

MATS-2010M

Soft Magnetic Material Dynamic Hysteresisgraph System

Model MATS-2010M



Automatic measurement on dynamic hysteresis loop of soft magnetic (silicon steel) material under 50Hz, 60Hz, 400Hz and 1kHz, accurate measurement on dynamic magnetic characteristic parameters such as amplitude permeability μ_a , loss angle δ , total losses P_s , remanence B_r and coercive force H_c .

Windows measurement software applied simply. The product conforms to China National Standards GB / T3655 - 92, GB / T13789 - 92 and international standard IEC60404 - 6.

Analog source (bridge), frequency meter, ammeter, voltmeter and wattmeter are replaced through computer control and A/D sampling, entire testing process automatically completed.

General Features

Software Features

Software Screen

Technical Data

Standard Package

System Specifications

Under 50Hz frequency, use 25cm Epstein frames to measure silicon steel sample, technical indices as follows:

Parameters measured	B_m (%)	H_m (%)	μ_a (%)	P_s (%)	δ (%)
Uncertainty (k=2)	1	1	2	1	2
Repeatability (constant temperature)	± 0.5	± 0.5	± 1	± 0.5	± 1

Instrument Specifications

MATS - 2010M Dynamic Hysteresisgraph	PC6111 A/D Card
Output Power: 500VA sine wave	Conversion time: $\leq 2.5 \mu s$ (every channel)
Frequency Range: 45Hz~ 1000Hz	Resolution and Linearity: 12 Bit $\pm 1/2$ LSB
Frequency Fineness: 1Hz	Voltage Range: $\pm 5 V \sim \pm 10 V$
Frequency Error: $< 0.05\%$	Sampling Clock: $5 \mu s \sim 10ms$ Hardware Clock
Output Voltage: 0 ~ 10V ~ 50V ~ 150V ~ 300V, four automatic ranges	Internal Storage Capacity: 4k Byte
Voltage Fineness: Program Control 1mV, panel $< 0.1\%$ * current range	Structure: PCI busbar
Voltage Distortion Factor: Superior to 0.5%	
Voltage Stability: Superior to 0.02%	
Sampling Current: 2mA, 5mA, 10mA, 20mA, 40mA, 80mA, 200mA, 400mA,	

800mA, 1.6A, 4A, 8A (Peak Value)

Sample Voltage: 20mV, 40mV, 100mV, 200mV, 400mV, 800mV, 2V, 4V, 8V,
16V,

40V, 80V, 160V, 320V, 800V, 1600V (Peak Value)