

MEASURING EQUIPMENT
DC - Microvoltmeter 2000

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Sheet: 1 of 1

German Cathodic Protection



DC - Microvoltmeter 2000

General

The microvoltmeter has a sturdy plastic case with a carrying handle which can be adjusted in 30° steps. Controls and indicators are located in a clear, logical configuration. Controls are grouped in accordance with the various functions of the unit.

Measuring Range

The microvoltmeter is a highly accurate moving coil instrument equipped both with an accumulator and a 230 V, 50-60 Hz socket for direct line connection. Two scales are provided with 10 skt and 3 skt. Fullscale ranges from 10 µV to 300 V

Polarity Indicator and Zero Adjustment

The unit features automatic polarity switching to ensure correct readings irrespective of polarity. Two LED's on the front panel indicate the polarity of the voltage measured; a control is provided for zero adjustment on the µV-range.

Active Filters for eliminating AC-influence

The 16 Hz and 50 Hz low-pass filters can be used to eliminate interference frequencies during measurements.

Isolated Amplifier Output

An output socket for the connection of an external recorder to document the measurements is located in the front panel. A special isolating amplifier is connected to the socket to isolate it from the input circuit. Recorders with earthed inputs can therefore be used without distorting the measurement.

Power supply 230 V

Power supply either via the 220 V socket or via the built-in NiCd batteries is possible. The unit is equipped with a built-in battery charger, an automatic monitoring system and protection against excessive discharging. Both battery charging and battery charge conditions are indicated.

Power supply 12 V Option

A converter DC-DC with a screwed plug connecting to the rear panel is available as an optional extra for using a 12 V car battery as power supply during field measurements.

Front Panel Controls and Indication

- S 1 Power - On button, with red mechanical indicator
- S 2 Range selector
- S 3 / 4 Filter-switch for eliminating AC influence
- BU 1 / 2 Brass input sockets
- BU 3 / 4 Amplifier output for external chart recorder connection
Fullscale range is transferred to 1 V
- LED 1 / 2 LED to indicate input polarity
- LED 3 LED-button to indicate battery charging and battery control
- R 1 Zero adjuster for microvolt ranges
- R 2 Mechanical zero adjustment for moving coil instrument



Technical Data

Measuring range	± 10 µV to ± 300 V
Input impedance	1 MΩ for ranges 10 µV upto 3 mV 10 MΩ for ranges 10 mV upto 300 V
Display	Analog pointer instrument with scaling factor 3 and 10 divisions
Accuracy	+/- 1.5% of full scale
Drift	+/- 0.2 µV / °C for operating temperatures from 15 up to 40°C
Series-mode rejection	16 Hz - 60 dB, 50 Hz - 80 dB
Basic pointer deflection	5 skt. on the 10 µV range
Polarity indication	LED display
Offset-control	± 45 µV
Recorder output	± 1 V to kΩ
Dimensions	105 x 230 x 230 mm
Weight	1.9 kg
Power supply	230 V line voltage or via insert NiCd-accumulator 9.6 / 1.6 Ah
Operation time	approx. 18 h non-stop operation with one accu-charge approx. 8 h by switched-on amplifier
Electric strength	max. 500 V DC or 300 V effective on all ranges

