

μ Active DC Power Converter-Regulator

HIGH POWER DC UP/DOWN CONVERTER & OUTPUT REGULATOR



Approved condition for use (e-mark):

The Antares μ Active DC Power Converter-regulator range is a heavy duty converter designed to operate loads from the “source” battery but without the output voltage decaying away as the battery goes down, offering a high degree of regulation with under-and over-voltage protection to the loads.

The unit has a built-in innovative split charge option which ensures that the connected loads cannot deplete the source battery too much.

The loads are directly connected to the outputs with no additional battery. Depending on the application the source battery could be an auxiliary set, or could be the OEM vehicle-start batteries.

If your requirement is to charge auxiliary batteries you should choose from the μ Active charger range.

This versatile approach can be tailored into a wide variety of vehicle applications saving both money and enhancing performance.

Key features:

- Powerful & Compact
- Any-to-any: 12/12, 12/24, 24/24 24/12
- Twin Channel 480W-840W
- Wide input voltage range
- Accurate output voltage regulation
- Integral split charge option
- Remote alternator detection
- High reliability & in-service proven
- High degree of system protection
- Overload/overheat protection
- Short circuit/overvoltage protection
- Temperature controlled cooling fan
- Automatic Recovery
- Rugged aesthetic enclosure

Applications

The DC Power converter/regulator range is designed to run any 12V or 24V loads on the vehicle, without an auxiliary battery, and the dual output version can provide both 12V and 24V from a single unit.

Note that if the loads have a very high peak current draw, such as tail-lifts and winches, then the Antares μ Active equaliser or the DC-DC μ Active charger would be more suitable depending upon the application.

Installation

The solid integral flanges of the aluminium side extrusions are pre drilled for ease of mounting in any orientation.

Modular Construction

The μ Active range of products is modular: any combination of modules can be created. Typically in the Power-Converter there is a need to either up convert, down convert, or provide a fixed output (regardless of input variations). The unit is designed to be located in an “in-cab” IP20 environment.

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engineering with answers

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Auto-on off

The unit measures the voltage on the control wire and will only allow the unit to run if it sees a charging voltage from an alternator or battery charger. When the charging voltage disappears, the unit switches off (into sleep mode). This is useful to protect the starting capability on the vehicle.

Manual on/off: The unit is switched on and off remotely via a control wire that is typically connected to an auxiliary circuit operated by an ignition key switch, but can also be operated by, for example, a timer switch or another system.

Whilst in sleep mode it is conserving

power with a quiescent draw of less than 30mW.

Battery protection

To protect the source batteries, the unit will automatically turn off at low voltage. The default setting for this is 11.0V

Rugged construction for long life

The unit is constructed from corrosion resistant aluminium with a structural steel top plate that is epoxy coated. The printed circuit boards are conformally coated to protect against high humidity and

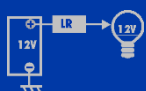
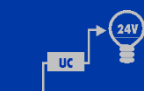
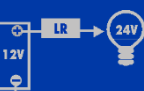


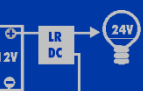
through-plated to protect against vibration damage.

Options

The μActive range is modular, and any module can be combined with any other: please call one of our applications engineers for details. As designers and manufacturers of this equipment we can create combinations not covered in this literature.

Safety protection

The system is protected against overload, overheating, short circuit, battery reversal/removal, overvoltage. Recovery is automatic.

Model type Purpose	12 to 12 LINE REGULATOR	12 to 24 UP CONVERTER	24 to 24 LINE REGULATOR	24 to 12V DOWN CONVERTER	12 to 12 & 24 DUAL OUTPUT CONVERTER	24 to 12 & 24 DUAL OUTPUT CONVERTER
Nominal output up to (Both channels)	40A @12V 240W per channel	20A @24V 240W per channel	35A @ 24V 420W per channel	40A @12V 240W per channel	20A@12V 240W + 10A@24V 240W	20A@12V 240W + 17.5A@24V 420W
FUNCTION						
Part Number (auto on-off control)	9661 131 131.0	9661 231 231.0	9662 231 231.0	9662 131 131.0	9661 131 231.0	9662 131 231.0
Part Number (manual on/off)	9661 132 132.0	9661 232 232.0	9662 232 232.0	9662 132 132.0	9661 132 232.0	9662 232 132.0
Auto on-off control On/Off thresholds	13.1V on / 12.6V off		26.2V on / 25.2V off		13.1V / 12.6V	26.2V / 25.2V
Input Voltage range	11.0 – 15.0V		21.0 – 30.0V		11.0 – 15.0V	21.0 – 30.0V
	Extended input range available on request. Contact Antares for details					
Output voltage	13.7V	27.3V	27.3V	13.7V	Primary: 13.7V Secondary: 27.3V	Primary: 13.7V Secondary: 27.3V
Standard Features	On/Off control, input undervoltage and overvoltage shutdown, output overvoltage protection					
Weight, Dimensions	1.5kg, 275mm x 121 mm x 67(H)					
Operating temp	-5 to 40°C, with de-rating above 40°C to 65°C, IP20 environmental protection					
Connections	1m flying leads - input, output(s), ground stud, 100mm control looms fitted with female super-seal Optional: Control loom, 5m, male super-seal to bare end; Battery sense loom with sensor and super-seal					
Cooling	Temperature controlled fan					
Compliance	e11*5860*00, CE marked					