

Land Induction Coil (LIC) 120 Technical Specifications

LIC 120 Specifications	
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) <ul style="list-style-type: none"> • at the flat part • at the linear part² 	200 mV/nT 200*f mV/nT
Transformation factor at auxiliary output (pin 5) <ul style="list-style-type: none"> • at the flat part • at the linear part² 	20 mV/nT 20*f mV/nT
Transformation factor error	< 3 dB
Magnetic noise level <ul style="list-style-type: none"> • 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 °C – +50 °C

Note:

¹ The transfer function experimentally derived values are given in Appendix A;

² where *f* is the frequency of measured signal.

Appendix A. Transformation factor table values

Table values of transfer function of Land Induction Coil 120. The first line contains frequency in Hz, and the following line contains transformation factor (S) values in mV/nT measured with error of 1%.

F, Hz	0.1	1	8	22	37	65	90	130	230
S, mV/nT	19.5	136.8	192.3	193.7	193.7	193.6	193.4	193.2	192.1

F, Hz	330	430	530	630	730	830	930	1,000	1,100
S, mV/nT	190.3	187.5	183.5	178.1	171.4	157.9	146.0	1129.4	98.6

LIC 120 Magnetometer Recommended Connection Layout

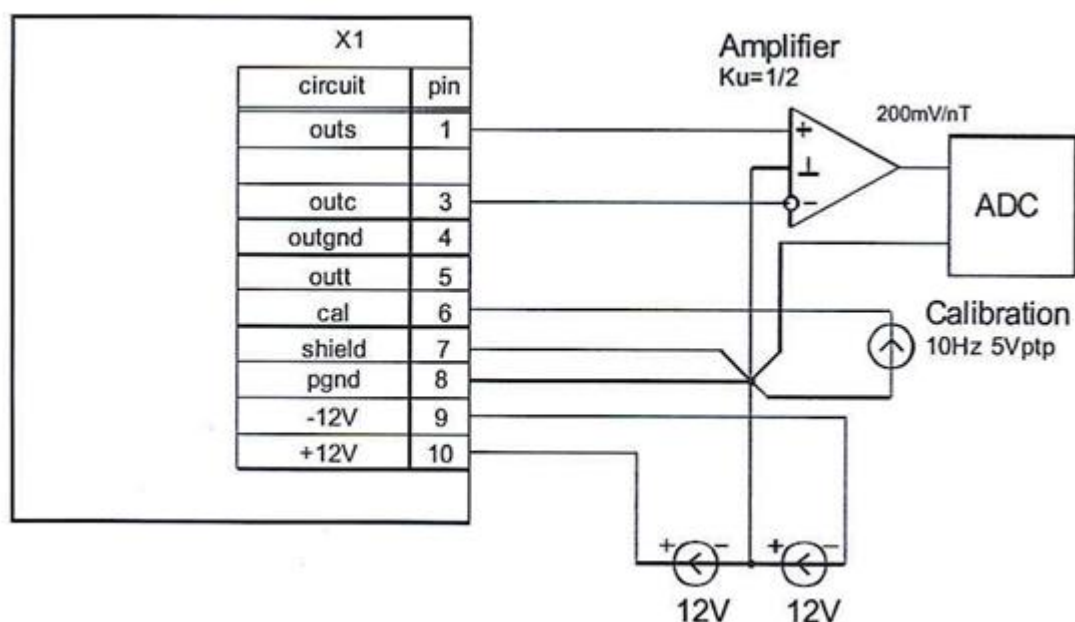
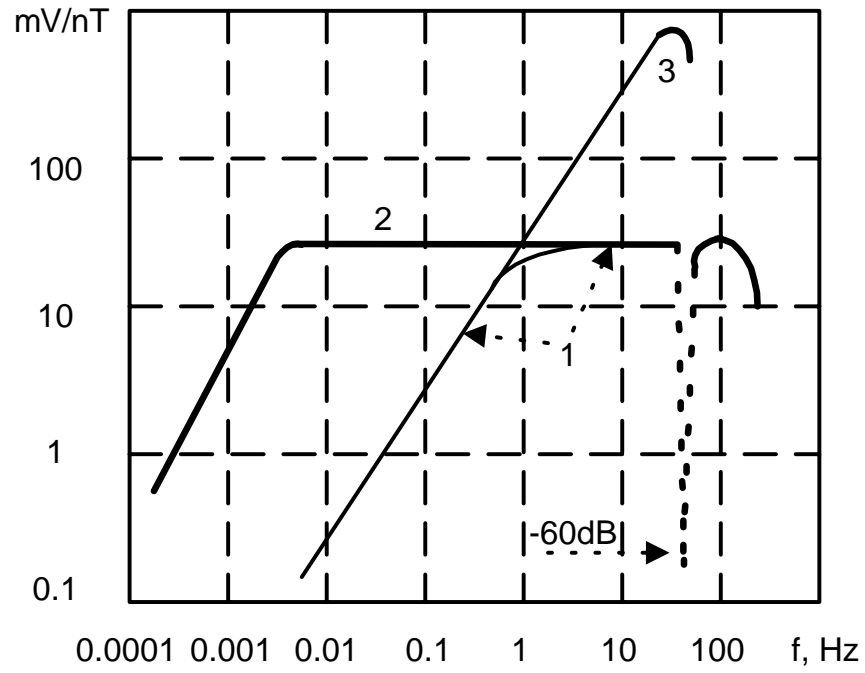


Figure 1. Connection diagram for precise measurements

1. Couple the sensor to a device and power supply. See Figure 1 for recommended connection layout.
2. If calibration is required then calibration signal source has to be connected as on Figure 1.
3. LIC 120 is ready for operation in 3 minutes after the power supply is switched on.

LIC 120

Sensitivity



Noise Level

