

Dual output **24Vdc** to **12Vdc** Voltage Converters

DUAL OUTPUT Converters with switched output

Some automotive equipment, such as In Car Entertainment (ICE) usually has two links to the vehicle's electrical system, one for security and one for switching the equipment on and off.

The security circuit senses when the equipment has been removed from the vehicle by having a permanent connection to the vehicle battery. The on/off function is controlled from the ignition switch so that when the ignition key is removed, the ICE equipment is turned off, preventing the battery from becoming discharged.

Also, some truck manufacturers run other 12V equipment, such as a cigar lighter socket off the same feed, while others prefer to leave it on.

Alfatronix have developed two voltage converters, a 3Amp (continuous) and a 12A (continuous), which overcome these configuration problems. The AlfaTronix converters mimic the 12V battery and 12V ignition function by providing two outputs, either of which can provide full power. One output is available whenever the 24V battery is connected. The other output is switched by the 24V ignition switch. Now the ICE equipment can be fitted to the 24V truck as simply as fitting it to a 12V car.

Of course, the Dual Output Range can be used for any application where a dual output is required or where a switched and permanent or memory connection must be retained.

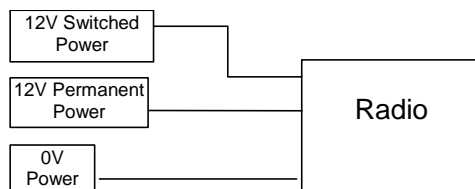


The PV12s-A is ideal for powering in car entertainment systems where a permanent memory circuit is required for security purposes.

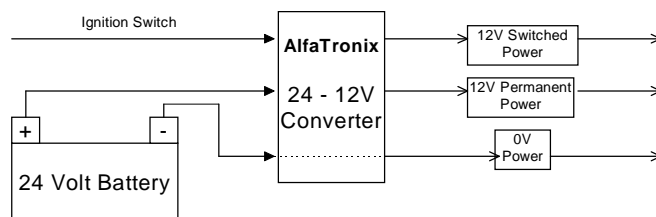


The PV3s-A is ideal for smaller applications where a switched and permanent circuit are both required.

Typical applications



The AlfaTronix Solution



Connection Solutions

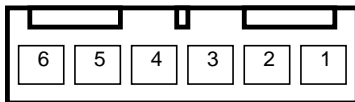


Choose your *PV DUAL* Product

Part Number	Cont/Int Power	Nominal Voltage	Dimensions	Weight
PV3s-A	3A/6A non-isolated	24Vdc input, 12Vdc output	67 x 87 x 50mm	250g
PV12s-A	12A/15A non-isolated	24Vdc input, 12Vdc output	126 x 87 x 50mm	455g

Technical Data

Input voltage range	17-32Vdc
Output voltage	13.6Vdc +15% -20% at extremes of temperature, load, input tolerance, etc.
Output power	As stated, from either output or combination of both. Intermittent ratings 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%
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	Five 6.3mm push-on flat blade connectors (PV3s-A) Ampliversal 6-way 070 connector (PV12s-A)
Output indicator	Red LED adjacent to output terminals (PV3s-A), None on PV12s-A
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 or equivalent for use on police and fire vehicles
Markings	CE and e marked: e11 020894, e13 023114



Pin No	Colour	Description
1	Red	+12Vdc Switched Output
2	Yellow	+12Vdc Permanent Output
3	White	0Vdc Output
4	Blue	0Vdc Input
5	Green	+24Vdc Input
6	Brown	+24Vdc Ignition Switch Input



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