

VMU-28

The VMU-28 is a 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 marine wind turbines or remote installations monitoring.

It is a highly integrated and configurable data acquisition and logging unit with extensive sensor and communication interfaces. This functionality includes:

- 28 channels of Analogue input
- 24 channels of Digital input
- 4 channels Frequency input
- 3 CANbus Channels
- RS232 & RS485/ISO9141
- 8 Digital output channels
- 3 Axis accelerometer
- Ambient temperature sensing
- Power supply monitoring
- Data transfer options include:
 - Ethernet
 - MilCAN
 - CAN and MODbus
 - Serial connections
 - GSM/GPRS telemetry
 - WiFi
- Storage of data on removable media
 - Flash
 - USB
 - Remote Rotating or Solid state



The heavily ruggedised construction includes operation between -40 and $+80^{\circ}\text{C}$, 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 VID 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. Data logging features include:

- Pre-trigger and post-trigger buffer logging at 10Hz
- Time series data at configure rate
- Statistical data collection at user defined parameters
- Histogram of time spent at operational levels
- Time stamped events
- Free text area for manual data entry (asset ID etc)
- Rising and falling alarms can be set for any channel

The following Military Standards have been allowed for in the VMU-28 design:

- Def Stan 00-35 – Environmental ($C1-A1$, -42 to $+58^{\circ}\text{C}$) & 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