

# MAGNETOMAT $\hat{a}$ C 1.723

Magnetic Field-Measuring Instrument



A dedicated versatile measuring system from the worlds leading manufacturer of sensors - (FÖRSTER-Sensor) and magnetic field measuring systems.

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## DESCRIPTION

- \* Magnetic DC field measurement (absolute value)  
Measuring range  $\pm 100 \mu\text{T}$  (max. value)
- \* Field difference measurement (DC field)  
Measuring range  $60 \mu\text{T}$  (max. value)
- \* Resolution up to  $0.1 \text{ nT}$  (depending upon measurement time)
- \* Inputs for FÖRSTER-sensors (1-, 2-, 3-axis and field difference)
- \* Max. 9 measuring channels (individually switchable for display)
- \* Digital display (switchable 6 1/2- or 5 1/2- digit)
- \* IEEE 488-bus interface
- \* Output for each measuring channel (10V D.C. for max. measurement value)
- \* Inputs for calibration-/compensatidn windings of the sensor measuring channels (one for each measuring channel)
- \* Facility for zero-offset (one measuring channel)
- \* 220V / 50 or 60 Hz
- \* (other voltages or accumulator-/battery operation upon request)
- \* Laboratory housing (other housings upon request)
- \* Separate measurement operations for current-, voltage-resistance and temperature measurements
  - separate input sockets for voltage-/resistance measurement (high impedance) and current measurement
  - input for temperature measurement (with PT 100-element)
  - function select by means of front keyboard for off-set, percentage deviation, logarithmic display, integration time (0.1 s to 10 s), external triggering, digital calibration

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## APPLICATIONS

The FÖRSTER-magnetic field measuring instrument **MAGNETOMAT<sup>a</sup> C 1.723** is specifically designed for the measurement of magnetic DC fields

for example - Earths magnetic field  
- Magnetic interference fields (permanent and induced)

and for the numerous applications of difference field measurements (earths magnetic field and background static magnetic fields are automatically compensated)

for- example - for detecting ferromagnetic objects  
- military ordnance components

as well as laboratory applications (laboratory or other housings available) out of doors operation (special housings upon request).

The high resolution (up to 0.1 nT) is of particular significance for scientific and technical/industrial applications.

The variety of FÖRSTER-sensor connections (see system components) which are watertight enable measurements-underwater (down to a depth of 100m) to be effected.

The available IEE-bus serves as an interface for the connection of a computer (ie., PC) and for computer-supported measurement data processing and evaluation.

There is a separate measurement- facility for the usual current-, voltage-, resistance- and temperature measurements. An available auxiliary-measuring programme in the instrument can be activated from the front keyboard for different displays of measured values and for processing.

### Note.

The measuring instrument can be supplied in a military housing or 19" plug-in unit (prices upon application)

Software for the measurement data analysis (ie., graphical display) can be offered to meet customer requirements (also with computer).

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## SYSTEM COMPONENTS

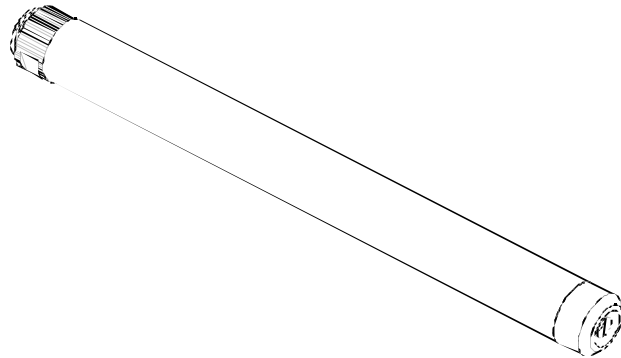
for connection to the magnetic field measuring instrument:

### A. DIFFERENCE-/ABSOLUTE FIELD SENSOR

including 30 m of cable (other cable lengths upon request)

#### Technical Data:

- Measuring range
  - absolute field: 0 to  $\pm 60 \mu\text{T}$
  - difference field: 0 to  $10 \mu\text{T}$
  
- Probe base clearance: 400 mm
  
- Temperature range:  $-50^\circ$  to  $+80^\circ \text{C}$
  
- Outputs: separate für absolute and difference field measurement
  
- Dimensions:  $\varnothing 45 \text{ mm}$   
length 600 mm
  
- Weight 1,25 kg (without cable)
  
- Splash proof (special types available; waterproof down to water depths of 100 m; prices available upon request)



length 320 mm

**B      MAGNETOMAT<sup>â</sup>-Sensor**

Uniaxial (Z)

including 20m of cable (other cable lengths upon request)

**Technical Data:**

- Measuring range            0 to  $\pm 100 \mu\text{T}$

- Max. output voltage         $\pm 10 \text{ V}$

- Temperature range        - 10 to + 45° C

- Dimensions                 $\varnothing 48 \text{ mm}$   
length 320 mm

- Weight                      about 0.9 kg  
(without cable)

- An additional calibration/compensation winding
- Magnetometer electronics within the sensor housing
- Splash proof  
(special constructions available: waterproof down to water depths of 100 m; prices available upon request)

**C      MAGNETOMAT<sup>â</sup>-Sensor**

Triaxial (X,Y,Z)

including 20 m of cable (other cable lengths upon request)

**Technical Data:**

- Measuring range            0 to 100  $\mu\text{T}$

- Max. output voltage         $\pm 10 \text{ V}$

- Temperature range        - 10 to + 45° C

- Dimensions                 $\varnothing 84 \text{ mm}$



- Weight                      about 1.5 kg  
(without cable)

- An additional calibration/compensation winding for each measuring axis (X, Y, Z)
- Magnetometer electronics within the sensor housing
- Splash proof



(special constructions available: waterproof down to water depths of 100 m; prices available upon request)

**Note**

Biaxial sensors are available (prices upon request)

For the solution of your special problems please contact:

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Information and illustrations  
subject to modification

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