

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>

© Metrolab Technology S.A.
Version 1.0
Specifications subject to change

Metrolab Technology S.A.
110, ch. du Pont du Centenaire
CH-1228 Geneva Switzerland
Tel: +41 (22) 884 33 11
Fax: +41 (22) 884 33 10
E-mail: contacts@metrolab.com
Website: www.metrolab.com