



CAYLAR
INSTRUMENTATION SCIENTIFIQUE

NMR20 TESLAMETER

Nuclear Magnetic Resonance Teslameter



CAYLAR offers a magnetic field measurement by Nuclear Magnetic Resonance (NMR) which allows an absolute measurement of the magnetic field, with a resolution of 10 nT (0.1 G) without temperature influence. NMR probes associated with the NMR20 have the particularity of having a large measurement range with a dynamic range of 5 and measure low fields from 140 G (14 mT) up to 13 T.

Precision

< 0.5 μ T absolute accuracy
10 nT reading resolution

Large measuring range

From 14 mT to 13 T with a large dynamic range (< x5)
90 mT to 2.1 T covered by 2 probes
140 mT to 3 T covered by 2 probes

Fast search

Integrated HALL sensor for fast search
Less than 1s to lock a NMR signal

High gradient tolerance

High tolerance to magnetic field gradients
> 2000 ppm/cm at 1 T

Small probe size

- 6,4 x 16 x 142 mm
- 6 x 8 x 142 mm

Special probes

- Very small thickness probe (< 2 mm)
- Deported passive and active electronic components highly radioactive environments
- UHV compatible probe
- Custom geometry and range

NMR Regulation

Embedded magnetic field control with analog output

Reliability and continuity

- 5 years warranty
- Long-term technical support, Services on Drusch devices over more than 40 years
- High MTBF, MTTF and low MTTR

NMR20 TESLAMETER

High Precision NMR Teslameter

Used for MRI Calibration, HALL sensors calibration, Magnetic Field Monitoring or Regulation.

DESCRIPTION

The NMR20 Teslameter measures magnetic fields using the principle of nuclear magnetic resonance (NMR). This is the most precise technology for measuring an absolute magnetic field value.

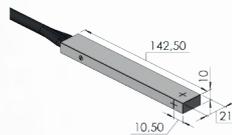
Features

Size	19" 2U P350
Range	14mT - 13 T
Resolution	10 nT (0,1 mG)
Absolute Precision	< 0.5µT
Internal clock stability	±1 ppm (0°C-70°C)
1st year Stability	<1 ppm
After 1 year	<±0,2 ppm / year
Required homogeneity	<2000 ppm/cm (1Tesla)
NMR Signal tracking Time	< 1 s (with HALL)
Channels	Up to 256
Interfaces	RS232, USB, Ethernet
10Mhz Clock reference	External in & Internal out
Analog output for magnetic field regulation	±10V / 1 µV resolution

STANDARD PROBES

Model A

Very low field
Available from 14mT to 200mT
Size: 21 x 10 x 142 mm
HALL Sensor



Model B

Small thickness (6mm)
Available from 40mT to 13T
Size: 16 x 6,4 x 142 mm
HALL Sensor



SPECIAL PROBES / MINIATURE

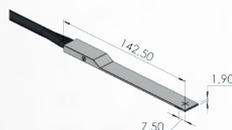
Model C

Small thickness (6mm) and small larger (8mm)
Available from 40mT to 3T
Size: 8 x 6,4 x 142 mm
No HALL Sensor

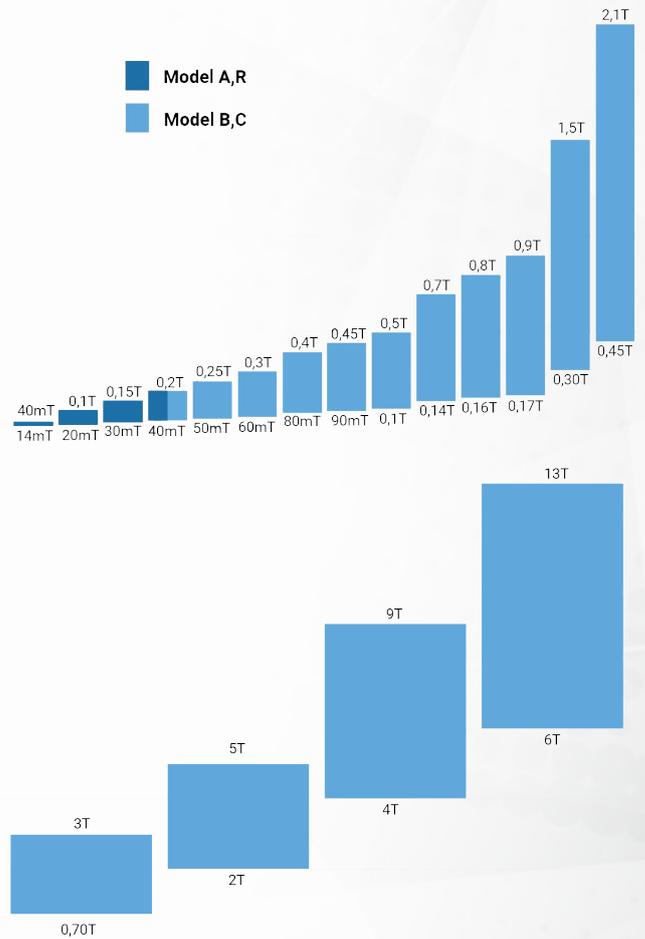


Model T

Very Small Thickness (2mm)
Size: 16 x 2 x 142 mm
HALL Sensor



STANDART PROBE RANGES



SPECIAL PROBES / DOUBLE PROBE

Model D

Double probes in one case
Available from 100mT to 3T
Size: 16x 6,4 x 142mm
HALL Sensor



SPECIAL PROBES / FOR SPECIFIC ENVIRONMENT

Model R

The sample is deported at 11cm from **passive** and **active** components. Used for high radiation.

Size A : 20x10 x 252mm

Size B : 16x6,4 x 252mm

Size C : 8x6 x 252mm

No HALL Sensor, Model R available in version **D (Double)**.

Model R+

The sample is deported at 40cm from **passive** and **active** components. Used for very high radiation. Available up to 0.5T. Size A from 14mT, Size B&C from 40mT

Size A: 16x6,4 x 25mm (Sample) / 16x6,4 x 142 mm (Elec.)

Size B: 21x10 x 15mm (Sample) / 16x6,4 x 142 mm (Elec.)

Size C: 21x10 x 15mm (Sample) / 8x6x 142 mm (Elec.)

No HALL Sensor