

# LPT-141

## Hall Effect Probe

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

- High Accuracy:  $\pm 0.01\%$  max. error at 25°C\*
- Extremely Low thermal drift at  $\pm 5\text{ppm}/^\circ\text{C}$  max.\*
- Negligible 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 LPT-141 Hall Effect Probe is most suitable to be used with a DTM-151 or DTM-152 Digital Teslameter.

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 metal 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:

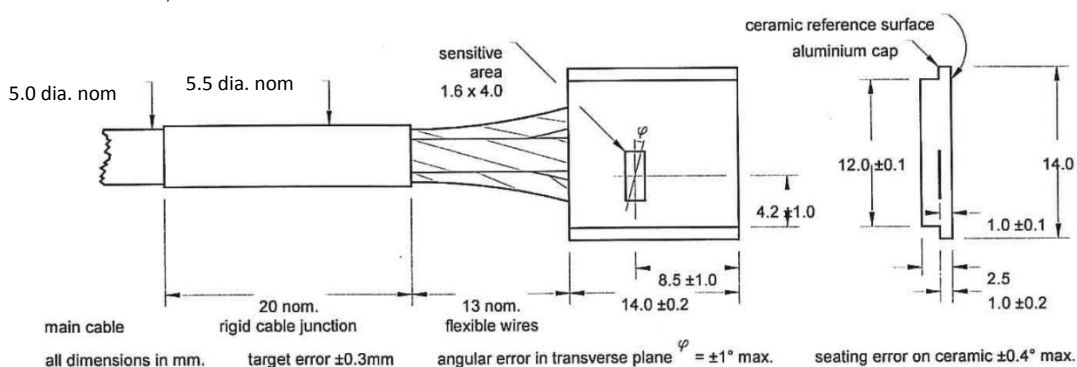
- Calibration:  $\pm 10\text{ppm}$  of reading/ $^\circ\text{C}$  max.
- 3ppm/ $^\circ\text{C}$  of reading per meter of probe cable
- Zero Drift:  $\pm (1\mu\text{T} + 0.0003\%$  of full scale)/ $^\circ\text{C}$  max.

### Temperature Range:

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

### Dimensions:

- Probe Head Size: 14 x 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-141-2S 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-141-03-2S

**Probe Accessories:**  
 LPT141/231 Transverse Probe Holder – Part No. 17000050  
 LPT141/231 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
0.3	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	0.0005	0.01	0.000001