

# Measuring it all

Total flux integration  
of permanent magnets  
and magnet assemblies

## ■ Fluxmeter M-Flux 1000



### Precise measurement:

- 0 Drift
- Resolution: 0.01µVs
- Accuracy ±1.0µVs
- Precise measurement of pulses up to 5kHz

### Total human Interface:

- Easy to use by focus onto relevant features and displays
- Probe identification
- Automatic drift compensation

### Smart technology:

- Setup of 1-3 channels
- Oscilloscope for pulsed fields
- High variety of accessory

### Fluxmetric Metrology

A Fluxmeter is an integrator of voltage. The physical principle of fluxmetric measurement is:

$$U_{\text{ind}} = d\phi/dt$$

$$\phi = \int U_{\text{ind}} dt$$

The measurement result equals to the flux  $\phi$  through the measurement coil.

Different magnetic values such as Flux, Flux density, Field strength, Dipole moment or Potential can be measured by use of different measurement coils.



## Technical Data

|                    |                                                                                                                                                                           |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement ranges | $\pm 500\mu\text{Vs}$ , $\pm 5\text{mVs}$ , $\pm 50\text{mVs}$ , $\pm 500\text{mVs}$                                                                                      |
| Range selection    | Automatically or manually                                                                                                                                                 |
| Accuracy           | Repeatability $\pm 1\mu\text{Vs}$<br>absolute $\pm 0,5\%$ of Range maximum after self calibration                                                                         |
| Magnetic Values    | Magnetic Flux: Vs, Wb, Maxw<br>Magnetic Flux density: T, G<br>Magnetic Field strength: A/m, Oer<br>Magnetic Dipole moment: Am <sup>2</sup> , Vsm<br>Magnetic Potential: A |
| Measurement        | DC, AC bis zu 2500Hz                                                                                                                                                      |
| Calibrator         | Internal reference of voltage and time, Autocalibration                                                                                                                   |
| Drift              | Standby: 0 $\mu\text{Vs}/\text{min}$ after dedrift<br>Measurement cycle: $< \pm 1\mu\text{Vs}/\text{min}$ after dedrift                                                   |
| Input resistance   | 10kOhm $\pm 0.1\%$                                                                                                                                                        |
| Input terminals    | Miniature connectors at front and rear panel                                                                                                                              |
| Display            | LCD 240*65 Pixel, 127mm * 34mm Display size<br>Black Graphic on white background LED<br>5-Digits Display                                                                  |
| Dimension          | 105mm * 236mm * 256mm                                                                                                                                                     |
| Weight             | 3,0kg                                                                                                                                                                     |
| Mains connection   | 230/115VAC $\pm 10\%$ , 50-60Hz                                                                                                                                           |

## Interfaces

|                  |                                                                                      |
|------------------|--------------------------------------------------------------------------------------|
| Analogue Output  | $\pm 10\text{V}$ , Continuous output of displayed readings<br>Peak (Min. Max. Diff.) |
| Serial Interface | RS 232C, SCPI Code, 9600 Baud, 115kbaud via USB                                      |
| PLC              | 8 Inputs / 8 Outputs 24VDC, short current proof                                      |

## Software functions

|                              |                                            |
|------------------------------|--------------------------------------------|
| Automatic drift compensation | 8 different Go/No Go - Comparators         |
| Self calibration             | Storage of probe parameter in probe EEPROM |

## Deliverable Accessories

|                   |                                                                                                                                    |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Search coils      | Probe connector plug with shielded cable, 2m long, for connection of self made coils to the fluxmeter. Built-in memory chip.       |
| Helmholtz coils   | Adaptor box with built in memory chip for the connection of probes with 4mm plugs (19mm distance). Length of connecting cable: 1m. |
| Potential coils   |                                                                                                                                    |
| Reference magnets | Mounting kit for assembly into 19" rack                                                                                            |