



MV 240

½" microphone preamplifier

with analog-to-digital converter

- USB (4 pin Lemo®)
- microphone power supply: USB
- capsule polarization voltage adjustable 200 V or 0 V
- 1 Hz to 80 kHz
- 7 dB(A) to 160 dB

| Delivery | Typ | Order-No. |
|---|----------|-----------|
| Microphone preamplifier, stainless steel, in weather protected case | MV 240 | 311222 |
| Options and Accessories | Typ | Order-No. |
| Microphone holder 21 mm, turnable | MH 93 | 202325 |
| Microphone holder 21 mm | MH 93.1 | 202304 |
| Microphone holder 21 mm | MH 22 | 302350 |
| Adapter for 1" microphone to ½" preamplifier | A 63.1 | 302302 |
| Adapter for ¼" microphone to ½" preamplifier | A 67 | 302305 |
| Angle adapter for ½" microphone to ½" preamplifier | WA 20 | 302334 |
| Dehumidifier adapter ½" | TA 202 L | 302349 |
| Measurement capacitor ½" | K 65 | 302307 |
| Connection cable, 4 pin Lemo® to USB-A, 1 m | C 24.01 | 600233 |
| Connection cable, 4 pin Lemo® to USB-A, 1 m | C 24.02 | 302263 |
| Connection cable, 4 pin Lemo® to USB-A, 1 m | C 24.05 | 302264 |

MV 240



| | | |
|------------------------------|----------------|--|
| Current consumption | | 450 mA (at $U_I = 10 V_{rms}$) |
| Power supply | | 5 V ($\pm 5\%$) |
| Frequency range | | 1 Hz to 80 kHz |
| Input impedance | | 20 G Ω ; <0.2 pF |
| Maximum input | | 10 V_{rms} |
| Max. SPL | with MK 301 | 160 dB |
| Inherent noise | with MKS 225 | 7 dB(A) |
| Polarization voltage | | 200 V or 0 V |
| Analog-to-digital converter | | Sigma-Delta converter, 32 Bit, 192 kHz 2 level ranges |
| Output signal | | USB, 1 channel, 32 Bit calibrated sound pressure values |
| Sample rate | AD converter | 192 kHz |
| | Output signal | 48 kHz, 96 kHz, 192 kHz |
| Connection to | | USB 2.0 / USB 3.0 |
| Operating system | | Windows, MacOS, Linux |
| Temperature range, operation | | -10°C to +50°C |
| Temperature range, storage | | -20°C to +70°C |
| Humidity limits | non condensing | r.H. $\leq 90\%$ |
| Connector | | 4 pin Lemo® EGG.1B.304.CLL |
| Thread | for microphone | 11.7 mm 60 UNS |
| Diameter | | 12.7 mm / 21 mm |
| Length | | 184 mm |
| Weight | | 120 g |

The ½" measurement microphone preamplifier type MV 240 USB combines a high-impedance transducer with an analog-to-digital converter. The output signal of the measurement microphone capsule is optimally adjusted to the dynamic range of the analog-to-digital converter by an impedance converter and a preamplifier with a very low noise level and THD. One channel of a 32 bit analog-to-digital converter converts the lower level range of the capsule signal and the other channel the upper level range.

A following processor combines these two level ranges to the one-channel 32 bit output signal, that represents calibrated sound pressure levels. The MV 240 USB converts sound pressure levels from 7 dB to 160 dB – more than the complete dynamic range of a typical ½" measurement microphone capsule.

The preamplifier supports the sample frequencies 48 kHz, 96 kHz and 192 kHz. Measurements up to 80 kHz are possible with ¼" measurement microphone capsules.

For the use of the MV 240 USB no special hardware driver is necessary because it is detected automatically by the operating system and can be used with Windows, MacOS and Linux. The MV 240 USB is powered by the USB interface and generates internally 200 V polarisation voltage for the measurement microphone capsule that can be switched off when using electret measurement microphone capsules.

The preamplifier is connected to the USB interface via a lockable LEMO® connector and a special LEMO® to USB adapter cable. Two integrated generators can be used to check the 32 bit processing of the following signal chain and to detect the reference value for a sound pressure of 1 Pascal.