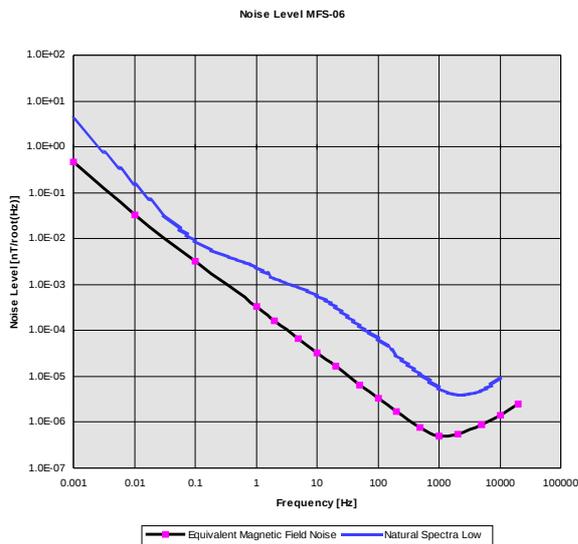


MFS-07e

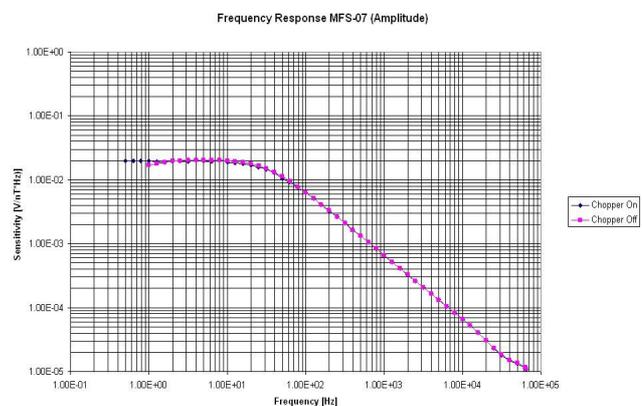
High-Frequency Induction Coil Magnetometer

The high-frequency induction coil magnetometer *MFS-07e* has been developed for applications in Audio Magnetotellurics (AMT) and Controlled Source Audio Magnetotellurics (CSAMT). Nevertheless, it covers a wide frequency range from 0.001 Hz up to 50 kHz and can also be used for standard MT applications. The *MFS-07e* shows outstanding low-noise characteristics, very low temperature drift of input offset voltage and offset current and a very stable transfer function over temperature and time. The *MFS-07e* is the result of more than 35 years of experience of metronix in the design, manufacture and application of induction coil magnetometers.



Metronix takes special care of the initial calibration of all *MFS-07e* magnetometers as part of the ISO9000-2000 certified production process. Tests have demonstrated an excellent long time stability of the transfer function.

The integrated calibration facility makes it easy for the user to perform an online calibration or test of the magnetometer's transfer function. A differential test signal can simply be injected into the CAL input of the sensor.



Technical data:

Frequency range	0.001 Hz	50 kHz
Frequency bands	0.001 Hz	500 Hz (chopper on) 10 Hz 50 kHz (chopper off)
Sensor noise	$3 \cdot 10^{-2}$ nT/ $\sqrt{\text{Hz}}$	@ 0.01 Hz $3 \cdot 10^{-4}$ nT/ $\sqrt{\text{Hz}}$ @ 1 Hz $5 \cdot 10^{-7}$ nT/ $\sqrt{\text{Hz}}$ @ 1000 Hz (chopper off)
Output sensitivity	0.02 V/(nT*Hz)	f << 32 Hz 0.64 V/nT f >> 32 Hz for exact values refer to individual calibration file
Output voltage range	+/- 10 V	
Function	Induction coil with magnetic field feed back	
Connector	ODU G32KON-T10QJ00-000 (coil socket) ODU S22KON-T10MJG0-7000 (cable plug)	
Calibration input sensitivity	1.6 nT / V	
Feedback cut-off frequency	32 Hz	
Supply voltage	+/- 12 V to +/- 15 V stabilized and filtered	
Supply current	+/- 25 mA	
Case	ruggedized, waterproof case	
Weight	appr. 5.5 kg	
External dimensions	length 700 mm, diameter 75 mm	
Operating temperature range	-25°C + 70°C	

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