50 mm	405 g
T286512807	PV18s	18 A/22 A non-isolated	24 VDC input, 12 VDC output	167 x 87 x 50 mm	605 g
T286512803	PV24s	24 A/30 A non-isolated	24 VDC input, 12 VDC output	167 x 87 x 50 mm	620 g
T286512834	PV50s	50 A/60 A non-isolated	24 VDC input, 12 VDC output	283 x 125 x 74 mm	1 820 g
TBA	PV3i	3 A/6 A isolated	24 VDC input, 12 VDC output	89 x 87 x 50 mm	280 g
TBA	PV6i	6 A/10 A isolated	24 VDC input, 12 VDC output	127 x 87 x 50 mm	505 g
T286512840	PV12i	12 A/18 A isolated	24 VDC input, 12 VDC output	167 x 87 x 50 mm	590 g
TBA	PV18i	18 A/22 A isolated	24 VDC input, 12 VDC output	217 x 87 x 50 mm	775 g
TBA	PV24i	24 A/30 A isolated	24 VDC input, 12 VDC output	217 x 87 x 50 mm	785 g

Other input and output voltage configurations are available as special orders. Please consult our sales team.

For Railway-Approved Versions, please see PowerVerter Railway Converters.

## TECHNICAL DATA

Input Voltage Range	17-32 VDC
Output Voltage	13.6 VDC +15% to -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 24 VDC commercial vehicles
Electrostatic Voltage Protection	Meets ISO10605, ISO14982, > 8 kV contact, 15 kV discharge
Output Noise	<50 mV pk-pk at continuous load. Meets CISPR25.
Off Load Current (Quiescent Current)	<15 mA
Power Conversion Efficiency	Typically: 90% for non-isolated units, 85% for isolated units, *95%
Isolation	>400 Vrms between input, output, and case, on isolated products only
Operating Temperature	-25 °C to +30 °C to meet this specification table +30 °C to +80 °C de rate linearly to 0 A
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 6.3 mm push-on, flat-blade connectors *(5-way Phoenix connector, including enable on/off terminal and mating half)
Output Indicator	Green LED adjacent to output terminals
Mounting Method	Click 'n' Fit mounting clip, fitted separately using three-hole fixture * 4-hole cradle
Safe Area Protection:	Over Current Over Heat Transients Catastrophic Protection
	Limited by current-sensing circuit Limited by temperature-sensing circuit Protected by filters and rugged component selection 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, ISO 11452-1, ISO 14982, EN12895, EN60945, EN55022, FCC15B.
Markings	CE and E (automotive) marked



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