

# 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**  
> 1000 ppm/cm; 2.4x better than PT2025 in side-by-side tests
- **Fast measurement rate**  
Up to 33 Hz
- **Fast search**  
Integrated 3-axis Hall sensor
- **Flexible probe ranges**  
Standard or custom probes; one standard probe covers 1.5 & 3 T
- **Small gaps, high radiation**  
Specialty probes with 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	Model 1326	Model 1426
	0.038 – 0.14 T 0.13 – 0.48 T 0.46 – 1.50 T 1.40 – 4.80 T 4.35 – 11.7 T 10.0 – 30.0 T	0.19 – 0.52 T 0.42 – 1.29 T 1.13 – 3.52 T 3.29 – 10.57 T 8.00 – 22.80 T
	Model 1326-0.20-3.00 0.2 – 3.0 T (highly uniform fields only) Custom ranges upon request	
Size	Model 1326 probe / 1426 probe electronics: • 16 x 12 x 231 mm  Model 1426 remote head: • 9.2 x 6.2 x 31.5 mm (p sample) • 16.2 x 6.0 x 31.5 mm (D sample)	
Cable length	10 m; custom upon request 100 m max total length (incl. multiplexers) Model 1426 remote-head probe: • Electronics – head: 0.5 m (Ø 4.3 mm)	
Search time	With Hall assist: < 1 s; without: <10 s (typical)	
Multiplexer (optional)	Self-powered; 4 or 8 channels; up to 3 levels (512 probes max)	

### SYSTEM

Power	55 VA, 100 – 240 VAC, 50/60 Hz
Operating temperature	10 – 40 °C; no air inlet
Magnetic environment	< 0.2 T (main unit: some magnetic components will generate mechanical forces)
Size	210 x 125 x 324 mm (main unit; optional rack mount)
Computer interface	USB / USBTMC, 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

GUI	Microsoft Windows XP SP3 or higher
API	Access to all system features; LabVIEW® 2015
Licenses	Metrolab (including source code for API) National Instruments (LabVIEW® and NI-VISA)



**MODEL 1326  
NMR PULSED-WAVE PROBE**



**MODEL 1426 REMOTE-HEAD  
NMR PULSED-WAVE PROBE**



**MUX6026  
NMR PROBE MULTIPLEXER**



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



**TC8026 TRANSIT CASE**

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

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Version 1.1  
Specifications subject to change

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