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WUNTRONIC
Mess-, Steuer- und Regelgeräte GmbH

Magnetometer KOSVAHA-USB User Manual

Digital Tesla Meter / Gauss Meter „KOSHAVA-USB“ with switchable units (Tesla, Gauss, kA/m und A/cm) analog output and USB interface

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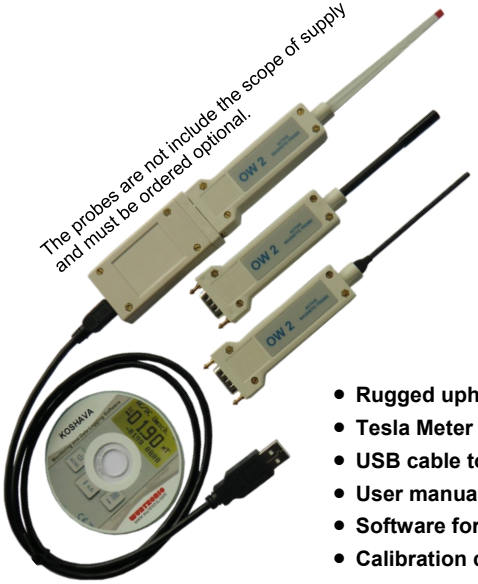
Scope of supply:



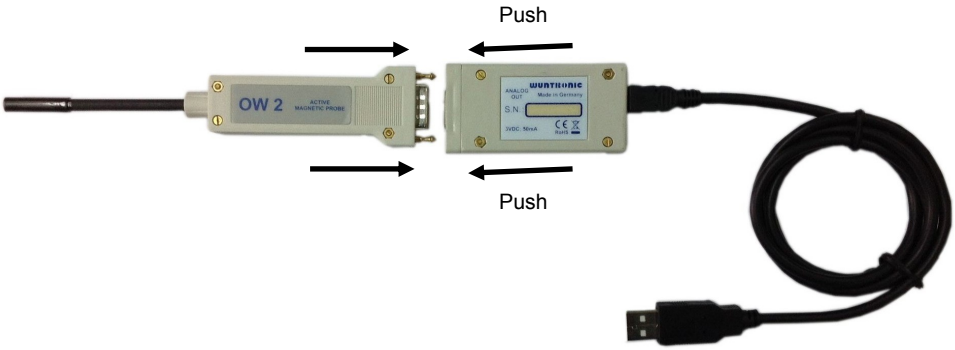
- **Rugged upholstered carrying suitcase**
- **Tesla Meter / Gauss Meter** (Order number 1099355)
- **USB cable to connect to PC**
- **User manual in English and German language.**
- **Software for displaying and logging the measure values**
- **Calibration certificate**

General descriptions:

WUNTRONIC has expanded its hugely successful Tesla/Gauss Meter product family KOSHAVA with a new USB unit. The Tesla/Gauss Meter KOSHAVA-USB is not only intended for customers which like to use the unit for automatically repeating pc based measurements, but also as a complement to the handheld Tesla Meter / Gauss Meter Type KOSHAVA 5 and also as a quality alternative for Low-Cost Tesla / Gauss Meters.

At the development of the Tesla Meters / Gauss Meters KOSHAVA 5 great value was paid to easy and intuitive use of the device. The Tesla Meter is comfortably and simply operable by English and German menu driven with 4 keys.

Probe connection:



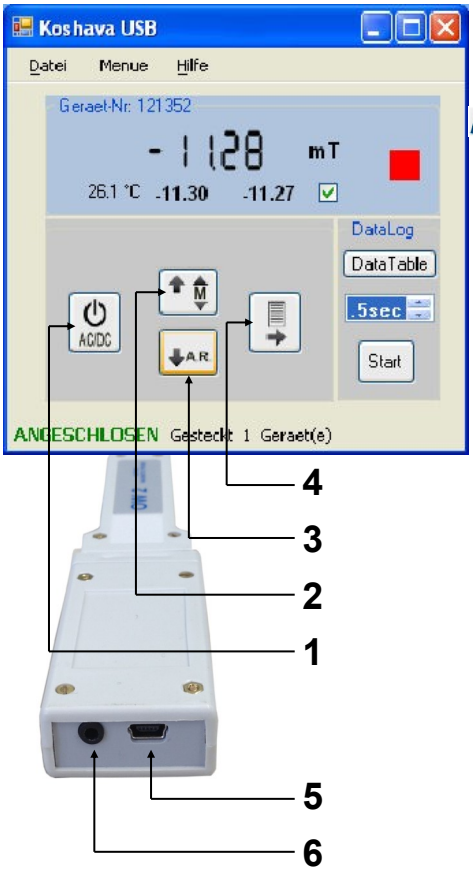
Put the probe (Transverse or axial probe) on to the 9-pin SUB D connector at top of the Teslameter.

Push the probe or the interconnecting probe cable onto the plug of the device so tightly that the latch on the left and right side clicks in.

At the first start of the unit with a new probe the Tesla Meter reads out from the probe the individual calibration and linearization table.

For the first use or to measure very small magnetic fields within the smallest range is recommended to run the zero field adjustment. (More details about the zero field adjustment you find at page 4)

Menu control, display and functions:



1 **ON / OFF:** The device becomes turned ON or OFF by long push on key 1

AC/DC **AC/DC Mode:** By pressing the key 1 briefly can be selected between DC or AC field measurement.

2 **Range up:** By pressing the key 2 briefly the range is increased by a decimal position.

Reset of the positive and negative peak value indication: The positive and negative peak value indication are set to zero by pushing long the key 2

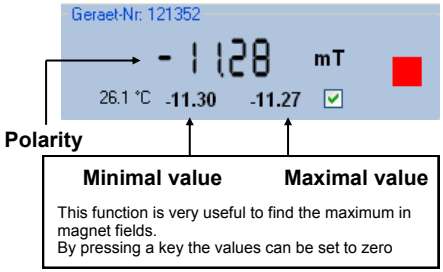
3 **Range down:** By pressing the key 3 briefly the range is decreased by a decimal position.

A.R. **Auto ranging:** The device switches on of off the auto ranging mode by pressing long the key 4

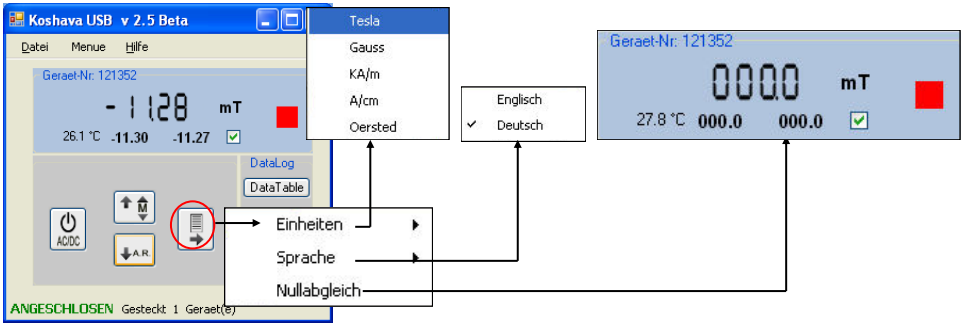
4 **Menu key:** (detailed information at the next page)

5 **USB interface:** The device is equipped with a USB interface. The software enclosed free of charge shows the displayed value of the device on the PC screen and offers the possibility of saving the readings in the selectable interval between 0,5 seconds and 100 seconds.

6 **Analog output:** Analog output: ±800 mV F.S. up to 10 KHz (not corrected value). Connection by 2,5 mm mono connector.



Menütaste:



The basic settings like choice menu language or select the unit can be taken with the menu key (3). With a short press the menu starts and with a short press at up (2) and down (4) key the function can be selected. With a log press (approx. 3 seconds) to the menu key (3) the selected function will be confirmed.

Units:

The following units are available:
Tesla
Gauss
kA/m
A/cm
Oersted

Language

The following languages are available:
Deutsch
Englisch

Zero field adjustment:

At the measurement very of weak fields the one always the zero field adjustment should be executed before the measurement.

With the zero field adjustment the environment fields becomes suppressed.

Zero field adjustment with the optional zero field chamber: If you put the probe top during the zero field adjustment into a zero field chamber, the geomagnetic field is suppressed.

Zero field adjustment without zero field chamber: If you run the zero field adjustments without the zero field chamber all available environment fields are suppressed and only the change cased by the test object will be measured.

Probe selection:

Transverse probes

Axial probes

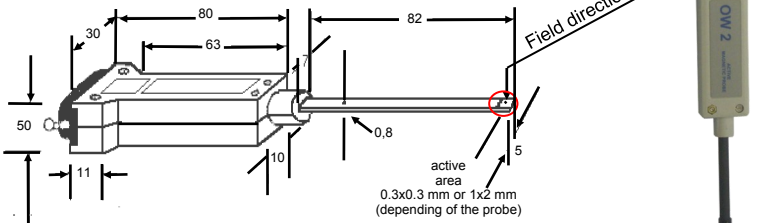
Customized probes
On request we can deliver customized probes with specials size and ranges.

Please call factory

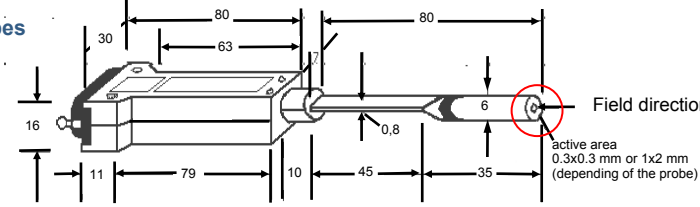
Probe dimensions:

Dimensions in mm:

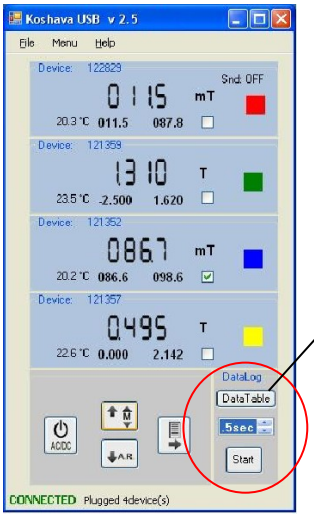
Transverse probes



Axial probes

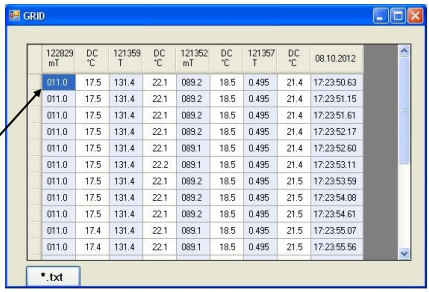


Software zur Darstellung und zum Datenloggen:



The software enclosed free of charge shows the displayed value of the device on the PC screen and offers the possibility of saving the readings in the selectable interval between 0,2 seconds and 50 seconds to the PC hard disk.

As data format its possible to select between the Excel compatible CVS or ASCII format.



Remote control:
The KOSHAVA-USV and also the handheld Tesla Meter KOSHAVA 5 can be remote controlled by Computer with the USB Interface

Spezifikationen:

Measurement Ranges (Probes up 3 or 4 Tesla on request): ..... 2 mTesla, 20mTesla, 200 mTesla, 2Tesla
(depending of the selected probe with 3 or 4 ranges) 20Gauss, 200Gauss, 2 kGauss, 20 kGauss
1,591kA/m; 15,91kA/m; 159,1KA/m; 1,591MA/m
15,91A/cm; 159,1A/cm; 1,591kA/cm; 15,91kA/cm
20 Oersted; 200 Oersted; 2kOersted; 20 kOersted
Auto ranging ..... The Tesla / Gauss Meter switch automatically in the optimal range
Display and switchable units : ..... 3 ½ digit display .
1,999 mT, 19,99 mT, 199,9 mT, 1999 mTesla
19,99 Gauss, 199,9 Gauss, 1,999 kGauss, 19,99 KGauss
1,591kA/m; 15,91kA/m; 159,1KA/m; 1,591MA/m
15,91A/cm; 159,1A/cm; 1,591kA/cm; 15,91kA/cm
19,99 Oersted; 199,9 Oersted; 1,999kOersted; 19,99 kOersted

Accuracy:
Device ..... 0,2% FSR ± 1 Digit
Probe ..... 0,3% FSR (DC) / 2% FSR(AC)
Long time stability: ..... 0,1% per year
Reproducibility: ..... 0,1% FSR (Units and probe)
Operating temperature: ..... 10° C to + 45° C
Storing temperature: ..... -20° C to + 55° C
Temperature coefficient: ..... 0,01% F.S. per °C (Unit and probe)
Functions: ..... DC, negative and positive peak value AC,

Power supply:
USB ..... via USB connection to PC

Dimensions and weight:
Dimension: ..... KOSHAVA-USB unit 70mm x 35 mm x 15 mm
Weight: ..... Unit 35 Gramm
Transvers probe 43 Gramm
Axial probe 55 Gramm

Output and interface:
Analog output: ..... ±800 mV F.S. up to 10 KHz not corrected
Connection by 2,5 mm mono connector
Interface: ..... USB 1.1
Software ..... Windows based Software for displaying and logging the measurement values at computer

Warranty:

All WUNTRONIC instruments are warranted against defects in material and workmanship for a period of one year from date of shipment to the original purchaser. WUNTRONIC agrees to repair or replace any assembly or components (expect expendable items such as fuses, lamps and batteries) found to be defective during this period. WUNTRONICS obligation under this warranty is limited solely repairing or replacing at its option any Tesla-Meter or probes which in WUNTRONIC's sole opinion proves to be defective within the scope of the warranty and when returned to the factory or to an authorized service center. Transportation to the factory or service center is to prepaid by purchaser. If the Tesla Meter or probe is defective as a result of misuse, improper repair, alteration, neglect, or abnormal conditions of operation, repairs will be billed at WUNTRONIC's normal rate. This warranty is in lieu of all other warranties, expressed or implied, and no representative or person is authorized to represent or assume for WUNTRONIC any liability in connection with the sale of our products other than set forth herein.

Limited warranty for probes:

The probe tops are kept very thin to able measure within narrowest air-gaps.
By the thin style the probes are very delicate against mechanical influences.

WUNTRONIC does not take warranty on any mechanical damages to the probes.

You pay attention at the storage that the enclosed reed capsule always protect the probe top

Transport damage:

The Tesla-Meter and probe should be tested as soon as it is received. If it is damaged in any way, a claim should be filed with the carrier. A full report of the damage should be obtained by the claim agent, and this report should be forwarded to us. WUNTRONIC will advise the disposition to be made of the equipment and arrange for repair or replacement. Please include model number and serial number in all correspondence referring to the instrument.