
HALL EFFECT, 3-AXIS TESLAMETER type RX - 25

RX-25 is a hand held, Hall-effect based instrument, for measurement of magnetic field induction along of three mutually orthogonal axes. The measured value is displayed as module of field vector together with field of each individual axis.

Miniature Hall generators based on GaAs technology are used for magnetic field sensing. The instrument measures both AC and DC parts of magnetic field. For user's convenience AC mode is divided into two frequency bands: 45 - 55 Hz (or 55 - 65 Hz) and 20 Hz - 50 kHz.

Teslameter is equipped with three outputs: RS 232 C as standard and two analog ports as options. In order to increase precision of measurement and stability conditions of instrument this design employs digital lock - in detection, digital filtering as well as dynamic and temperature corrections of magnetic field induction.

Technical data

- Modes of measurement **DC, 50 Hz, AC (20 Hz - 50 kHz), temperature, peak hold (max., min.), relative, gradient (XYZ directions) ****
- Range 0 - 3000 mT (0- 0.5 mT)*
- Number of ranges 4
- Ranging automatic or manual
- Resolution 1 μ T (10 nT) *
- Accuracy **DC ($\pm 0.3\%$ + 2 digits), **AC ($\pm 1\%$ + 2 digits)****
- Probe 3-axis, diameter - ϕ 6.8 mm
- Temperature dependence of result 0.075 % / $^{\circ}$ C at range - 20 $^{\circ}$ C to + 60 $^{\circ}$ C (0.01 % / $^{\circ}$ C with temperature probe correction)
- Display graphic LCD
- Units Gs, mT, kA/m, $^{\circ}$ C
- Range of temperature measurements -20 $^{\circ}$ C to + 60 $^{\circ}$ C
- Temperature resolution 0.1 $^{\circ}$ C
- Analog output # 1 0 - 3 V, corrected (12 bit D/A converter)**
- Analog output # 2 ac voltage before detection, proportional to the value of magnetic field induction
- Digital output two-way RS 232 C with optical isolation
- Dynamic probe correction linearization of $U = f(B)$ function
- Temperature probe correction linearization of $U = f(T)$ function

- Supply 6 V (4 x 1.5 V AA battery) or external power supply
- Weight 0.45 kg
- Features (standard model)
 - ✓ memory of last 1000 results,
 - ✓ low battery indication,
 - ✓ MAG PRO H software for data acquisition and processing, local and remote mode of operations ,
 - ✓ digital filters ,
 - ✓ audible alarm function (i.e.can be used for industry sorting and checking of magnetic materials),
 - ✓ four languages for communication to choose.

Accessories

- Zero field chamber 60 dB attenuation of stray magnetic field for induction up to 30 mT
- Hard case
- Additional probe connection cable ** 1 m - 3 m
- AC adapter ** stabilized, 6 V/100 mA
- Additional probes **
 - HM - 2 AT, two-axis point sensor (axial and transverse), diameter - ϕ 3.8 mm
 - FS - 3, three-axis, **50 Hz (60 Hz)** mode only, 3 ranges 50 μ T - 50 mT, 51mm diameter (spherical)
 - HSF - 1 T, one-axis, transverse, subminiature, flexible, 0.8 mm thickness
 - HG - 2T, gradient probe, gradient resolution 0.01 mT / cm along of two mutually perpendicular axes, probe diameter - 6.8 mm
 - XX, customized probe for special using (i.e. for superconducting magnets up to 10 T)

* - range and resolution for **50 Hz (60 Hz)** mode with FS - 3 probe only

** - option

Menu of RX- 25 teslameter

POWER	MEASURING MODE	magnetic field	dc
			50 Hz
			ac
		peak hold	max
			min
			off
		relative	x x x x x
			off
		gradient	dX
			dY
	off		
	temperature	on	
		off	
	SETTINGS	axis	X
			Y
			Z
			vector
		ranges	auto
			5 mT
			50 mT
500 mT			
		3000 mT	
units		Gs	
	mT		
	kA / m		
alarm	↑ x x x x x		
	↓ x x x x x		
	off		
MISCELLANEOUS	probe zeroing		
	filter	on	
		off	
	time out	3 min.	
		6 min.	
		12 min.	
		off	
	results	on	
		off	
	menu	POLSKI	
ENGLISH			
DEUTSCH			
ITALIANO			

RX - 25 view

