BILLINGSLEY AEROSPACE & DEFENSE

Key Features:	Fast, > 62k Samples per second High Resolution for Surveillance and Magnetic Signature Analysis
Description:	SINC and LC Anti-aliasing filters give >100 dB rejection of fluxgate drive frequency feed through. This allows 3 kHz, wideband operation and extremely low noise. Mounted in a lightweight housing with remote triaxial sensor head or in an integral underwater housing, as required by user.
Recommended applications:	Magnetic Signature Analysis, Underwater Surveillance or Degaussing Ranges. General Laboratory. High conversion speed, low inter-channel latency for ROV or other moving platforms. This allows excellent dynamic heading accuracy.
Data interface:	Serial interface 9600 to 961,400 Baud, 8 Data, No Parity, 1 Stop Bit RS485 serial interface. Can drive cable lengths $\approx$ 1000 meters up to 100kBaud. Checksum with EOT character on data blocks
Axial Alignment:	Orthogonality better than ± 0.15° (0.02° Special) *
Input Voltage:	20 to 28 VDC @ $\approx$1.5Watts
Field Measurement Range:	± 65 µT standard (other ranges on request)
Scaling accuracy:	± .1 % of Full Scale
Digital Output Resolution:	32 bits, system noise floor: ~ 40 A/D counts (~ 2.6 pT)
Conversion speed:	Selectable, 62.5K SPS to 61SPS. (noise < 0.2 µV @ 61SPS)
Frequency Response:	Flat to 3kHz @ -3dB
Digital Linearity:	± .007 % of Full Scale
Scale Factor Temperature Shift:	≤ .002 % / ° Celsius typical
Noise (Single Domain Only): Noise (Vacquier Sensors):	≤ 5 pT RMS/√Hz @1Hz ≤ 25 pT RMS/√Hz @1Hz
Zero Offset:	≤ 5 nT
Susceptibility To Perming:	< ± 5 nT Shift with ± 5 Gauss applied
Support software (included):	BMATS-VSC/FFT "VIRTUAL STRIP CHART" also with real time Fast Fourier Transform Graphically displays magnetic field data in either a relative or absolute mode. Variable time base and sensitivity display and also writes data to a file. NOTES: Fast Fourier Transform (FFT) Capability Built-in - Enabled by the high speed "block" mode 250 samples - Data converted @ 1 µsec/cycle averaged from 16x to 16384x cycles (user selectable) in blocks, in contiguous samples; then, transmitted in a "burst" mode to minimize latency between FFT screens

* "J" command returns constants which may, at user option, be used to further refine reported readings.

SAMPLE SCREEN CAPTURE BMATS-VSC/FFT
Real-time Fast Fourier Transform Capability Built-in