

Wallen Voltage Converters

An innovative new concept in voltage conversion, with built-in protection for equipment and vehicle electrics.

- ❑ 24~13.2 volt switch-mode operation
- ❑ High performance, high reliability
- ❑ Soft-Shutdown fault protection
- ❑ Isolated and non-isolated versions



Switch-mode conversion, with unbeatable protection and lifetime warranty

Wallen voltage converters have been developed specifically to provide high performance and reliability. They feature intelligent monitoring circuitry for “Soft-Shutdown” to completely avoid short-circuit, overload and wiring fault problems ...protecting not only the equipment driven, but also the vehicle wiring and systems. Soft-Shutdown can be important in applications where the voltage converters might be retro-fitted by people whose level of expertise may be unknown to you. (For details of our quick & easy super-safe installation process, click on the link below.)

Wallen voltage converters will operate over a wider input voltage range and at a lower cranking voltage than rival designs. Different versions are available to support a wide range of applications, typically in vehicles (and particularly for a growing variety of mobile communications). Non-isolated versions are supplied with the unique extra protection of Soft-Shutdown. Our sophisticated Isolated versions do not normally require Soft-Shutdown (but this can be added to special order) and are thus ideal for price-sensitive applications such as volume manufacturing. All versions are highly efficient and extremely compact ...and all offer protection against overload, reverse polarity and short circuits.



Wallen Voltage Converters are available in isolated versions for use on isolated-return vehicles, such as petro-chemical tankers.

Specifications are approximate and subject to change without prior notice.

Intelligent Monitoring Circuitry

If a short circuit or voltage overload occurs during operation, Wallen voltage converters are designed to shut down and send only low current to the output side. These converters are designed to recover when either the input is disconnected (and subsequently reconnected); or the offending load is removed, the problem rectified and that load reconnected. Our intelligent monitoring circuitry prevents fuses being blown, which can happen with other types of convertor that could threaten connected equipment (even equipment that has a protection diode).

If a fault condition occurs, the Wallen intelligent shut-down circuit switches in so fast that the protective fuse on the output side of the convertor will not blow. Furthermore, Wallen converters will continue to run at maximum current all day if there is no fault ...and due to their highly-specified design, these converters are able to provide continued operation even at 20% overload for extended periods.

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Wallen Voltage Converters

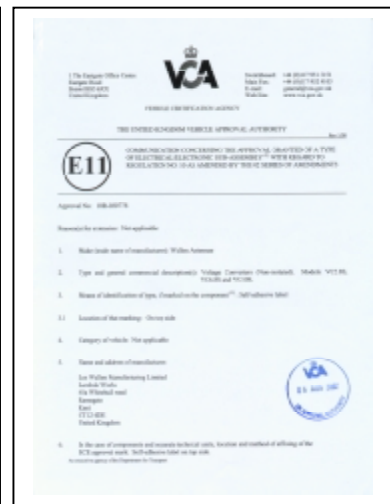
Performance data for non-isolated versions

	VC3.8S	VC6.8S	VC10S
Type	Switch Mode Non-Isolated	Switch Mode Non-Isolated	Switch Mode Non-Isolated
Input	15-38V DC	15-38V DC	15-38V DC
Output	13.2V DC	13.2V DC	13.2V DC
Constant Current (100% duty cycle)	3.8A	6.8A	10A
Intermittent Current (30% duty cycle)	7A	11A	14A
Quiescent Current	<15mA	<15mA	<15mA
Oscillator Frequency	60kHz	60kHz	60kHz
Transient Voltage	Level 3 @ +/- 2kV	Level 3 @ +/- 2kV	Level 3 @ +/- 2kV
Protection	Overload Reverse Polarity Short Circuit Soft-Shutdown	Overload Reverse Polarity Short Circuit Soft-Shutdown	Overload Reverse Polarity Short Circuit Soft-Shutdown
Efficiency (approx.)	91%	90%	89%
Connection	4 x Spade	4 x Spade	4 x Spade
Colour	Black/Gold	Black/Gold	Black/Gold
Dimensions (mm)	69 x 74 x 31	79 x 74 x 31	89 x 74 x 31
Weight	138g + Fixings	186g + Fixings	207g + Fixings
Warranty*	Lifetime	Lifetime	Lifetime

* Against manufacturing defects



Approvals



VIDG Spec 5 Iss 7 Class 1

EN 50081-2: 1993

E - Mark

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Performance data for isolated versions

	VC4i	VC8i
Type	Switch Mode Fully-Isolated	Switch Mode Fully-Isolated
Input (<500mA Load) (Full Load)	17.5 - 38V DC 20 - 38V DC	17.5 - 38V DC 20 - 38V DC
Output	13.2V DC	13.2V DC
Constant Current (100% duty cycle)	4A	8A
Intermittent Current (30% duty cycle)	8A	11A
Quiescent Current	<50mA	<50mA
Oscillator Frequency	75kHz	75kHz
Protection	Overload Reverse Polarity Short Circuit	Overload Reverse Polarity Short Circuit
Connection	4 x Spade	4 x Spade
Colour	Black/Green	Black/Green
Dimensions (mm)	119 x 74 x 31	129 x 74 x 31
Weight	270g + Fixings	318g + Fixings
Warranty*	Lifetime	Lifetime

* Against manufacturing defects



Approvals

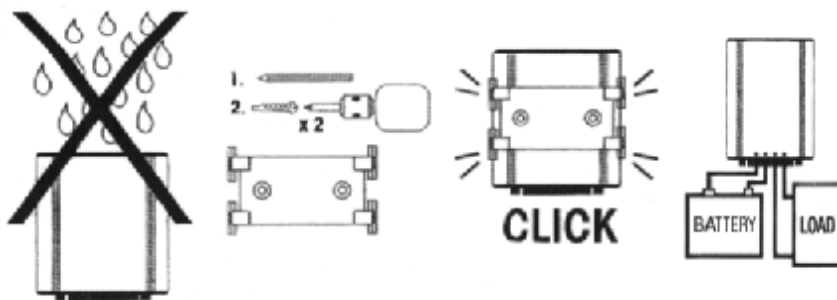


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Wallen Voltage Converters

Quick & easy super-safe installation process



Wallen Voltage Converters are very easy to install.

The converter should be suitably sited.

Use two self-drilling screws to fix the bracket, then click the converter into place.

Just connect the positive and negative leads to the required equipment...

...then connect the vehicle (supply) to the negative and positive input terminals.

Ensure that in-line fuses are used on both sides of the converter ...and it's ready!

Super-safe installation

Wallen "S" voltage converters use intelligent monitoring circuitry as a safety feature designed into the converter, to provide soft and non-damaging shutdown.

Two LED's on the front interconnection panel indicate the operating status of the voltage converter:



If the green LED is lit, the converter is operating normally.

If neither the green nor the red LED is lit, there is a 24V supply problem.

If the red LED is lit, then there is a problem on the output side ...probably a short circuit or a wrong-polarity connection.

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