



## DEUTROMETER 3873

Measurement Of Magnetic Field Strength

**KARL DEUTSCH**

# DEUTROMETER 3873

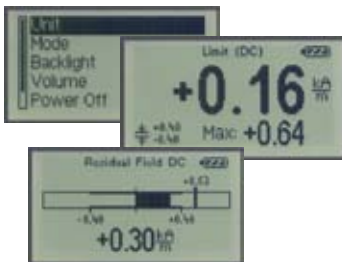
## The gauge for measurement of magnetic fields: rugged and user-friendly



Delivery in a handy carrying case together with a detailed instruction manual and a quality test certificate (image shows sample assembly).



0°-sensor and measuring head of the 90°-sensor: Various designs for different shapes of workpieces.



User-friendly menu guidance in plain text. The indication of readings is clear and well arranged.



Accessory: Zero Field Chamber (left) with field-free space and Reference Magnet (right) for check of instrument.

### Accessory for magnetic particle crack detection: Simple and convenient field strength measurement and monitoring of limit values

During the magnetic particle crack detection workpieces are magnetized by means of a current or a field flow. For a secure indication of cracks a minimum magnetizing field strength must be reached in this case. After termination of the test cycle the workpiece usually becomes demagnetized.

The DEUTROMETER 3873 was consistently designed for professional use and helps to determine both measurands quickly and easily: An own operating mode is available to measure both the magnetizing strength as well as the residual field strength immediately one after the other. Manual switching between alternating field and direct field mode is no longer required since the instrument automatically recognizes whether a direct field or an alternating field is present. Thus, false measurements due to incorrect gauge selections are excluded. The simultaneous representation of readings and maximum values as well as the selectable visual and acoustic limit alarm complete the practical qualities of the new gauge.

For optimal adaptation to the geometrical conditions you can choose between a 0° and a 90°



Example on application: Measurement of tangential field by means of the 90°-probe at field flow

measuring head. An alternative, paraffin-resistant version makes the probes especially robust and thus suitable for crack detection using oil-based testing agents.

The menu guidance is executed in comprehensible plain text. The illuminated display and the lettering which fluoresces under UV light permit safe and easy operation of the instrument also inside the darkened testing booth.

### Further advantages of the DEUTROMETER 3873

- 2 selectable display modes: standard indication, bar graph indication for visual monitoring of limits
- "True RMS" mean values in AC fields
- Battery-saving illumination
- Integrated stand
- Splash-proof housing (IP 54)

### Technical Data DEUTROMETER 3873

<b>Display</b>	LCD, illuminated, 48 mm x 24 mm approx., graphic capability 128 x 64 px, font height up to 12.5 mm
<b>Measurands</b>	Magnetic field strength H and/or induction B (in air) in direct (DC) and alternating fields (AC)
<b>Measuring ranges</b>	0.0 to 80 kA/m, measurement uncertainty: $\pm 0.01$ kA/m $\pm 2\%$ (DC), $\pm 0.05$ kA/m $\pm 4\%$ (AC)
<b>Measuring principle</b>	Hall sensor
<b>Measuring units</b>	mT, A/cm, kA/m, Gauss
<b>Measuring methods</b>	DC = measuring of a direct field with information on the polarity of the magnetic field, AC = mean (True RMS) in an alternating field
<b>Sensor design</b>	0° or 90° measuring heads, 1 m connection cable, on request: paraffin resistant, weight 45 g
<b>Power supply</b>	2 pcs. alkali manganese batteries (operating hours: 50 h approx.) or 2 pcs. NiMH rechargeable batteries (operating hours: 30 h approx., if new), type AA/IEC R6 Externally via mains unit or via USB cable from a PC
<b>Battery check</b>	4-stage battery level indicator, automatic low-limit cut-off
<b>Keyboard</b>	4 keys, lettering fluoresces under UV light
<b>Size, weight</b>	133 mm x 81 mm x 32 mm approx., 150 g (with batteries, w/o protective rubber holster)

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DIN EN ISO  
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