

DC-DC

Intelligent Battery Chargers

DC – DC Intelligent Battery Chargers

While many applications can be supplied using a standard voltage converter or stabiliser, sometimes there is a requirement to charge one DC battery from another in order to provide independent power. The Alfatronix range of DC-DC chargers are based on the very successful PowerVerter range but configured to offer a four stage charging programme that will ensure that batteries are charged to the maximum capacity providing long term reliable power.

These products come with many of the same safety and protection features as the PowerVerter, but are also additionally designed to detect faulty batteries and dead cells. They will also ensure that they will not operate unless the source battery is attached to a charging source such as a vehicle alternator or mains unit. In this way, you can ensure that the charger will not allow unintentional draining of the source battery.



These DC-DC battery chargers offer a comprehensive 4 stage charging programme as well as protection against battery source drainage.

Range Development

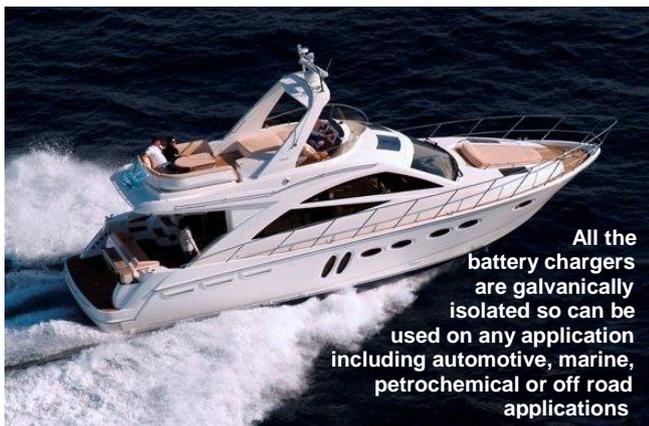
The development of this range of products is ongoing. Currently we are offering units with 24V-12V charging at 12Amps, 24V-24V at 6Amps and 12V-12V at 6Amps. We are planning to develop the range further, with higher output currents and 12V-24V units.

DC-DC chargers are suitable for providing auxiliary power on a wide variety of vehicles including fire, police and ambulance as well as farming, forestry, commercial and leisure marine

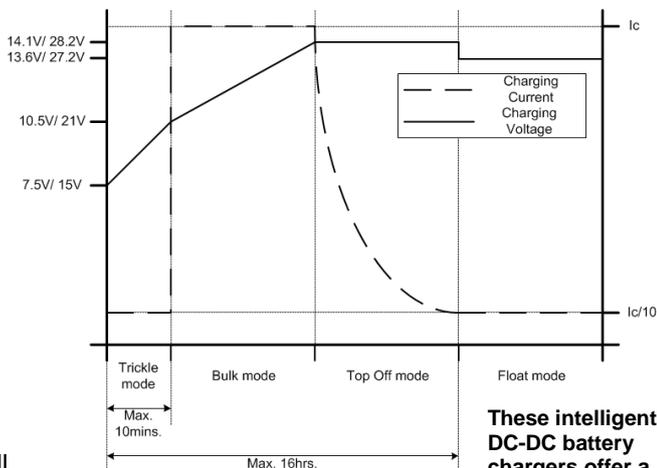


Many Key Features

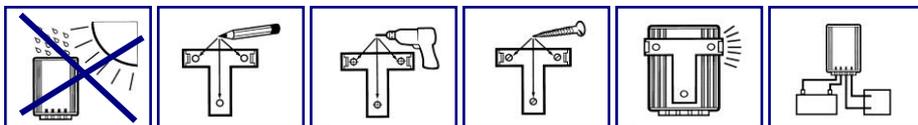
These intelligent battery chargers operate a four stage charging cycle. The first stage monitors the battery to establish that the battery is in good condition before starting the three stage process. This feature is of key importance in ensuring that faulty batteries are not inadvertently charged causing over-heating and potential system failure. The units are also reverse polarity protected and when re-connected correctly will operate normally without reset. The Alfatronix three point mounting cradle is also supplied for fast and easy installation.



All the battery chargers are galvanically isolated so can be used on any application including automotive, marine, petrochemical or off road applications



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Choose your Battery Charger

| Part Number | Cont/Int Power | Nominal Voltage | Dimensions | Weight |
|---------------|----------------|--|-----------------|--------|
| ICi 24-12 144 | 12A Isolated | 24Vdc input, 12Vdc output (variable charge voltage) | 167 x 87 x 50mm | 600g |
| ICi 24-24 144 | 6A Isolated | 24Vdc input, 24Vdc output (variable charge voltage) | 167 x 87 x 50mm | 600g |
| ICi 12-12 072 | 6A Isolated | 12Vdc input, 12Vdc output (variable charge voltage) | 167 x 87 x 50mm | 600g |

For AC-DC Battery Chargers, please see our **IC Series AC-DC Intelligent Battery Charger** leaflet.

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|--------------------------------------|--|
| Input voltage range | 27-32Vdc, 13.5-15Vdc Configured to prevent depletion of source battery |
| Output voltage | 12V or 24V nominal through the intelligent charging curve. Please see charge graph on for further information. |
| 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 |
| Off load current (quiescent current) | Typically <5mA. Unit will shut down when source battery is not being charged |
| Power conversion efficiency | Typically: 85% |
| Isolation | >400Vrms between input, output and case, on isolated products only |
| 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 |
| Output indicator | Multicolour LED adjacent to output terminals indicating power and charging mode |
| 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 | 2004/108/EC The general EMC directive 2006/96/EC The automotive directive 93/68/EEC The CE marking directive |
| Markings | CE and e marked (planned) |



Alfatronix Limited, 29 Newtown Business Park, Poole, Dorset, BH12 3LL, England
 Telephone: +44 (0)1202 715517. Fax: +44 (0)1202 715122
 Website: <http://www.alfatronix.co.uk>. E mail: sales@alfatronix.co.uk
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