

SENSYS

Sensorik & Systemtechnologie

Multi Channel Data Logger

TDX



Features

- 5 input channels for FGM3D triaxial Fluxgates
- 1 extension port for additional sensor
- Ethernet interface for integration of TDX into network or PC structure
- Remote access
- 24Bit digitalization
- Temperature calibrated
- Integrated power supply
- 200 ... 2,000 Hz sampling rate (selectable)
- Measurement data synchronized and time stamped

The SENSYS TDX is a high end data logger with five (5) input channels for SENSYS triaxial FGM3D Fluxgates and an additional RS232 based sensor.

All five channels can be sampled in parallel with up to 2,000 Hz and the Magnetometer signals will be digitized with 24Bit.

The RS232 extension port allows for integration of an additional sensor, i.e. to measure temperature, altitude or the angle of a spinning measurement table as done for the client DLR for measurement of magnetic impact of satellite components prior their deployment into space.

The TDX can be connected to a PC or network via the LAN interface. A Server tool allows for remote access and configuration of connection and output

parameters. The output of all measurement values is synchronized and time stamped to correlate with other parameters.

The TDX is temperature calibrated to ensure highest accuracy throughout all measurement campaigns.

Applications

- Magnetic field surveys
- Pre-installation MRI/electron microscope site surveys
- Magnetic material analysis
- Combined sensor surveys (magnetic + i.e. altitude, rotation, temperature, etc.)
- Long term studies
- Laboratory measurements

Technical Data TDX

Power supply	1x IEC 60320 C14; internal 220/240 Vac power supply unit; 150 W max.	
Operating Temperature	0 ... +40 °C	
Storage Temperature	-20 ... +60 °C	
Humidity	10 ... 90 %, non condensing	
Dimensions (W x D x H)	211 x 270 x 120 mm	
Weight	2.8 kg	
Ingress Protection	IP20	
FGM3D sensor input	5x D-Sub 15 pins HD; simultaneously sampled	
Input Measurement Range	± 10 V	
Maximum Allowed Input Voltage	± 30 V	
Sample Rate	200 ... 2000 Hz (selectable via software)	
Resolution	24 Bit	
Input Impedance	typ. 100 kΩ	
Accuracy	calibrated (0 ... 40°C) ¹	uncalibrated at 25°C
Gain accuracy	max. 0.05 %	max. 0.2 %
Offset accuracy	max. 0.2 mV	max. 2 mV
Analogue Antialiasing Filter	Low-Pass, typ. $f_{-3dB} = 48$ kHz	
Digital Antialiasing Filter	Pass-band flatness: < 0.01 dB; DC to $0.45 \cdot f_s$ Stop-band rejection: > 100 dB; $0.55 \cdot f_s$ to $127 \cdot f_s$	
Integrated Sensor Supply	± 15 V, max. 50 mA per sensor	
Extension port	1x digital RS232 via D-Sub 17 pins	
Galvanic isolation	100 Vdc max.	
Data rate RS232	Up to 921,600 Baud	
PPS input	yes	
Integrated output supply	24 V, max. 1A	
Ethernet port	1x RJ45 LAN 10/100 Mbit/s	



Backside panel TDX



TDX kit with 2 sensors, tripods and rotary encoder