ULTRA | PCS

Distributed Power Nodes

Key features

- Scalable architecture
- Accredited output overcurrent protection
- Greatly enhances consumers and harnessing protection
- Configurable reversionary mode
- Inherent flexibility to support intelligent power management
- Small space claim
- Mass 3.7kg max
- Real time current monitoring for HUMS
- Generic Vehicle Architecture (GVA) interface compliant
- Reduces power wiring

Overview

Our power node has been specifically developed to provide a standalone unit or a core building block for military vehicle distributed and intelligent power management systems. Utilizing our solid state switching and precision circuitry, each node can supply up to ten discrete consumer circuits, greatly enhancing protection and reliability. The power node supports MilCAN for switching, monitoring and remote re-set following a trip scenario. Distributing protection away from large legacy panels of manual circuit breakers regains space in the operators immediate environment. By combining multiple power nodes with a rugged vetronics processer, a fully intelligent vehicle power management system can be developed for new vehicles or mid-life update. Once installed, a core system can be easily scaled up with additional nodes and software configured for particular mission fits.

Power Nodes

Specifications

- Ten power channels
- Latest solid state circuit protection
- Up to 15 amps per channel
- Load sharing
- MilCAN
- Up to 15 nodes on a single bus
- Fully configurable circuit protection
- Hardware secondary trip protection
- Real time current reporting
- Inrush protection
- Thermal protection

Power node control

Each output is controlled by a processor which sets trip levels whilst monitoring the current draw and status of the output. This data is continuously passed over MilCAN for action by the vetronic processor. The unit is capable of connecting two MilCAN while the node processor utilises hardware watchdogs and BIT to provide a high level of availability.

Consumer protection

- Overload protection
- Inductive load tolerant
- Incandescent load tolerant

Designed for the environment

The Power Node is designed specifically for the land military vehicle environment and provides the following features:

- Robust aluminum enclosure and internal design to withstand vibration to DEF STAN 00-35 (land class A)
- Automotive grade components coupled to effective heat management to withstand operating temperatures -46°C to +71°C at maximum current load
- Proven D38999 series connectors for power and databus connections
- Sealed against water, sand and dust

Compatible to EMC requirements

- DEF STAN 59-411
- DEF STAN 61-5 Part 5 Issue 6