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RX-25b TESLAMETER

SHORT MANUAL

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CONTENTS

1. FIRST STEPS BEFORE START

- Remove plastic protection from the screen.
- Attach three-axis Hall probe to the instrument.
- Turn on teslameter. Use push-button located at the back of teslameter.
- Instrument may be supplied with internal battery or external AC adapter with stabilized 9 V output - see POWER socket. Adapter plug-in automatically disconnects the battery. **Do not use rechargeable batteries.**

- **Note:** connecting of external power supply with voltage higher than 9,5 V automatically switch off teslameter.
- When teslameter is initially turned on - logo „RX-25" will be illuminated for few seconds. Immediately after this the instrument automatically starts to do zeroing relative to the magnetic field existing around of probe.
- For more precise and absolute measurements, after at least one minute of instrument being on, it is recommended to repeat probe zeroing by placing probe into attached Zero Field Chamber and then choosing zeroing function from Menu.

2. FRONT PANEL OPERATION

- Access to Menu (see page 5) and a choice of desired modes and functions is showed on the Menu diagram. All operations of the instrument are controlled by four buttons only: **Esc** (menu/measure change), (up cursor), (down cursor), - **ENTER** (circular horizontal cursor). From any position at Menu it is instantaneously possible to enter to measure mode and inversely simply by using the **Esc** button!.
  Black label position on the display means active function at the time.
- Note that menu on the display of horizontal functional branches is subdivided vertically on the screen. Therefore, horizontal cursor initially moves vertically and then horizontally. This corresponds exactly to horizontal positions of Menu.

Three „position buttons" enable **very fast** access to the main functions without searching the Menu.Therefore, successive pressing of down button ( ) enables change of teslameter resolution from 0,001 mT to 0,1 mT. Up button ( ) changes active axis: X/Y/Z/Vect. Besides horizontal button (- **ENTER**) has two additional functions.

First, it activates direct access to Relative mode when pressed for more than two seconds in the measure mode. Second - in the vector mode only – it generates full screen projection of measured parameters, i.e. X, Y, Z axes and Vector results.

In order to go out from Relative mode the Menu must be entered. When pressing the horizontal button for two seconds, while at the Peak Hold mode – previous measurements are deleted and new actual measured magnetic field is established as zero.

- The rest of functions and modes of measurement are accesible from Menu only.

3. DISPLAY VIEW

- Besides of measured results placed at central part of screen, additional informations are visible on the display:

  F - **filter** is ON,
  R - **Relative** mode is ON,
  ↑ - **Peak Hold** mode is ON,
  - change battery.

- Result of temperature measure is placed at the bottom of left screen corner (this function is activated from Menu only!). Units of measurements (Gs, mT, kA/m) are presented at the right hand site of the bottom of the screen.

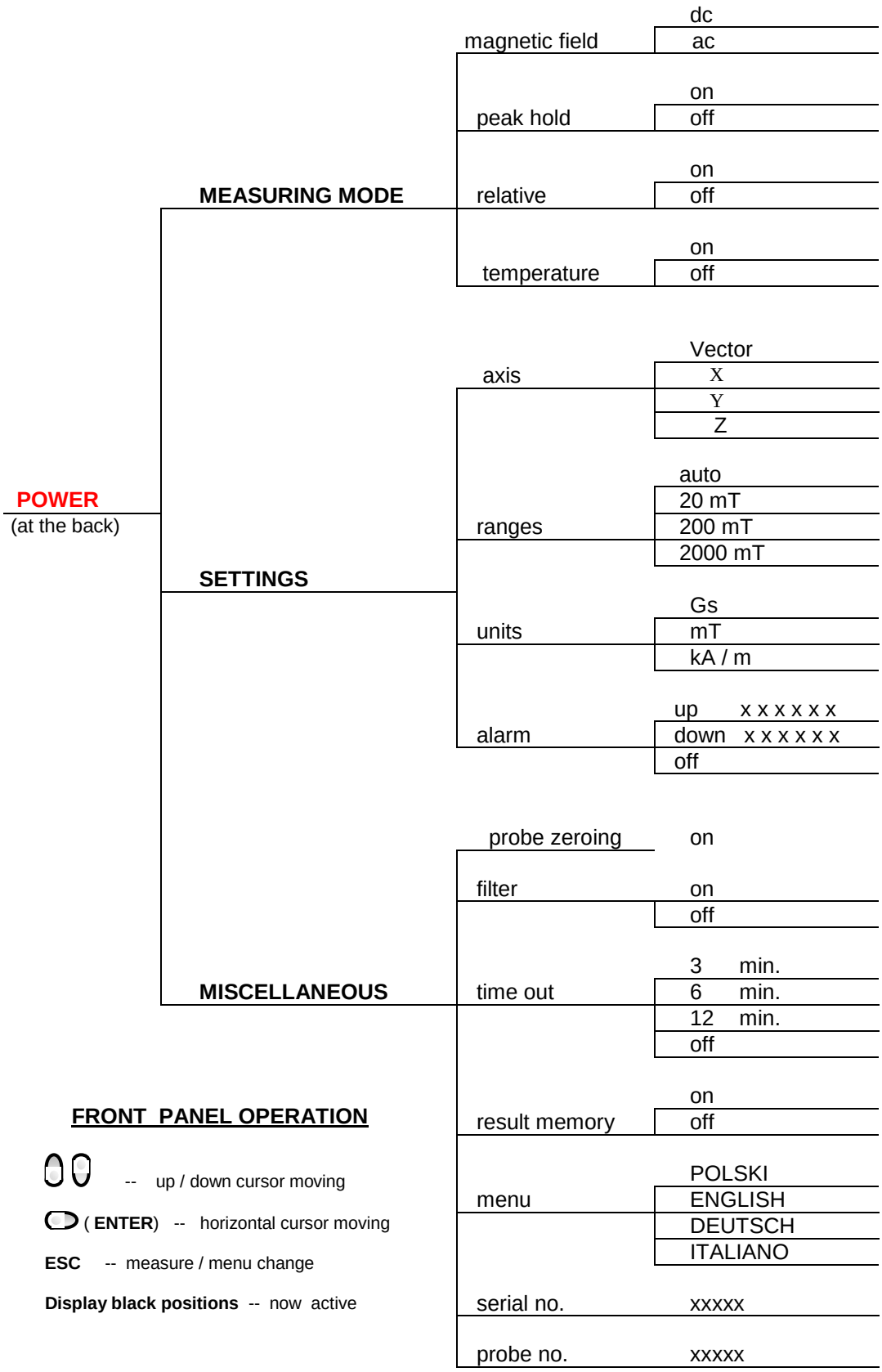
Standard mode of measure on the screen, where:

0,29 - value of vector of magnetic field measured,
Gs - chosen units of measure,
F - digital filter of result is ON,
13,1 °C – temperature of Hall sensor,

Full mode of measure where:

V - vector value of magnetic field,
X, Y, Z - values of magnetic field along of X, Y, Z axes respectively.

4. TESLAMETER MENU



FRONT PANEL OPERATION

-- up / down cursor moving

(**ENTER**) -- horizontal cursor moving

ESC -- measure / menu change

Display black positions -- now active

5. GENERAL REMARKS

- Teslameter has two additional output sockets: serial port (RS 232) for data transmission and remote control by PC and analog port for direct view on oscilloscope of AC magnetic field shape at AC mode of measurement.
  If there is no COM port in PC, please use standard COM /USB port converter.
- Instrument saves all utilized settings before being turned off.
- The attached MagPro RX-25.3.9 software allows for collecting results of measurements, write them to a file, show magnetic field variations at real time on the display, and remote control of most instrument functions by means of PC.
- Additional program is attached to the RX-25. 3.9 software which enables loading of upgraded versions of MagPro software to PC. This operation is realized by RS 232 port.
- Important: - the probe is extremely delicate part of the teslameter, please take care during using it. Please do not plug-in probe to the teslameter when it is on.