

LPT-231

Hall Effect Probe

High Sensitivity with temperature compensation
(Max. calibrated field is 0.3T or 3000 Gauss)

High Accuracy: $\pm 0.03\%$ max. error at 25°C*

Low thermal drift at $\pm 20\text{ppm}/^\circ\text{C}$ max.*

Low Zero Drift of $\pm 0.01\text{G}/^\circ\text{C}$ max.*

Calibration tables at 0, 25 and 50°C supplied

Specifications

The LPT-231 Hall Effect Probe is most suitable to be used with a DTM-151 or DTM-152 Digital Teslameter.

Probe is calibrated up to 0.3 Tesla, bipolar. Temperature-compensated from 0 to 50°C. Transverse orientation, reads (+) when field vector enters the top epoxy surface.



* Contribution of probe only

Accuracy at 25°C:

$\pm 0.03\%$ of reading + 0.006% of full scale

Operating Range:

4- Range Operation.

0.03, 0.06, 0.12, 0.3 Tesla Full Scale

300, 600, 1200, 3000 Gauss Full Scale

Temperature Stability:

Calibration: $\pm 25\text{ppm}$ of reading/ $^\circ\text{C}$ max.

- 3ppm/ $^\circ\text{C}$ of reading per meter of probe cable

Zero Drift: $\pm (1\mu\text{T} + 0.0003\%$ of full scale)/ $^\circ\text{C}$ max.

Temperature Range:

0 to 50°C operating to spec, -20 to +60°C max.

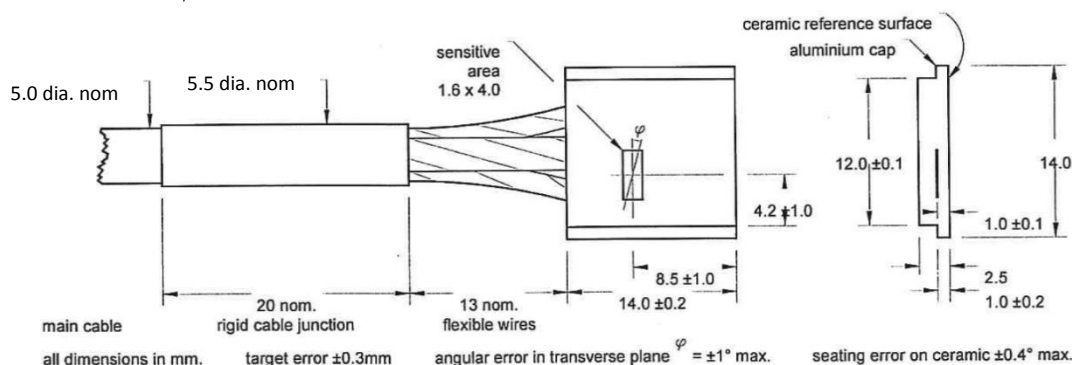
Dimensions:

Probe Head Size: 14 x 14 x 2.5 mm

Sensitive Area: 4 x 1.6 mm

Unshielded part of cable at probe head: $\varnothing 5.0 \pm 0.2$ mm, 300 mm nominal length

Shielded Cable: $\varnothing 7.2 \pm 0.2$ mm



ORDER CODE:

LPT-231-2S for probe with basic 2 meters shielded cable.

Special probe cable lengths may be ordered up to 30 meters.

For single range probes, add range suffix -03, -06, -12, -30

e.g. LPT-231-03-2S

Probe Accessories:

LPT 141/231 Transverse Probe Holder – Part No. 17000050

LPT 141/231 Axial Probe Holder – Part No. 17000092

Resolution using DTM-151 Digital Teslameter:

TABLE -1 DC Mode with Digital Filtering ON

1 in 600,000 of bipolar scan in front of panel display

Range	Display resolution		Serial / GPIB Output Resolution	
	Gauss	Tesla	Gauss	Tesla
0.03	0.001	0.0000001	0.0001	0.00000001
0.06	0.002	0.0000002	0.001	0.0000001
0.12	0.004	0.0000004	0.001	0.0000001
0.3	0.01	0.000001	0.001	0.0000001

TABLE 2 -DC Mode with Digital Filtering OFF, and AC Mode,

1 in 120,000 of bipolar scan in front of panel display

Range	Display resolution		Serial / GPIB Output Resolution	
	Gauss	Tesla	Gauss	Tesla
0.03	0.005	0.0000005	0.0001	0.00000001
0.06	0.01	0.000001	0.001	0.0000001
0.12	0.02	0.000002	0.001	0.0000001
0.3	0.05	0.000005	0.001	0.0000001