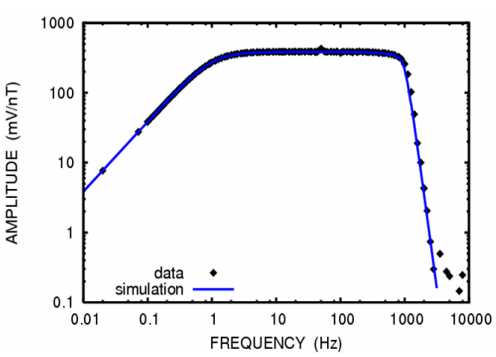
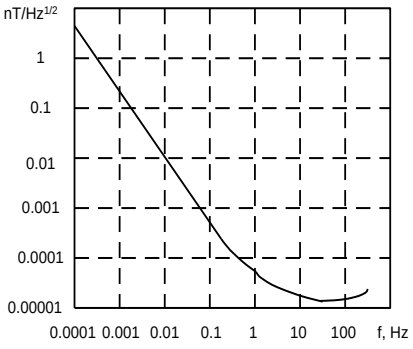
Land Induction Coil (LIC) 120

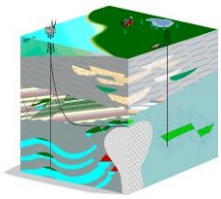
KMS Technologies - KJT Enterprises Inc.

The KMS LIC-120 broadband land induction coil magnetometer has been developed to measure variations of the Earth's magnetic field, particularly for applications in Magnetotellurics (MT) and Controlled Source Audio Magnetotellurics (CSAMT). The KMS LIC-120 is intended for the study of magnetic field fluctuation for frequencies ranging between 0.0001 and 1,000 Hz in land conditions. In spite of its wide bandwidth, the LIC-120 induction coil magnetometer shows outstanding low-noise characteristics, extremely low temperature drift of input offset voltage and offset current as well as a very stable transfer function over temperature and time. The LIC-120 is the result of many years of experience on the part of KMS Technologies in the design, manufacture and application of induction coil magnetometers. The KMS LIC-120 induction coil has undergone extensive comparison tests with commercial induction coils. The results of these tests show that the LIC-120 has a higher sensitivity and a larger dynamic range than other commercial induction coils. Like all KMS field sensors, the KMS LIC-120 is highly reliable, lightweight, and manufactured to exacting standards. Designed for use in the most demanding environments, KMS field sensors have proven their reliability and quality on many MT and AMT sites around the world.

KMS LIC-120 induction coil performance:







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 V2.0

Technical Specs

Frequency range	0.0001Hz – 1,000 Hz
3 dB points frequency band	1 Hz ~ 1000 Hz
Shape of transfer function	Linear - Flat
Transfer function corner frequency	1 Hz
Output sensitivity transformation factor[1] at main differential output (pins 1 & 3) • at the flat part • at the linear part[2]	 200 mV/nT 200*f mV/nT
Transformation factor at auxiliary output (pin 5) • at the flat part • at the linear part[2]	 20 mV/nT 20*f mV/nT
Transformation factor error	< 3 dB
Magnetic noise level • at 0.001 Hz • at 0.01 Hz • at 1 Hz • at 100 Hz	 ≤ 100 pT/√Hz ≤ 10 pT/√Hz ≤ 0.1 pT/√Hz ≤ 0.01 pT/√Hz
Output voltage range	+/- 10 V
Function	Induction coil with magnetic field feed back
Connector	10-pin
Length of connecting cable	≤ 100 m
Supply voltage	± (12±0.2) V
Power consumption	270mW
Weight	7.5 kg
External dimensions	Length: 1,215 mm Diameter: 96 mm
Operating temperature	-10 ^{o}C – +50 ^{o}C