SOFT MAGNETIC MATERIALS

AMH-DC-T-S

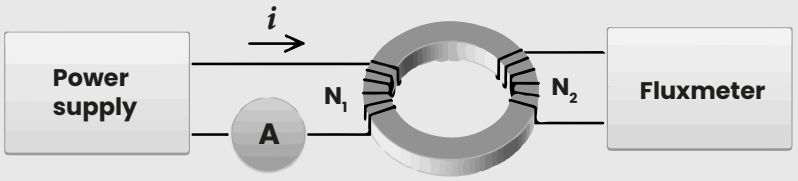
AMH-DC-T-S Permeameter is an automatic DC measuring system to characterize toroid shaped soft magnetic materials. Rings are the best shapes for such magnetic characterization: due to the naturally closed magnetic circuit, the demagnetizing field inside the material is zero.

PERMEAMETER AMH-DC-T-S

DESCRIPTION

The sample must be wound with a primary set of NH turns for excitation. A secondary set of NB turns must also be wound around the sample to record the magnetic flux. The H field is determined measuring the current i in the primary winding: H = NH • i /l, where l is the length of the magnetic path (i.e. the averaged ring circumference, when the ring O.D and I.D. are not too different). The B field is determined measuring the magnetic flux Φ from the secondary winding: B = Φ/(NB A), where A is the cross section of the ring specimen.

The measuring cycle is fully automatic and is controlled by Laboratorio Elettrofisico exclusive software (Argon), resulting in complete characterization of the material under test.



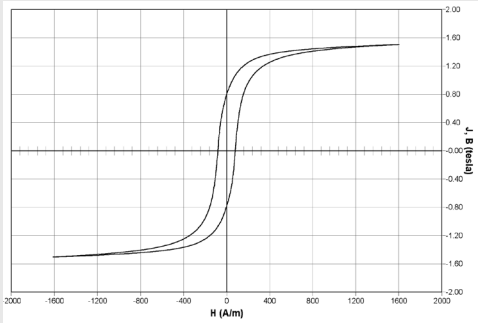
KEY BENEFITS

- Automatic measurement of complete hysteresis loop, normal magnetization curve, permeability curve
- Remanence Br, coercivity Hc, saturation values Hsat, Bsat, Jsat, cycle area, relative permeability, etc.
- Differential permeability
- The AMH-DC-T-S meets the International Standards IEC 60404-4, ASTM A341 and ASTM A596.

STANDARD CONFIGURATION

- Fluxmeter
- 2 DC Power Supplies (incorporating precision current meter)
- Polarity switch
- Reference ring for day-to-day control
- Connection tool for ring samples
- Dedicated software Argon
- PC and printer

AMH-DC-T-S
SOFTWARE ARGON



Argon software automatically controls the measurements of the AMH-DC-T-S and AMH-DC-TB-S permeameters.

FEATURES

TYPE OF MEASUREMENT	▪ Hysteresis loop, normal magnetization curve and relative permeability ▪ Demagnetization of the sample
SETTING OF MEASURING PARAMETERS	▪ Manual or automatic settings of magnetizing and demagnetizing field, speed, resolutions and many other parameters
RESULTS	▪ Hsat, Bsat, Jsat, Br, Hc, loop area, relative permeability ▪ Magnetic units in SI and CGS, dimensions in mm and inches, temperature in °C and °F
DATA ELABORATION	▪ Curve comparison ▪ Curve's interpolation ▪ Automatic control of the fluxmeters ▪ Merging of different curves
PRINTING A REPORT	▪ Customized report or single and multiple measures output in PDF, graphical files, text file
DATA BASE AND FILE SEARCHING	▪ Data base of measuring files with fast search options, ordering, selection, etc. ▪ Full compatibility with other programs, such as Microsoft Excel™
PROTECTION	▪ Password protection for restricting access according to selected parameters.
SET OF MEASURES	▪ Ability to group together different measurements in the same graph. The software recognizes the group type and provides additional results such as statistical data, i.e. the average, standard deviation, etc.

TECHNICAL SPECIFICATIONS 1/2

GENERAL

MEASURABLE MATERIALS	Soft Magnetic Materials
MEASURABLE QUANTITIES	Bsat, Jsat, Hsat, Br, Hr, cycle area, μrel
MEASURABLE SHAPES	Rings
SAMPLE SIZE RING	No physical limits (size affects max H field achievable)
TYPICAL ACCURACY RING	Hsat, Bsat: 1%; Hc: ±2%, Br: ±2%; μ: ± 3%
TEST TIME	60-120 seconds (typical)
OPERATING TEMPERATURE RANGE	15÷40°C
FREQUENCY	DC

MAIN CABINET

POWER SUPPLY	220 Vac, 50/60 Hz, 16 A max absorption
UNITS	16 U
DIMENSIONS	543 x 710 x 628 mm - 21.3” x 28” x 24.7”
WEIGHT	60 kg (132 lb)

POWER SUPPLY LPS

POWER OUTPUT	200 W: 8V/20 A or 20 V/10 A
RESOLUTION	1 mV/ 1 mA
CURRENT ACCURACY (READING)	0.15% + 5 mA

POWER SUPPLY HPS

POWER OUTPUT	1500 W: 60 V/25 A
RESOLUTION	1,2 mV/1.25 mA
CURRENT ACCURACY (READING)	0,3% ± 75 mA

TECHNICAL SPECIFICATIONS 2/2

FLUXMETER

MODEL	Digital Flux
RANGES	2000 x (1, 2, 5, 10, 20, 50,100) µWb
RESOLUTION	1/2000 of range
ACCURACY	±0,5 % of reading, ±1 digit

PC AND SOFTWARE

PC	PC, monitor, printer and connection cables
OPERATIVE SYSTEM	Windows O.S.
SOFTWARE	Argon (English or Italian)
CONNECTION	LAN

MANUALS & DOCS

	Calibration certificate, CE mark

CONTACT US

www.laboratorio.elettrofisico.com

EUROPE HEADQUARTERS

Italy, Nerviano (Milan)

+39 0331 589 785

italy@elettrofisico.com

USA

Michigan, Lake Orion

+1 248 340 7040

usa@elettrofisico.com

CHINA

Shanghai, Chang Shou Lu

+86 135 2439 6693

china@elettrofisico.com

VIETNAM

Hanoi, Anh Minh Building

+84 964 174 291

vietnam@elettrofisico.com