



Power electronics solutions product range

Australian design and Australian manufactured. Supplied to USA, China, Egypt, India, Thailand, England, Turkey, Hong Kong & Australia.

Australian Rail Technology products have a unique technical advantage that create products that are ONE THIRD of the size and weight of most competitors' products and they are silent in operation.

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Intelligent battery chargers

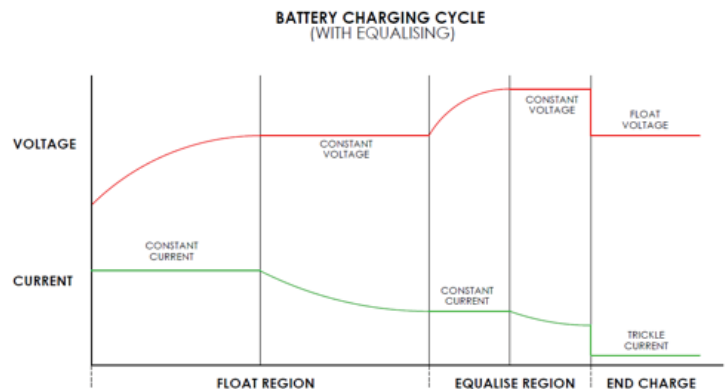
For lead Acid, NiCad or Nickel Metal Hydride batteries.

IUIU system = Constant current, constant voltage, trickle charge dV/dt

- Charging output currents available: 100 to 500 amp
- Supply options: 750 Vdc 3rd rail galvanically isolated, or 380/480 Vac 3-phase, or 230 to 500 Vac 3-phase 30 to 80 Hz for locomotives and wheel driven alternators.
- Can accept two auxiliary alternator inputs.



Australian Rail Technology is a world leader in intelligent battery chargers.



Single phase inverters

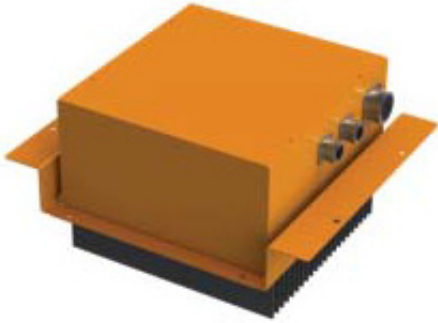
74 or 110 Vdc to 240Vac, 4 kW galvanically isolated intended for locomotive cab facilities. (Lightest in weight, smallest in size and silent in operation)



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DCformers (dc:dc converters)

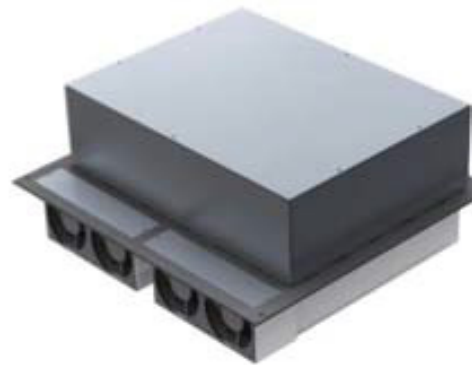
- 9 kW modules paralleled up to 36kW galvanically isolated from the supply.
- Supply 72 Vdc or 110 Vdc to 420 Vdc for powering for 1-phase inverters.
- Supply 72 Vdc or 110 Vdc to 700 Vdc for powering 3-phase inverters.

Three phase inverters

- 600 or 750 Vdc to 380/400 Vac 9, 18, 22 and 30 kW galvanically isolated (lightest in weight, smallest in size and silent in operation)
- Phase-lock-loop available to create a common 3-phase bus on adjacent railcars. Totally enclosed version IP56 self-ventilated for underframe mounting.
- 3-phase inverters, liquid cooled up to 120 kW galvanically isolated
- 74 or 110 Vdc to 380/400/480 Vac 9, 14 kW galvanically isolated intended for air conditioning on locomtives and EMUs.
- 3-phase soft-start inverters with bypass contactor +phase lock loop to avoid motor starting currents.



32 kW liquid cooled 700 Vdc to 3-phase inverter



9 kW forced ventilated 72 Vdc to 3-phase inverter



Emergency Fan 3-phase inverter

1 kW inverter for air conditioning on passenger railcars.
110 Vdc to 415 Vac 3-phase.



Air Conditioning systems for Locomotives and EMUs

Supply 72 Vdc or 110 Vdc supplied from battery system.

Three systems available:

- 3-phase inverter up to 9 kW + 4kW 1-phase inverter
- 2 x 3-phase inverters: 5.6kW for compressor _ 2 Kw for blowers
- Single 3-phase inverter for air conditioner with Cycle by Cycle current limiting at the switching frequency to provide direct on line motor starting that eliminates inrush starting currents.



Cycloverter

Single phase to 3-phase at unity power factor for EMUs operating off AC catenary overhead supplies, 15 and 25 kV 50, 60 and 16²/₃ Hz.

Australian Rail Technology is a world leader in Cycloconverters for EMUs.

Manufacturing standards

EN 50155	Electronic equipment used on rolling stock equipment
IEC 1287-1	Power converters installed on board rolling stock
EN50121-3-2	Electromagnetic Compatibility
EN50121-3-1	Electromagnetic Compatibility
IEC 61000-5-1	EMC standard
IEC 61000-5-2	EMC standard
IEC61373	Railway application rolling stock equipment Shock and vibration testing
BRB/RIA-12	British Rail Standard for transients and surges
AS 3000	Wiring regulations

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