

## AV14

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1-Channel Monitor Amplifier and Charge Amplifier

### USES

- Acoustic and Vibration Measurements
- Source Location
- Machine Diagnostics

### FEATURES

- Electret condenser microphone input
- Piezoelectric accelerometer input
- Adjustable Headphones output
- Preamplifier Function (additional output)



The 1-channel charge amplifier AV14 is a small battery-driven instrument, which has been constructed mainly to monitor acoustic and vibration signals. It has a measuring channel for an electret condenser microphone or a piezoelectric accelerometer. The switching over from the accelerometer to the microphone comes automatically, when the microphone mini-jack is plugged in. A headphone output is built in for monitoring purposes. The loudness of

the headphone can be adjusted by the potentiometer on the right side of the instrument.

At the output socket you get a voltage proportional to the acceleration or sound pressure independent of the amplification of the headphone amplifier. So the instrument can be used as a front end for analyzers or similar instruments.

## Technical Data

### Inputs

Piezoelectric accelerometer input: ..... Microdot  
Microphone input: ..... LEMO 00

### Headphones - Amplifier

Frequency response: ..... -3 dB between  
.....30 Hz –20 kHz  
Max. Output voltage: .....4 V<sub>ss</sub>\*) at 150 Ω  
Distortion factor: ..... < 1 % at 1 kHz and 4 V<sub>ss</sub>  
Output socket: .....3.5 mm stereo jack

### Measuring Amplifier

Output socket: ..... BNC (on rear panel)  
Max. Output voltage: ..... 5 V<sub>ss</sub>  
Output Impedance: ..... 50 Ω in series with 10 μF  
Max. Impedance: ..... > 10 kΩ, < 10 nF  
Frequency response: ..... -3 dB between  
.....1 Hz – 30 kHz  
Microphone power supply  
voltage: .....5.6 V via 8.2 kΩ

Sensitivity (Piezoelectric  
accelerometer): ..... 1 mV/pC or 10 mV/pC, ±2 %

## Accessories included

- Internal rechargeable battery
- External AC adaptor, 100-240 VAC / 12 VDC

### LED

„Supply Voltage” .....green  
“Charging” (rear panel).....red

### Power Supply

Supply:  
Rechargeable battery . 9 V or external 9–15 V DC  
Battery Charge: ..... 12–14 V, approx. 14 h  
Current Consumption: ..... 5 to 15 mA, depends on  
.....adjusted amplification  
Battery lifetime: ..... approx. 10–30 h, depends on  
.....headphone level

### Operation conditions

Operating temperature range: ..... +/- 0°C to +50°C

### Mechanical Data

Cabinet material: ..... Aluminum  
Dimensions (W × H × D): ..... 55 × 25 × 100 mm  
Weight with batteries: ..... ca. 250 g

### Safety

IEC61010

### EMC

EN55103-1, EN55103-2

## Optional Accessories

- Microphone MI10 \*
- Headphones KH10 \*
- Carrying Case KO10 \*
- Piezoelectric accelerometer

\* **AV14 is also available as part of an electronic stethoscope: ES11**

Messelektronik Ulrich Falm reserves the right to change specifications and accessories without notice.