Tesla Meter / Gauss Meter with USB Interface and Analog Output

Portable microprocessor controlled precision Digitial Tesla Meter / Gauss Meter

Model KOSHAVA5

Features:

- **Min / Max detection (peak detection)**
- **Auto ranging**
- **Switchable units: Tesla, Gauss, kA/cm, A/cm or Oersted**
- **DC and AC Magnet field measurement up to 10 kHz RMS**
- **Digital linearization and Temperature compensate**
- **USB Interface. Free Software for remote and data logging**
- **Menu language English and German**
- **Digital zero field adjustment**
- **Large graphical Display**
- **10 mG (1µT) Resolution**
- **0.2% instrument accuracy**
- **Rugged**
- **RoHS conform (lead free)**
- **3 years Warranty (mechanical damages excepted.)**
- **Include calibrating certificate**
- **Made in Germany**

Description:

The new Tesla Meter / Gauss Meter KOSHAVA 5 combines the functionality, stability and precision of high-quality desktop units in a portable hand instrument.

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.

For every user the right measurement unit indication: Depending of which kind of use and in which country of use the user prefer the different units Gauss, Tesla, A/cm, kA/m or Oersted. Over the menu the user can select his preferred unit and he can save time for the annoying conversions.

Always the optimal measurement range:
To be able to reach the optimal resolution always, the Tesla Meter / Gauss Meter KOSHAVA 5 is equipped depending of selected probe with 3 (20 mT, 200mT, 2T) or 4 (2mT, 20 mT, 200mT, 2T) measurement ranges. The optimal measurement range can be either adjusted manually or setup automatically by using the Auto Ranging function.

Min / Max detection (Peak detection):
The Teslameter /Gaussmeter shows the minimal and maximal peak value in bottom area of the display. By pressing a key the peak values can be set to zero.

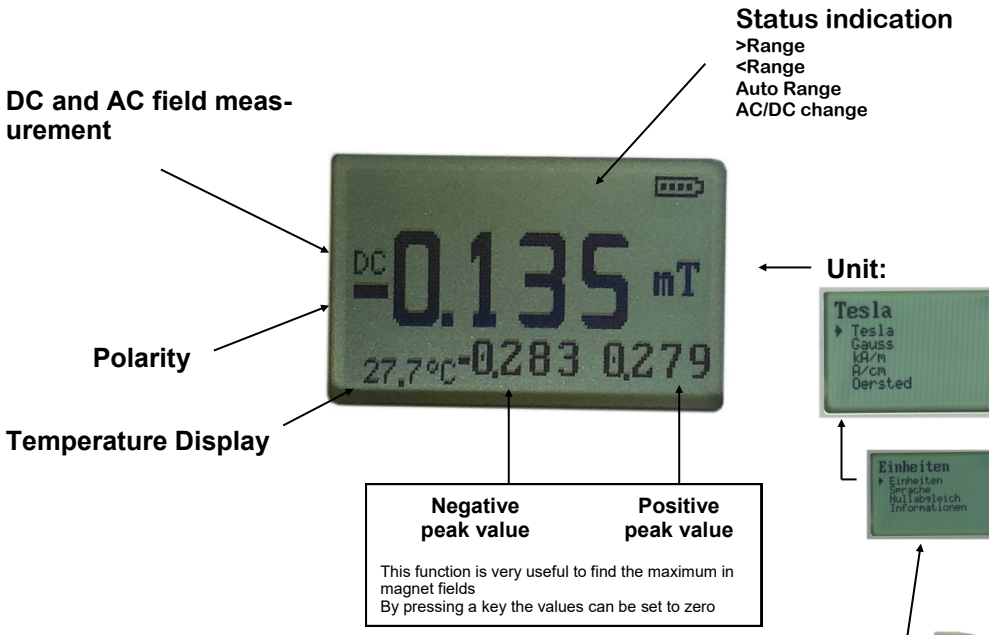
Precise in all measurement ranges:
In opposite to many other hall sensor based units at our Magnetometer KOSHAVA 5 each probe is measured in each range and each probe gets an individual table with linearization and calibration information. At the first start with a new probe the Tesla / Gauss Meter reads the calibration information and use this for the accurate calculations of the measure values.

Analog output and USB interface:
The Tesla Meter / Gaussmeter KOSHAVA 5 is suitable for the automatic control and documentation excellently through its features the analog output and USB interface. The software enclosed free of charge shows the displayed values of the device on the PC and offers the possibility saving the reading in a interval between 0,2 seconds to 50 seconds. The acquired data can be saved in the Excel compatible CSV format. If the unit is connected with the USB interface the power is supplied from the PC.

Applications:

- Assessment of magnetic materials.
- Analysis of magnetic circuits and components
- Measurement of residual magnetis
- Measure stray and leakage fields
- Measurement of absolute, and differential fields
- Testing, sorting, classifying magnets
- DC and AC motor testing
- Relay and solenoid test
- NDT Compliance Testing
- Loudspeaker test

Menu Control and Display:



The Tesla Meter / Gauss Meter is very easy and intuitive useable with only 4 keys

The large grahic display shows the current value as well the negative and positive peak measurement value.

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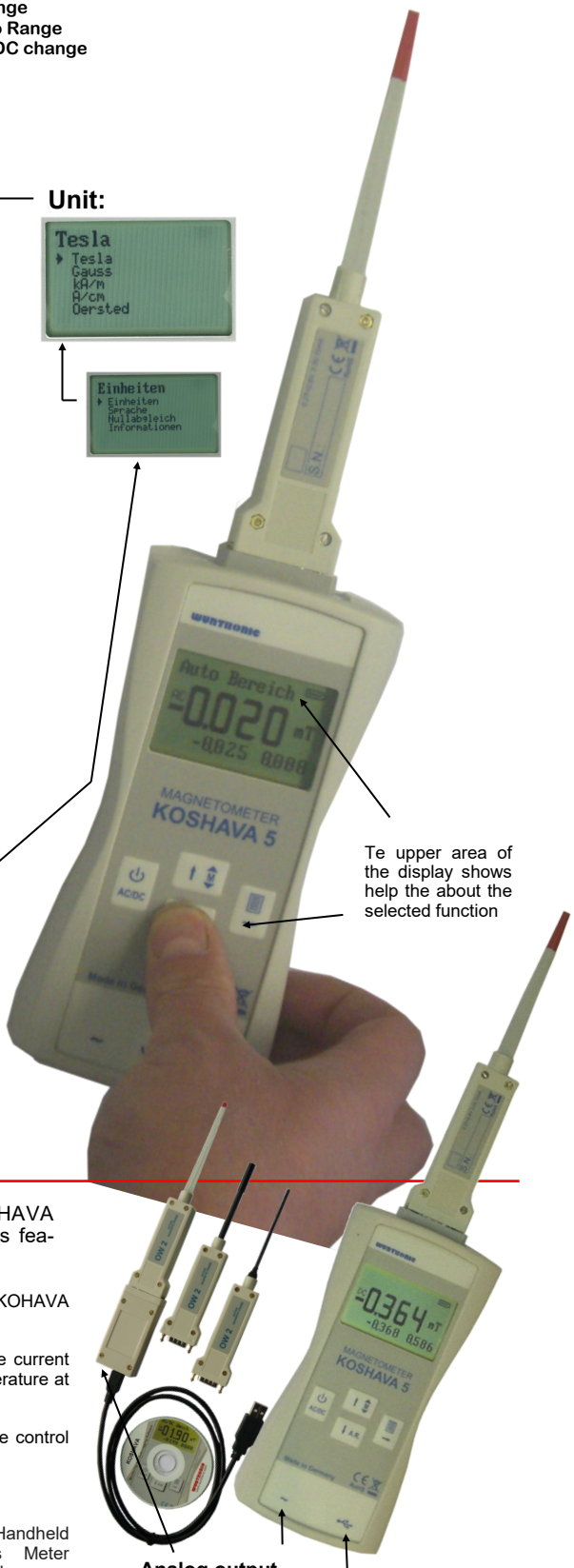


Te upper area of the display shows help the about the selected function

Data output and interface:

Analog output and USB interface: The Tesla Meters / Gauss Meters KOSHAVA are suitable for automatically control and documentation excellently because its features analog output and USB interface.

With the KOSHAVA Software the mixed use of up to 4 KOHAVA 5 or faceless KOSHAVA-USB units is possible.

For each unit, a data window opens, which shows the current value, the minimum and maximum peak and the temperature at the probe top.

The connected devices can be easily controlled on the control panel inspired by the KOHAVA5 control keypad

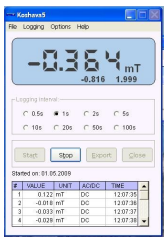
Connected Handheld Tesla / Gauss Meter KOSHAVA5 can be operated simultaneously on the device and the software

Powered by USB interface:
The Magnetometer KOSHAVA 5 gets the power from the USB interface, if the unit is connected with the computer.

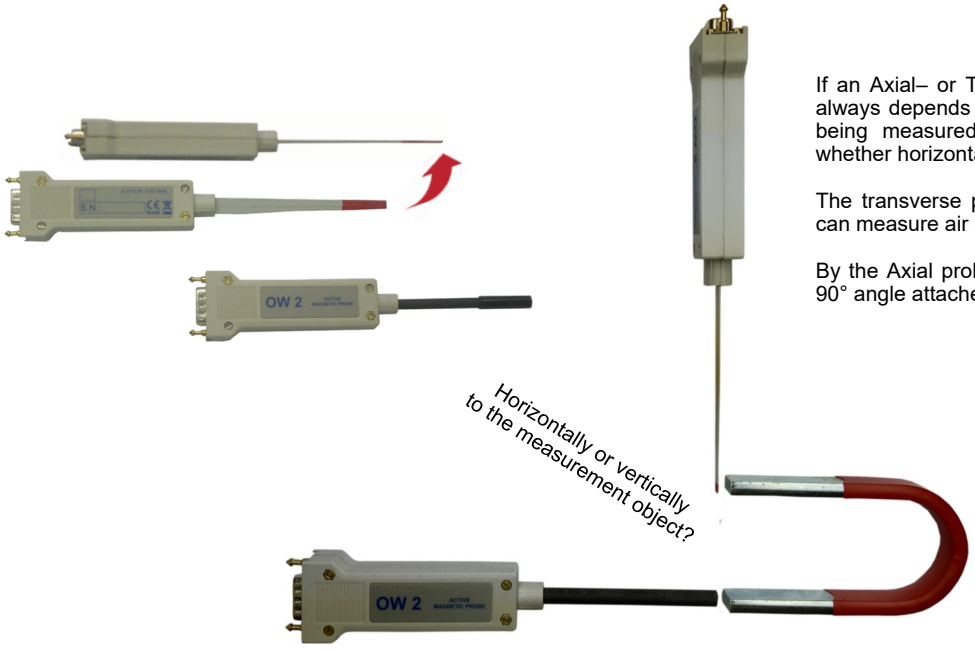
Analog output

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

USB Interface



Probe selection Axial or Transverse ?



If an Axial– or Transverse probe is more suitable, always depends on how to get closer to the object being measured and how should be measured whether horizontally or vertically.

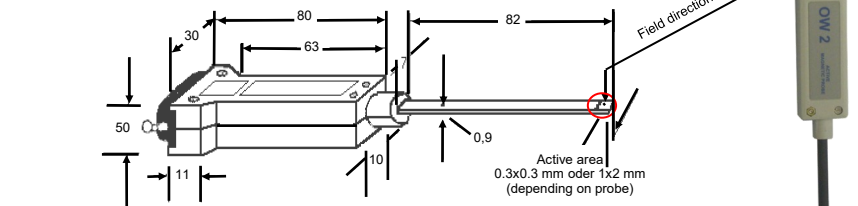
The transverse probe has the advantage that you can measure air gaps with the thin probe tip.

By the Axial probe the active measuring area is at 90° angle attached and sealed in a tube.

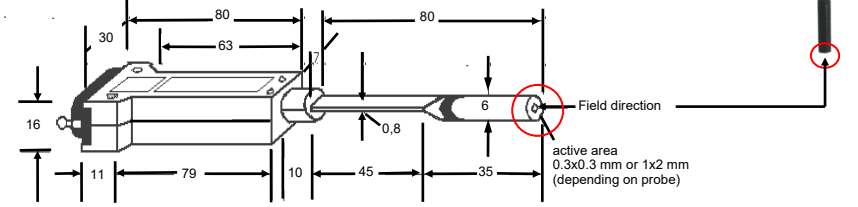
Probe dimensions:

Dimensions in mm:

Transverse probe



Axial probe



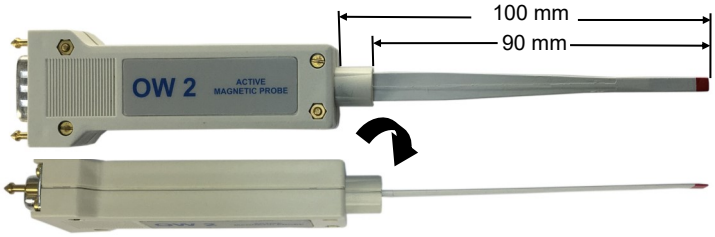
Scope of supply:

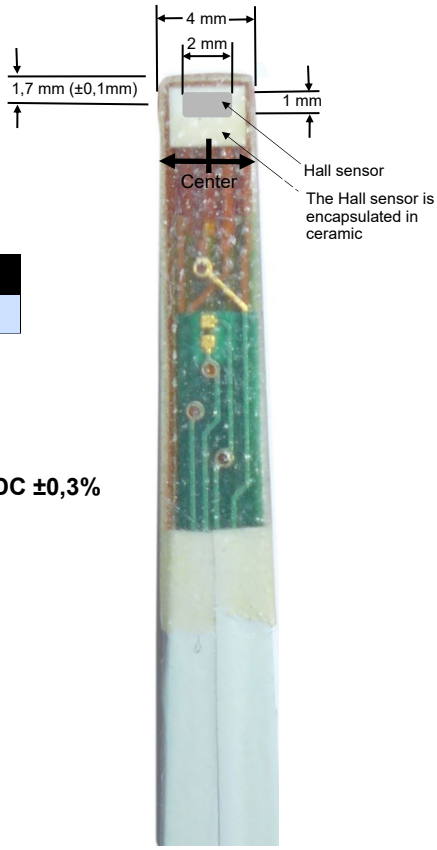
- **Rugged upholstered carrying suitcase**
- **Tesla Meter / Gauss Meter** (Order number 1099255)
- **1 meter probe cable**
- **USB cable to connect to PC**
- **User manual in Englisch an German language**
- **Software for displaying and logging the measure values**
- **Calibration certificate**

Transverse Probes with 4 ranges:

Probes with 4 ranges and temperature sensor (Active area 1x2mm, accuracy DC ±0,3% AC ±2%)

Ranges: 2mT, 20mT, 200mT, 2000mT
20Gauss, 200Gauss, 2kGauss, 20kGauss



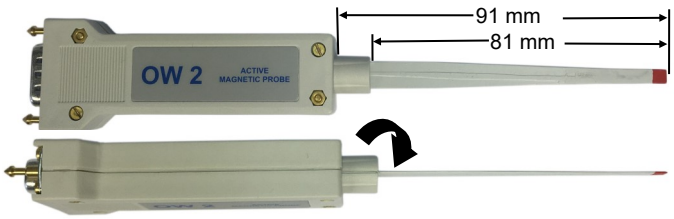


Order number	Model	Description
1099260	OW2-TT	Transverse probe for KOSHAVA 5 and KOSHAVA USB

Transverse Probes with 3 ranges:

Probes with 3 ranges and temperature sensor (Active area 1x2mm, accuracy DC ±0,3%

Ranges: 20mT, 200mT, 2000mT
200Gauss, 2kGauss, 20kGauss

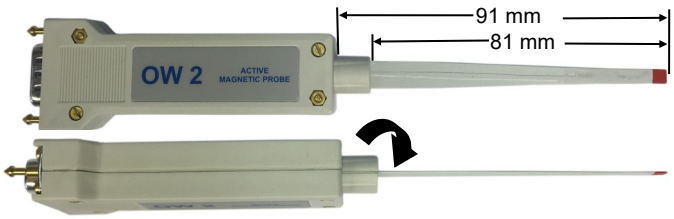


Order number	Model	Description
1099420	OW2-TT-3R	Transverse probe for KOSHAVA 5 and KOSHAVA USB

Transverse Probes with 3 ranges:

Probes with 3 ranges and temperature sensor (Active area 0,3,x 0,3mm, accuracy DC ±1% AC ±3%)

Ranges: 20mT, 200mT, 2000mT
200Gauss, 2kGauss, 20kGauss

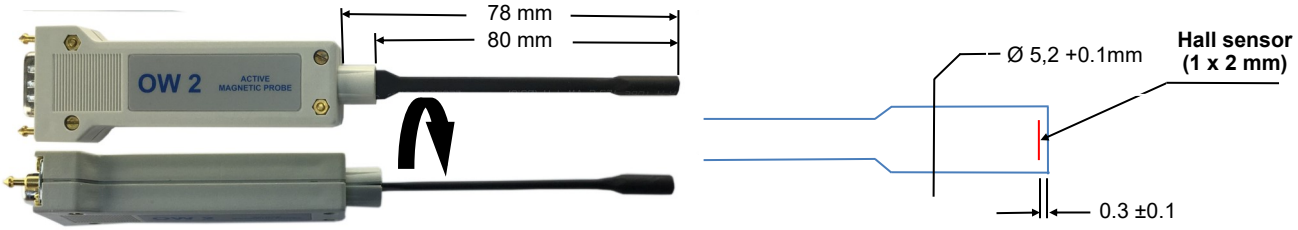


Order number	Model	Description
1099390	OW2-TMT	Transverse probe for KOSHAVA 5 and KOSHAVA USB

Axial Probes with 4 ranges:

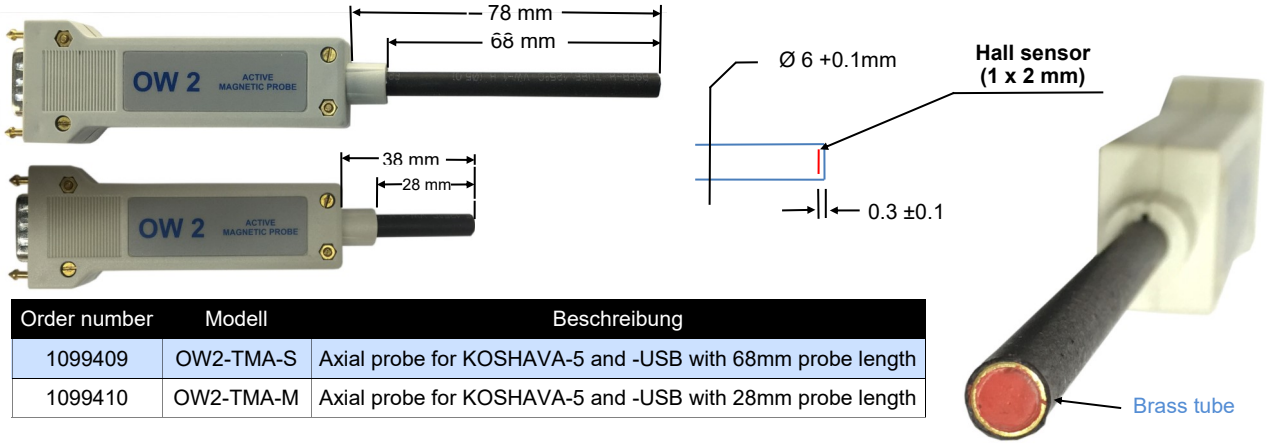
Probes with 4 ranges and temperature sensor (Active area 1x2mm, accuracy DC ±0,3% AC ±2%)

Standard probe



Order number	Model	Description
1099261	OW2-TA	Axial Probe for KOSHAVA 5 and KOSHAVA USB

Rugged probe with brass tube

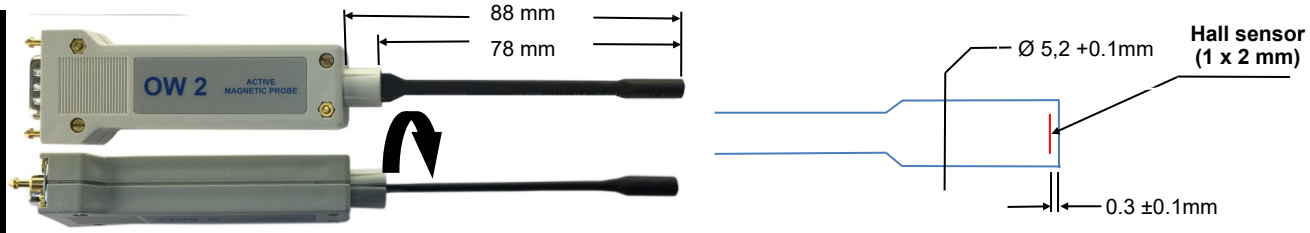


Order number	Modell	Beschreibung
1099409	OW2-TMA-S	Axial probe for KOSHAVA-5 and -USB with 68mm probe length
1099410	OW2-TMA-M	Axial probe for KOSHAVA-5 and -USB with 28mm probe length

Axial Probes with 3 ranges:

Probes with 4 ranges and temperature sensor (Active area 1x2mm, accuracy DC ±0,3% AC ±2%

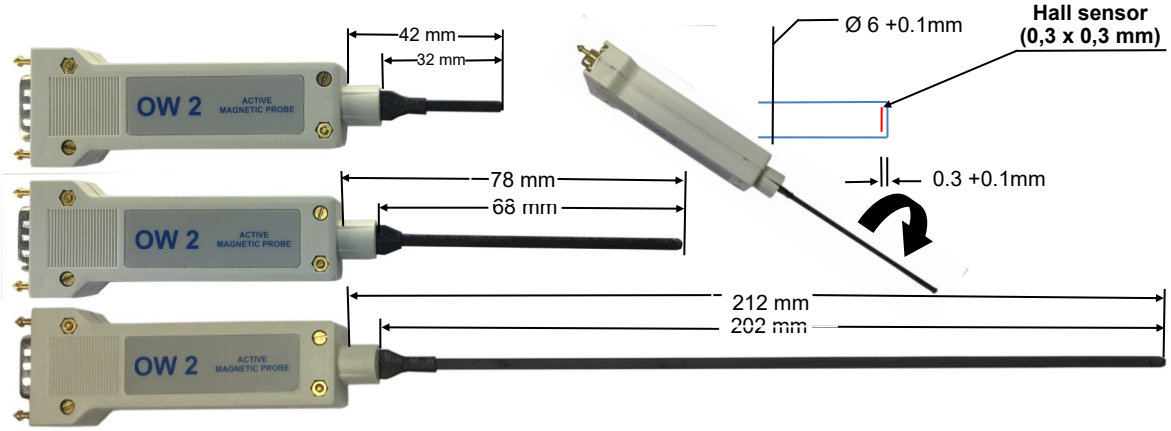
Standard Probe



Order number	Model	Description
1099430	OW2-TMT	Axial Probe for KOSHAVA 5 and KOSHAVA USB

Probes with 4 ranges and temperature sensor (Active area 0,3 x 0,3 mm, accuracy DC

Mini Axial Probe



Order number	Model	Description
1099409	OW2-TMA-S	Mini Axial Probe for KOSHAVA-5 and -USB with 32 mm probe length
1099410	OW2-TMA-M	Mini Axial Probe for KOSHAVA-5 and -USB with 68 mm probe length
1099415	OW2-TMA-L	Mini Axial Probe for KOSHAVA-5 and -USB with 202 mm probe length

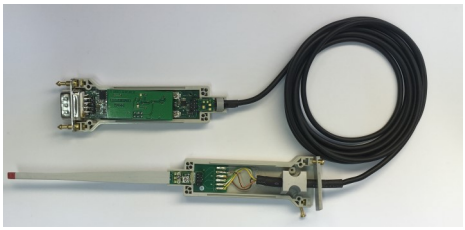
Passive Probes :

For measurements with the whole probe in a strong magnetic fields such it happens for example in a MTR (magnetic resonance imaging) we developed the passive probes.

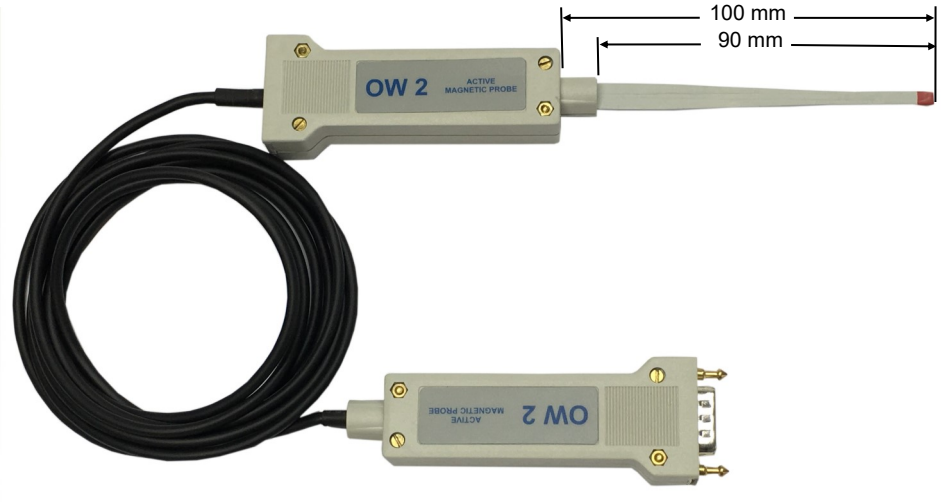
At the passive probe, the probe electronics is located at the end of the probe cable and be during the measurement away from the strong field.

The probe cable has a standard length of 2m and is optionally available with 4m.

The passive probes are available in the transverse and axial design.



Passive Tranverse Probe :



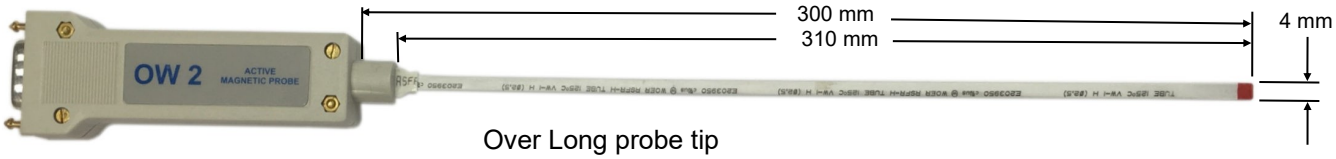
Order number	Model	Description	Ranges
1099279	OW2-TT-P2.5	Passive Transverse Probe for KOSHAVA 5 and –USB	2,5mT, 25mT, 250mT, 2,5T
1099280	OW2-TT-P3	Passive Transverse Probe for KOSHAVA 5 and –USB	3mT, 30mT, 300mT, 3T
1099281	OW2-TT-P4	Passive Transverse Probe for KOSHAVA 5 and –USB	4T, 40mT, 400mT, 4T

Passive Axial Probe :

Order number	Model	Description	Ranges
1099289	OW2-AT-P2.5	Passive Axial Probe for KOSHAVA 5 and –USB	2,5mT, 25mT, 250mT, 2,5T
1099290	OW2-AT-P3	Passive Axial Probe for KOSHAVA 5 and –USB	3mT, 30mT, 300mT, 3T
1099291	OW2-AT-P4	Passive Axial Probe for KOSHAVA 5 and –USB	4T, 40mT, 400mT, 4T

Customized Probes:

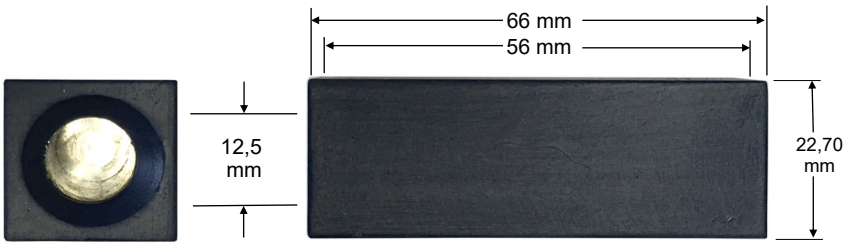
Open probe tip for measurement into a air gap of 0.6 mm



Over Long probe tip

Zero Gauss Chamber:

The Zero-Gauss-Chamber insolate the environment magnet fields. The Zero field camber is very usefull for zero adjustments of Teslameters / Gauss meters.



Order number	Model	Description
1099263	ZG-2	Zero Gauss Camber for Axial and Transverse Probes

Reference magnete:

The inexpensive WUNTRONIC standard reference magnets offers a simple way to test and calibrate in a defined field magnetic measuring instruments like our Gauss / Tesla Meters Series KOSHAVA.

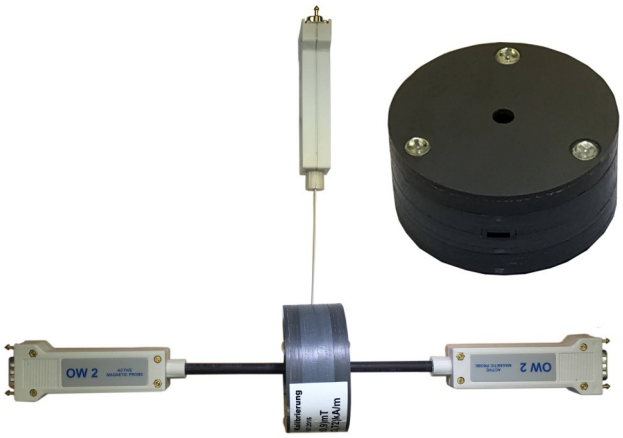
For axial and transverse probes: The reference magnets MT Series can be used for transverse and axial probes.

The reference magnets are available in two versions with a magnetic flux density H (induction) 20mT (200 Gauss) or 180 mT (1800 Gauss).

The specified flux densities and field strengths are approximate values and are determined individually for each magnet.

Factory calibration certificate: The reference magnets are delivered as standard with a factory calibration certificate.

Optional DAkkS calibration: Optionally, the reference magnets are available with a DAkkS calibration certificate.



Order number	Model	Description
1099181	MT20mT	20mT (200 Gauss) Reference magnet with factory calibration certificate
1099182	MT180mT	180mT (1800 Gauss) Reference magnet with factory calibration certificate
1099190	MT-DAkkS	Optional DAkkS calibration (Calibration by DAkkS accredited calibration)

Specifications:

Measurement Ranges:..... 2 mTesla, 20mTesla, 200 mTesla, 2Tesla
(depending of the probe) 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:
Battery:.....3 x1,5 volts AA Batteries (for approximately 70 hour operating)
USB ..... with external USB power supply or USB connection to PC

Dimensions and weight:
Dimension:..... Unit 165mm x 78 mm x 34 mm
Weight:.....Unit 255 Gramm (incl. Batterie)
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

Changes reserved

Order information:

Order No.	Model	Description
1099255	KOSHAVA 5	Precision Handheld Tesla / Gauss Meter (Please select one probe)
1099355	KOSHAVA-USB	Faceless Precision Tesla / Gauss Meter (Please select one probe)

Order No.	Model	Description	Accuracy DC	Accuracy AC
Probes with 3 ranges (20mT, 200mT, 2000mT) and temperature sensor (active area 0,3mm x 0,3mm):				
1099390	OW2-TMT	Transverse probe for KOSHAVA 5 and KOSHAVA-USB	±1% F.S	±3% F.S
Miniature axial probes with 3 ranges (20mT, 200mT, 2000mT) and temperature sensor (active area 0,3mm x 0,3mm):				
1099409	OW2-TMA-S	Mini axial probe (Probe top length 32mm and 3mm diameter) for KOSHAVA 5 and KOSHAVA USB	±1% F.S	±3% F.S
1099410	OW2-TMA-M	Mini axial probe (Probe top length 68mm and 3mm diameter) for KOSHAVA 5 and KOSHAVA USB		
1099415	OW2-TMA-L	Mini axial probe (Probe top length 202mm and 3mm diameter) for KOSHAVA 5 and KOSHAVA-USB		
Probes with 3 ranges (20mT, 200mT, 2000mT) and temperature sensor (active area 1mm x 2mm):				
1099420	OW2-TT-3R	Transverse probe for KOSHAVA 5 and KOSHAVA-USB	±0,3% F.S	±2% F.S
1099430	OW2-TA-3R	Axial probe for KOSHAVA 5 und KOSHAVA-USB		
Probes with 4 ranges (2mT, 20mT, 200mT, 2000mT) and temperature sensor (active area 1mm x 2mm):				
1099260	OW2-TT	Transversal probe for KOSHAVA 5 und KOSHAVA-USB	±0,3% F.S	±2% F.S
1099261	OW2-AT	Axial probe for KOSHAVA 5 und KOSHAVA-USB		
1099261-R	OW2-RAT	Axial probe for KOSHAVA-5 and –USB (Probe top length 68mm)		
1099261-R1	OW2-RAT1	Axial probe for KOSHAVA-5 and –USB (Probe top length 28mm)		
Passive probes (for using into strong magnetic fields) **with 4 ranges (3mT, 30mT, 300mT, 3000mT) and temperature sensor (active area 1mm x 2mm):**				
1099280	OW2-TT-P3	Passive Transverse probe for KOSHAVA 5 and KOSHAVA-USB	±0,3% F.S	±2% F.S
1099290	OW2-AT-P3	Passive axial probe for KOSHAVA 5 and KOSHAVA-USB		
1099281	OW2-TT-P4	Passive Transverse probe for KOSHAVA 5 and KOSHAVA-USB		
1099291	OW2-AT-P4	Passive axial probe for KOSHAVA 5 and KOSHAVA-USB		
Options:				
1099263	ZG-2	Zero field camber for transverse and axial probe		
1099181	MT20mT	Reference magnet ca.20mT (200 Gauss) for Transverse –and Axial-Probes		
1099182	MT180mT	Reference magnet ca.180mT (1800 Gauss) for Transverse -and Axial-Probes		
1099184	MT800mT	Reference magnet ca.800mT (8000 Gauss) for Transverse Probes		