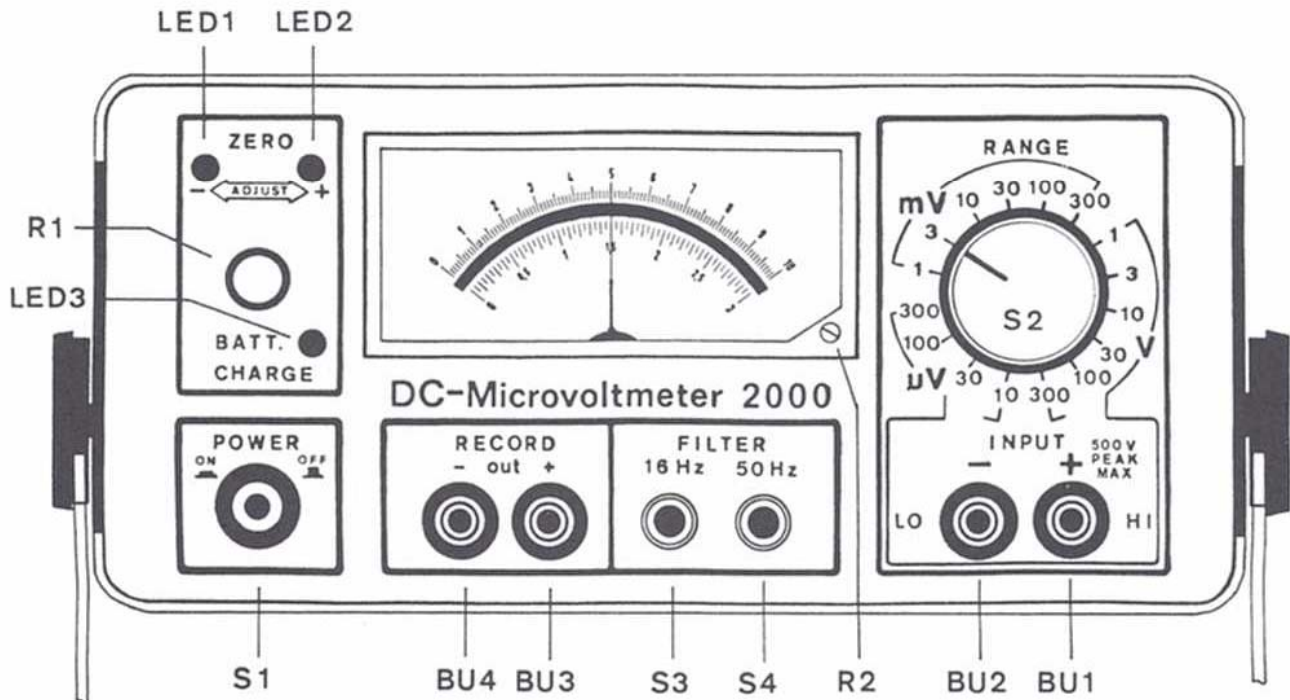


# DC-Microvoltmeter 2000



*Battery- and mains powered DC-Microvoltmeter  
with high measuring sensitivity, built-in active filters and analogue display*

## Front Panel Controls and Indicators



- 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 Volt
- 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**

### **General**

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

### **Measuring Range and Input Resistance**

The microvoltmeter is a highly accurate moving coil instrument equipped both with batteries and with a mains connection. Two scales with 10-unit and 3-unit divisions are provided. Fullscale ranges from 10  $\mu$ V to 300 V.

### **Polarity Indicator and Zero Adjustment**

The automatic polarity switching ensures 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 in the  $\mu$ V-range.

### **Active Filters for eliminating AC influence**

The 16 Hz and 50 Hz active sharp cutting low-pass filters installed in the unit can be switched-on to eliminate interference AC frequencies.

### **Isolated Amplifier Output**

The front panel also houses a 1 Volt output socket for the connection of an external chart recorder to document the measurements. A special isolating amplifier is connected to the socket to isolate it from the input circuit. Recorders with earthed inputs can therefore be connected without distorting the measurements.

### **Mains- and Battery Operated with battery capacity testing capability**

Power supply is either 230 Volt from the mains or from the built-in lead gel batteries. The unit is equipped with a built-in battery charger and an automatic monitoring system and protection against excessive discharging. Both battery charging and the actual battery capacity are indicated.

### **12 Volt Option**

A DC / DC converter with a screwed plug connecting to the rear panel of the unit is available as an optional extra to permit the use of a 12 Volt car battery to power or charge the unit during field measurements.

## Technical Data

<b>Measuring Range:</b>	$\pm 10\mu\text{V}$ to $\pm 300\text{ V}$
<b>Input Resistance:</b>	1 M $\Omega$ in the range 10 $\mu\text{V}$ to 3 mV 10 M $\Omega$ in the range 10 mV to 300 V
<b>Display Device:</b>	Analogue with 10-division and 3-division scales
<b>Measuring Error:</b>	$\pm 1.5\%$ of full scale (without drift and noise)
<b>Drift:</b>	$\pm 0.2\ \mu\text{V} / ^\circ\text{C}$
<b>Working Temperatur:</b>	The above accuracy figures apply between 15°C and 40°C. From 0°C to 15°C and from 40°C to 50°C the additional error is $\pm 1.5\%$ .
<b>Frequency Attenuation:</b>	For 16 Hz = 60 dB, for 50 Hz = 80 dB
<b>Standard Indication:</b>	5 divisions in the 10 $\mu\text{V}$ range
<b>Polarity Indication:</b>	LED
<b>Offset-Adjustment:</b>	$\pm 45\ \mu\text{V}$
<b>Recorder Output:</b>	$\pm 1\text{ Volt}$ to 1 k $\Omega$
<b>Dimensions:</b>	105 x 220 x 230 mm (H x W x D)
<b>Weight:</b>	3.9 kg
<b>Power Supplies:</b>	230 V mains power and battery 6 V / 1.3 Ah. 40 hours of use. 20 hours with isolating amplifier in operation
<b>Max Voltage:</b>	500 Volt DC or 300 Volt AC rms. in all ranges

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