

# PT2026

## NMR PRECISION TESLAMETER

**METROLAB**  
Magnetic precision has a name



### The world's most precise magnetometer

MetroLab's PT2026 sets new standards for magnetometers based on NMR (Nuclear Magnetic Resonance), the most precise technique for measuring magnetic flux density. The combination of a pulsed-wave NMR detector and advanced signal processing opens a host of new applications in the areas of magnetic field measurement, monitoring, mapping and calibration.

- **High fields**  
To over 10 T with robust proton probes, over 20 T with Deuterium
- **Ultra-high precision**  
< 10 ppb at 3 T
- **Tolerant of field gradients**  
1620 ppm/cm at 1 T: 2.4x better than PT2025
- **Fast measurement rate**  
Up to 33 Hz
- **Fast search**  
Full range search < 10 s
- **Flexible probe ranges**  
Standard or custom probes; one standard probe covers 1.5 & 3 T
- **Small gaps, high radiation**  
Probes have optional remote measurement head
- **Connect up to 512 probes**  
Flexible multiplexer with full software control
- **Standard interfaces**  
USB and Ethernet interfaces, compatible with IEEE 488.2 and SCPI
- **Powerful display & control**  
Sophisticated turnkey software and LabVIEW™ API
- **Fits into laboratory**  
Synchronize with other instruments; use your laboratory's reference clock

## TECHNICAL CHARACTERISTICS AND ACCESSORIES

### MEASUREMENT

Frequency range	1 MHz – 1 GHz
Resolution	± 0.1 Hz (stable field, low gradient, no averaging)
Accuracy	± 5 ppm, independent of temperature
Max gradient	> 1000 ppm/cm
Measurement rate	Up to 33 Hz
Trigger modes	Immediate, Timed, Bus, External

### PROBES

Ranges	0.19 – 0.52 T (Ø 4 mm p sample) 0.42 – 1.29 T (Ø 3 mm p sample) 1.13 – 3.52 T (Ø 3 mm p sample) 3.29 – 10.57 T (Ø 3 mm p sample) 8.00 – 22.8 T (Ø 3 mm D sample) Custom ranges upon request
Size	Standard probe / electronics: 16 x 12 x 231 mm Remote measurement head: • Head (p sample): 9.2 x 6.2 x 31.5 mm • Head (D sample): 16.2 x 6.0 x 31.5 mm
Cable length	10 m; custom upon request 100 m max total length (incl. multiplexers) Remote measurement head: • Electronics – head: 3 m (Ø 4.3 mm)
Search time	Full range typ. < 10 s
Multiplexer (optional)	Self-powered; 4 or 8 channels; up to 3 levels (512 probes max)

### SYSTEM

Power	50 W, 90 – 255 VAC, 50/60 Hz
Operating temperature	10 – 40 °C; no air inlet
Magnetic environment	< 0.2 T (main unit)
Size	210 x 125 x 324 mm (main unit)
Computer interface	USB / USBTMC and Ethernet / VXI-11; IEEE 488.2; SCPI
Trigger connector	TTL level; Trigger In or Trigger Out Trigger In: rising or falling Trigger Out: pulse or level; B rising or falling, or either
Clock connector	10 MHz; External Reference In or Internal Reference Out

### SOFTWARE

Supported platforms	Microsoft Windows XP SP3 or higher
API	Access to all system features; LabVIEW® 2013
Licenses	Metrolab (including source code for API) National Instruments (LabVIEW® and NI-VISA run-times)



**MODEL 1226  
NMR PULSED-WAVE PROBE**



**MODEL 1226 PROBE,  
REMOTE HEAD**



**MUX6026  
NMR PROBE MULTIPLEXER**



**PROBE-EXTENSION /  
MUX CABLE 3026-10M**

For detailed specifications,  
please see <http://www.metrolab.com>

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Version 1.0  
Specifications subject to change

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