

# Military Payload Power System

28V LAND CLASS A VEHICLE POWER MANAGEMENT



The military payload power system combines Antares' expertise in power system design with an EMC package suitable for use in Land Class A environments. It operates over a wide temperature range.

The system provides alternator control, battery capacity measurement, load isolation, split charging, and battery thermal management – all in one package. The system includes a fully specified EMC harness.

If this configuration does not meet your exact requirements our engineers are able to work with you to adapt the concept to meet the needs of your particular vehicle.



FM 37786  
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## KEY FEATURES

- 28VDC system
- Alternator voltage control
- Programmable
- Battery temperature sensing
- Adaptive mapping battery gauge
- Heater pad thermostatic control
- Load isolator
- Split charge facility
- Status display panel
- High specification harness
- Designed to Land Class A
- Low temperature operation
- Cyclic Duty GEL or AGM batteries
- Deep discharge protection

## Alternator control

To provide adequate charging at low temperatures and to avoid gassing at high ambient temperatures, the system continuously monitors the battery temperature and controls the alternator voltage to optimise the charging regime.

## Battery thermal control

A battery temperature management function controls a heater pad to ensure that the batteries are kept warm in low ambients. This ensures that the vehicle can start and also ensures that the DC standby capability is preserved.

## EMC specification

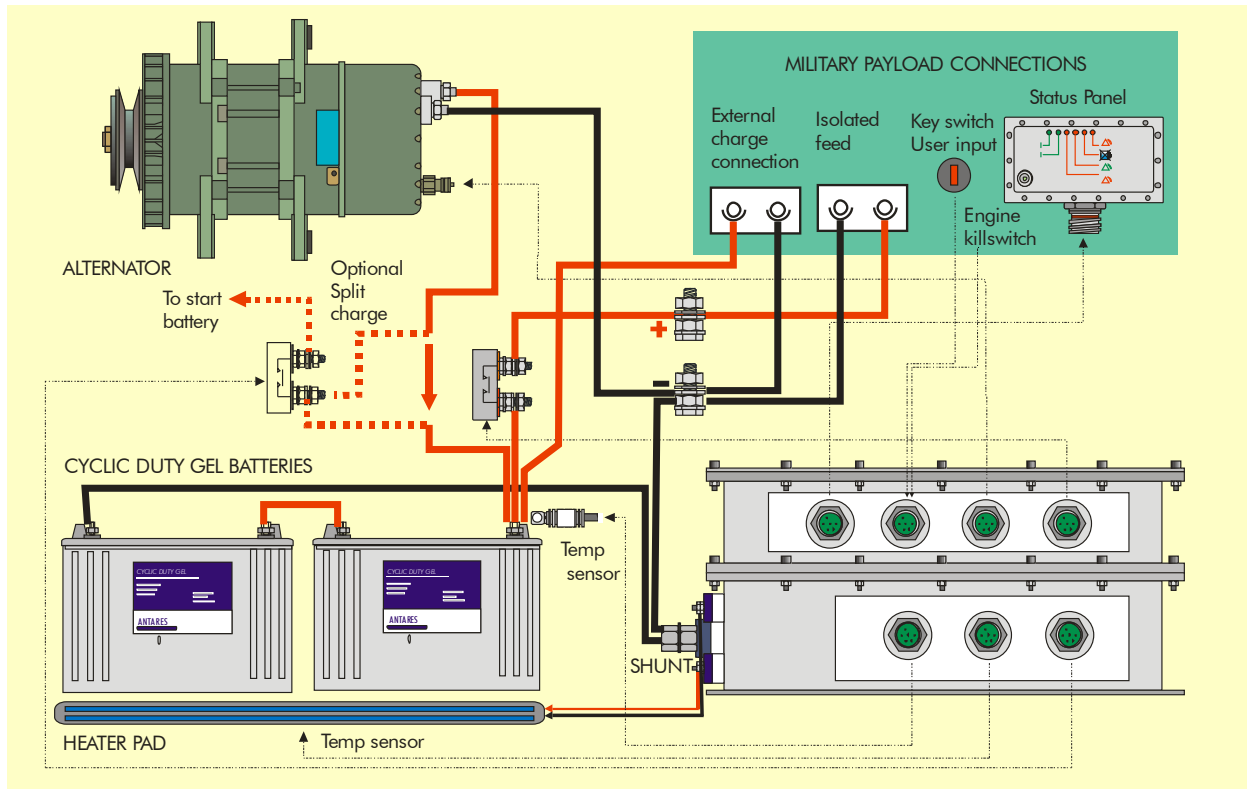
The system is designed to meet or exceed the requirements of DEF STAN 59-41 Part3 – Class A limits.

## Capacity gauge

A specially developed capacity gauge,

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uses an adaptive auto calibrating algorithm to provide system information about the energy remaining in the battery. This can be presented to the user as either time remaining, no of specific actions, or a simple level gauge.

## Battery isolation

The batteries can be isolated from the load either manually, at a deep discharge condition protecting the batteries from damage, or at a level to ensure that the vehicle start capability is intact.

## Status panel

The panel indicates the following:  
 Alternator fail  
 System fault  
 "X" minutes remaining  
 "Y" minutes remaining  
 System active  
 System on

Accept push button  
 Acoustic alarm

## Self test

The MPSS tests for the presence of expected peripheral parts, such as battery heater, indicating a fault if components are missing or cable continuity is broken.

## Optional split charge

An alternative configuration can be applied to vehicles with a second auxiliary battery by controlling a split charge contactor and sensing the primary battery.

## Support

Antares are ISO 9001:2000 accredited by BSI. We have full workshop repair facilities and in-field design support based at our facility in Buckinghamshire, UK.

