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Mag Array Telemetry Data Sheet

Designed with users in mind, the Geomatrix marine magnetometer Telemetry System is a simple plug and play device, which has been designed for short to medium length, centre conductor armoured wirelines. Consisting of a Top side rack mount power supply & wet end enclosure (Fig.1), the system offers up to 6 serial ports supporting any combination of digital devices.

Fig 1: Mag Array Telemetry, Wet end unit (upper image) and Top end Rack mount power supply with LCD display for monitoring & control (Lower image)

The Wet end unit, as standard has one 28V Auxiliary port (e.g. altimeter) and supports 2 (optional 4) serial devices via RS232. Additional optional ethernet ports allow the connection of MFAM (Magelement) units 2 or 4.

Providing 15 VDC (30W available per port total 60W, specifically designed for MFAM) & 28 VDC (150 W & optional 300W) power rails, the system is capable of running up to 4 Geometrics G-882 magnetometers, digital Gyro, digital altimeter, digital sound velocity probe or any other digital device capable of sending data in serial.

An on-board computer directly controls the unit, on receiving power from the top end power supply.

The wet-end incorporates a digital pitch and roll module for monitoring the stability of the towfish frame during deployment; in addition, the unit monitors moisture and detects pressure vessel leaks. The internal clock has a 1pps allowing real time data acquisition.

The top end power/ data unit has been designed with reliability in mind. The new LCD display fitted on to the 3U rack mount PSU allows the user to monitor and configure the top and wet end units with safe start and fault detection displayed on the window.

The small and compact design of the wet-end electronics package, in conjunction with the innovative design of the Geomatrix TVG frame, allows the unit to be deployed directly on to the tow point assembly without inciting noise into the magnetometers.

Designed for shallow water deployment (depths up to 250m) the TVG telemetry system can operate on up to 500m of wireline depending on cable type.

Features

Wet End:

- G882 compatible serial ports 2 optional 4
- Optional MFAMS compatible ethernet inputs optional 4
- Pressure Vessel leak detection and moisture monitoring
- Real time clock 1pps available

Top End:

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- 3U Rack Mount, 150 VDC Operation
- LCD Display allows:
    - Power and Leakage monitoring
    - Safe Start (Online Monitoring)
    - Safe Shutdown
    - Fault Detection
    - Wet-End serial configurable at top side
    - Wet-end power configurable at top side

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	wet end: 27cm; top end: 40cm x wet end: 15.6cm; top end: 21.8cm x wet end: 98cm; top end: 12.1cm	wet end: 6kg; top end: 15kg

Technical Specifications

Wet End:	----------
Serial Channels:	Up to 4 Channels and RS485 & RS232 available
Ethernet Connections:	Up to 4 Channels
Depth rating:	250m
Input Voltage:	150 VDC
Output Voltage rails:	28 VDC
Output Power:	150W, optional upgrade to 300W.
Auxiliary power port (Optional):	28V for maintaining USBL power. Must be specified at time of order
Baud Rate of input devices:	Nominally 9600 baud can be configured up to 115200 baud rates
Data Bandwidth:	10/100Mbps bi-directional Ethernet Link to topside (varies depending on Tow-cable quality & length)
Pitch Specification:	0.5 degree accuracy; 0.1 degree Resolution
Roll Specification:	0.5 degree accuracy; 0.1 degree Resolution
Material:	Machined aluminium
Dimensions (Wet End):	270mmx156mmx98mm (LxWxH)
Top End:	----------

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Input Voltage:	240 VAC mains supply (optionally 110V)
Output Voltage:	150 VDC
Data output:	Wired network 10/100Mbs, TCIP protocol – optional 6 x serial output
Wire-line cable length:	Contact suppliers for further information
Dimensions (Top End):	440mmx218mmx131mm (LxWxH)
Rack Mount:	Supplied as standard

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