DD SERIES AND DDi SERIES
VOLTAGE CONVERTERS

12V–12V, 24V–24V & 48V–12V CONVERTERS FOR A WIDE RANGE OF APPLICATIONS

The sensitivities of modern electronic equipment to variable input voltages, susceptibility to EMC interference and in some cases, the need to isolate the supply has made voltage stabilisation an important section of our product range. Start/Stop technology on motor vehicles has added to this problem. The DDi Series offers a wide range of 12V-12V and 24V-24V isolated products that ensure a stable and reliable voltage can be delivered to important equipment. Units are available from 36-240W. The range now also offers 48V-12V units, suitable for the telecoms and forklift truck markets. *For 12V-24V converters, see DD Series 'Up' Voltage Converters*

A COMPREHENSIVE PRODUCT RANGE

There are four products in the 12V-12V isolator range from 36W to 168W and a further five products in the 24V-24V range from 36W to 240W. There are also three 48V-12V products from 36W to 108W. All products use modern switchmode designs and are built using the same concepts and technologies as the successful PowerVerter range, which will of course meet your 24V–12V requirements.

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.

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

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

PRODUCT CODING

The product code is developed as follows, taking the DDi 12-12 036 as an example:

DD	DC input and output
i	Denotes isolated converter
12-12	Nominal 12V input/output
036	36W capacity unit

12V–12V and 24V–24V units can provide a stable output voltage as well as providing galvanic isolation for a variety of applications

CHOOSE YOUR DD SERIES PRODUCT

Part Number	Power	Nominal Voltage	Dimensions	Weight
DDi12-12 036	36W (3A) Isolated	12Vdc input, 12Vdc output	89 x 87 x 50mm	280g
DDi12-12 072	72W (6A) Isolated	12Vdc input, 12Vdc output	127 x 87 x 50mm	440g
DDi12-12 108	108W (9A) Isolated	12Vdc input, 12Vdc output	167 x 87 x 50mm	540g
DDi12-12 168	168W (14A) Isolated	12Vdc input, 12Vdc output	217 x 87 x 50mm	780g
DDi24-24 036	36W (1.5A) Isolated	24Vdc input, 24Vdc output	89 x 87 x 50mm	270g
DDi24-24 072	72W (3A) Isolated	24Vdc input, 24Vdc output	127 x 87 x 50mm	440g
DDi24-24 108	108W (4.5A) Isolated	24Vdc input, 24Vdc output	167 x 87 x 50mm	540g
DDi24-24 168	168W (7A) Isolated	24Vdc input, 24Vdc output	217 x 87 x 50mm	780g
DDi24-24 240	240W (10A) Isolated	24Vdc input, 24Vdc output	217 x 87 x 50mm	870g
DD48-12 072	72W (6A) Non-Isolated	48Vdc input, 12Vdc output	89 x 87 x 50mm	270g
DD48-12 108	108W (9A) Non-Isolated	48Vdc input, 12Vdc output	127 x 87 x 50mm	370g
DD48-12 240	240W (20A) Non-Isolated	48Vdc input, 12Vdc output	217 x 87 x 50mm	770g
DDi48-12 036	36W (3A) Isolated	48Vdc input, 12Vdc output	89 x 87 x 50mm	290g
DDi48-12 072	72W (6A) Isolated	48Vdc input, 12Vdc output	127 x 87 x 50mm	405g
DDi48-12 108	108W (9A) Isolated	48Vdc input, 12Vdc output	167 x 87 x 50mm	560g

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

TECHNICAL DATA

Input voltage range	12Vdc, 24Vdc +/- 30%, 48Vdc -30% +25%
Output voltage	13.6Vdc or 27.2Vdc +15% -20% at extremes of temperature, load, input tolerance etc
Intermittent output power	Continuous rating +25% 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, ISO14982, >8kV contact, 15kV discharge
Output noise	<50mV pk-pk (100mV on 24V units) at continuous load. Meets CISPR25.
Off load current (quiescent current)	<15mA (<25mA, 168W + 240W versions)
Power conversion efficiency	Typically: 90% for non-isolated units, 85% for isolated units
Isolation	>400Vrms 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 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	Green LED adjacent to output terminals
Mounting method	Click 'n' fit mounting clip, fitted separately using three hole fixture
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	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