

## Hall effect, 3-axis teslameter

type RX-25b

The RX-25b teslameter is a portable Hall-effect based instrument for measurement of stable or slowly varying (DC) as well as alternating (AC) magnetic field induction components - **simultaneously** along of the three mutually orthogonal axes. The AC component is measured at 20 Hz – 20 kHz frequency band pass, as a true RMS value. The results of measure is displayed as module of field vector together with value of each individual axis.

Miniature Hall generators based on GaAs technology are used for magnetic field sensing. Teslameter is equipped with two outputs: serial RS 232 C and analog port for AC magnetic field shape observing. 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 measurement.

### Technical data

- Modes of measurement **DC, AC ( 20 Hz - 20 kHz ), temperature, peak hold (max., min.), relative,**
- Ranges 20,000 mT; 200,00 mT; 2000,0 mT; (0 - 0.5 mT)\*
- Number of ranges 3
- Ranging automatic or manual
- Resolution 1  $\mu$ T, (10 nT) \*
- Accuracy **DC (  $\pm 0.4 \% + 2$  units ), **AC (  $\pm 1,4 \% + 3$  units )****
- Probe 3-axis, diameter -  $\phi$  6.8 mm
- Temperature dependence of result 0.075 % /  $^{\circ}$ C at range 0  $^{\circ}$ C to + 50  $^{\circ}$ C (0.01 % /  $^{\circ}$ C with temperature probe correction)
- Display graphic LCD
- Units Gs, mT, kA/m,  $^{\circ}$ C
- Range of temperature measurements 0  $^{\circ}$ C to + 50  $^{\circ}$ C
- Temperature resolution 0.1  $^{\circ}$ C
- Analog output AC voltage before detection, proportional to the value of magnetic field induction (**AC** mode only)
- Digital output two-way RS 232 C with optical isolation
- Dynamic probe correction linearization of  $U_{\text{sign.}} = f(B)$  function
- Temperature probe correction linearization of  $U_{\text{sign.}} = f(T)$  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 500 results,
  - low battery indication,
  - digital filters ,
  - audible alarm function (i.e.can be used for industry sorting and checking of magnetic materials),
  - other languages for communication to choose for demand.

### **Accessories**

- Manual
- Soft case
- MagPro ver. 25.3.10
  - PC software for data acquisition, real time plotting, processing, archivization and full control of instrument
- Four alkaline 1,5 V batteries
- Zero field chamber
  - 30 dB attenuation of stray magnetic field for induction up to 30 mT
- Certificate of calibration\*
- Hard case\*
- Additional probe/instrument connection cable \*
  - 0,5 m - 3 m
- AC adapter
  - stabilized, 9 V/100 mA
- Additional probes \*
  - please ask

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\* - options

**TESLAMETER MENU**

		dc
	magnetic field	ac
		on
	peak hold	off
		on
	relative	off
		on
	temperature	off
		Vector
	axis	X
		Y
		Z
		auto
	ranges	20 mT
		200 mT
		2000 mT
		Gs
	units	mT
		kA / m
		up x x x x x x
	alarm	down x x x x x x
		off
		on
	probe zeroing	on
		on
	filter	off
		3 min.
	time out	6 min.
		12 min.
		off
		on
	result memory	off
		POLSKI
	menu	ENGLISH
		DEUTSCH
		ITALIANO
	serial no.	xxxxx
	probe no.	xxxxx

**MEASURING MODE**

**SETTINGS**

**MISCELLANEOUS**

**POWER**  
(at the back)

**FRONT PANEL OPERATION**



-- up / down cursor moving



-- horizontal cursor moving

**ESC** -- measure / menu change

**Display black positions** -- now active

Overall view of teslameter with 3-axis probe



Full screen mode

