

MPT-141

Hall Effect Probe

Standard Sensitivity with temperature compensation
(Max. calibrated field is 2.2T or 22000 Gauss)

- High Accuracy: $\pm 0.01\%$ max. error at 25°C*
- Low thermal drift at $\pm 5\text{ppm}/^\circ\text{C}$ max.*
- Low Zero Drift of $\pm 0.01\text{G}/^\circ\text{C}$ max.*
- Calibration tables at 0, 25 and 50°C supplied

* Contribution of probe only



Specifications

The MPT-141 Hall Effect Probe is most suitable to be use with a DTM-151 or DTM-152 Digital Teslometer. Probe is calibrated up to 2.2 Tesla, bipolar. Temperature-compensated from 0 to 50°C. Transverse orientation, reads (+) when field vector enters the top epoxy surface.

Accuracy at 25°C:

$\pm 0.01\%$ of reading + 0.006% of full scale

Operating Range:

- 4- Range Operation.
- 0.3, 0.6, 1.2, 3.0 Tesla Full Scale
- 3, 6, 12, 30 Kilo Gauss Full Scale

Temperature Stability:

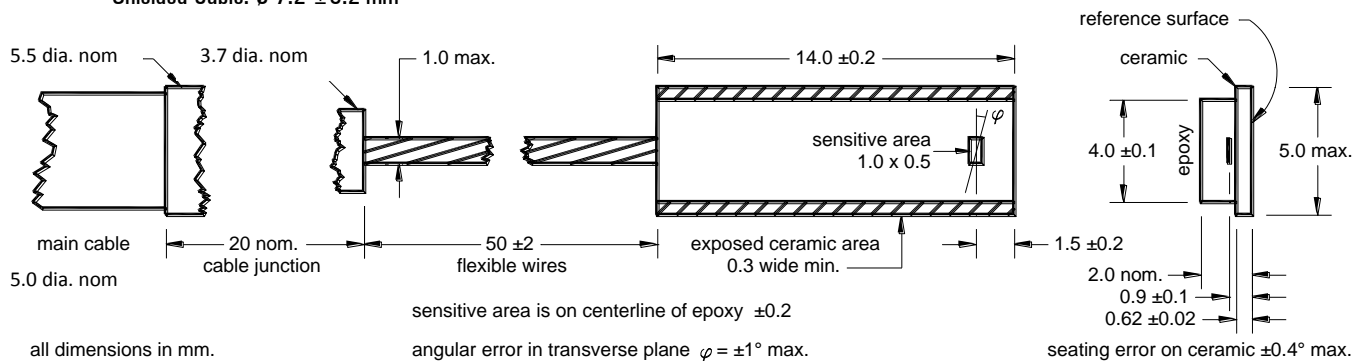
- Calibration: $\pm 10\text{ppm}$ of reading/ $^\circ\text{C}$ max.
- 3ppm/ $^\circ\text{C}$ of reading per meter of probe cable
- Zero Drift: $\pm (1\mu\text{T} + 0.0003\%$ of full scale) $^\circ\text{C}$ max.

Temperature Range:

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

Dimensions:

- Probe Head Size: 14 x 5 x 2 mm
- Sensitive Area: 1 x 0.5 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



Resolution using DTM-151 Digital Teslometer:

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
0.3	0.01	0.000001	0.001	0.0000001
0.6	0.02	0.000002	0.01	0.000001
1.2	0.04	0.000004	0.01	0.000001
3.0	0.1	0.00001	0.01	0.000001

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
0.3	0.05	0.000005	0.001	0.0000001
0.6	0.1	0.00001	0.01	0.000001
1.2	0.2	0.00002	0.01	0.000001
3.0	0.5	0.00005	0.01	0.000001