BMU

The Battery Monitoring Unit is a battery and charge circuit condition monitoring and logging unit designed specifically for use on mobile platforms subject to severe operational use, such as military vehicles, mining equipment and marine craft and in extreme environments where functionality must be maintained for long periods of time, for example back up power generation or remote installations monitoring.

The unit models battery capacities based on charge and discharge periods and can employ current monitoring to improve the modelled data. Being based on the Dytecna Systems Engineering VMU technology the unit is highly integrated and configurable with data acquisition and logging capability allied with extensive sensor and communication interfaces. This functionality includes:

- 10 channels of Analogue input
- 8 channels of Digital input
- 2 CANbus Channels
- RS232 & RS485/ISO9141
- Fieldbus controller capability
- Ambient temperature sensing
- Internal power supply monitoring
- Data Display options include:
  - LED 'traffic lights'
  - 3 line text
  - Full graphical representation

The heavily ruggedised construction includes operation between -40 and +80°C, IP67 sealed aluminium enclosure with Mil-C-38999 connectors shown here and survivability of 50G shock loading. Power requirement is 10-40VDC.

Configuration can be completed by using the VIDI software tools and PC connection by way of the DDH, either directly to the unit or via the fieldbus. This allows for channel allocation, parameter levels, alarm points and date stamping specification to be set without changing software or requiring physical removal of the unit.

The following Military Standards have been allowed for in the BMU design:

- Def Stan 00-35 – Environmental (C1-A1, -42 to +58°C) & Mechanical
- Def Stan 59-41 – Electromagnetic Compatibility, to Class A
- Def Stan 61-5 – DC electrical systems in Military Vehicles
- Def Stan 25-24 – Health and Usage Monitoring Capability for Land Platforms