Product Information

Series 180

Miniature Microphones

www.neumann.com

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The "Series 180" consists of three compact miniature microphones with patterns that satisfy the demands of all common studio applications. Because of its optimized mechanical construction and conscious omission of modularity, which is unnecessary in many cases, the "Series 180" is predestined for economy-minded production and home recording studios.

The KM 183 omnidirectional and KM 185 hypercardioid microphones are based on the tremendously successful KM 184 cardioid microphone, which has become a standard within the global studio community in just a very short time.

All "Series 180" microphones are available with either matte black or nickel finish. They come in a folding box with a windshield and two stand mounts that permit connection to the microphone body, or the XLR-connector.

Applications

Their slender shapes and the transmission characteristics described below make the "Series 180" especially suitable for a very wide range of tasks in the radio and television sector.

Acoustic features

The KM 183 and KM 184 microphones are the successors of the well proven KM 83 and KM 84, which have been used since the seventies worldwide with great success. The KM 185 rounds out the series with a hypercardioid microphone.

The KM 183 is a pressure transducer with a boost of approximately 7 dB at 10 kHz in the free field. In the diffuse sound field it has a flat frequency response.

Features

- *Three different miniature microphones for all typical studio applications*
- *Successor of the worldwide successful KM 83/84*
- *Transformerless circuitry*
- *Trouble-free operation also with unbalanced equipment (e.g., DAT recorders)*
- *Set includes windshield and microphone clamp*

The pressure gradient transducers KM 184 and KM 185 feature very smooth frequency responses not only for the 0° axis, but also for lateral (off-axis) sound incidence. In typical usage, there is no coloration of sound over a wide pickup angle.

Although the KM 184 has the same capsule as the KM 84, the microphone differs slightly on the 0° frequency response: The KM 184 has a gentle rise at about 9 kHz, a characteristic that was introduced very successfully with the KM 140. The result is a tonal balance that is fresher and livelier when compared to the KM 84 with its flat frequency response in that band.

This difference was achieved with just a slight change of the capsule's rear opening, and is not due to resonances.

The KM 185 with its hypercardioid characteristic features attenuation of sound incidence from the side or rear of about 10 dB, with minimum sensitivity at an angle of 120°.

Electrical features

The "Series 180" microphones have the same transformerless circuitry as is used in the KM 100 system, resulting in excellent technical specifications: Compared to the KM 84 the dynamic range of the KM 184 increased by 24 dB mainly through the reduction of self-noise level to only 22 dB (CCIR) and an increased sound pressure handling capability of up to 138 dB.

The microphones operate without any problems, even if the input of following equipment happens to be unbalanced, for example as in some DAT recorders.

The output of the "Series 180", as in all Neumann microphones, is balanced and phantom (48V) powered.

Economy

The "Series 180" is a good choice for all users who look for a high-quality miniature microphone, but do not need the complex, modular KM 100 system, which continues to be part of the Neumann product range.

The mechanical construction was simplified, for example, capsule and output stage cannot be separated from each other. For this reason the "Series 180" is an economical alternative without giving up the electroacoustic features the users expect from Neumann microphones.

Delivery Range

KM 183 (mt) ... 185 (mt) Microphone, WNS 100 Windscreen, SG 21 bk Stand mount

Stereo set: *2x KM 183 (mt) ... 185 (mt) Microphone, 2x WNS 100 Windscreen, 2x SG 21 bk Stand mount, Wooden box*

Catalog No.

KM 183	*ni*	*008437*
KM 183 mt	*blk*	*008438*
KM 183 Stereo set	*ni*	*008522*
KM 183 mt Stereo set	*blk*	*008521*
KM 184	*ni*	*008439*
KM 184 mt	*blk*	*008389*
KM 184 Stereo set	*ni*	*008524*
KM 184 mt Stereo set	*blk*	*008523*
KM 185	*ni*	*008440*
KM 185 mt	*blk*	*008441*
KM 185 Stereo set	*ni*	*008526*
KM 185 mt Stereo set	*blk*	*008525*

Selection of Accessories

Elastic suspension, EA 2124 A mt	*blk*	*008433*
Auditorium hanger, MNV 21 mt	*blk*	*006802*
Popscreen, PS 15	*blk*	*008472*
Windscreen, WS 100	*blk*	*006751*

A complete survey and detailed descriptions of all accessories are contained in the accessories catalog.

Meaning of color codes: blk = black, ni = nickel


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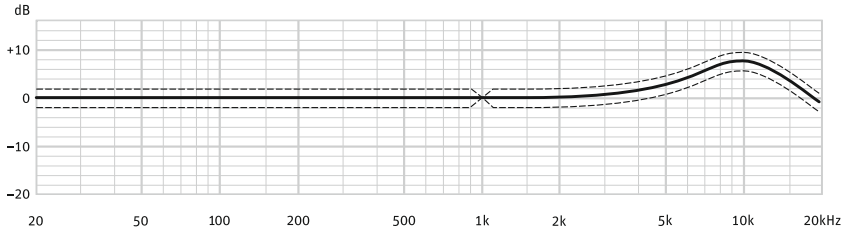
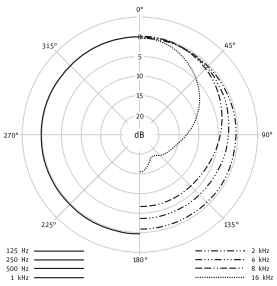
Technical Data

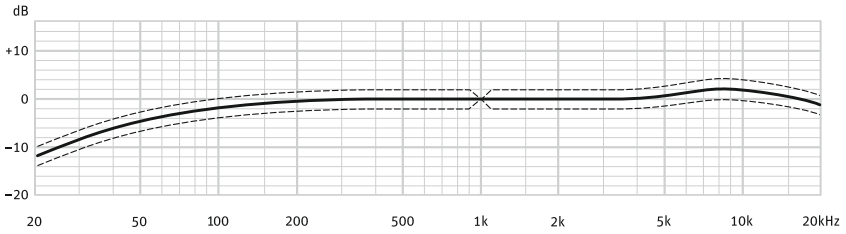
KM 183

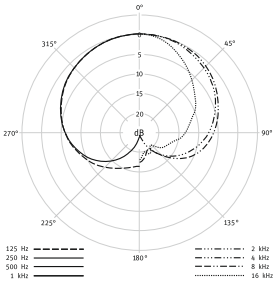


measured in free-field conditions (IEC 60268-4)

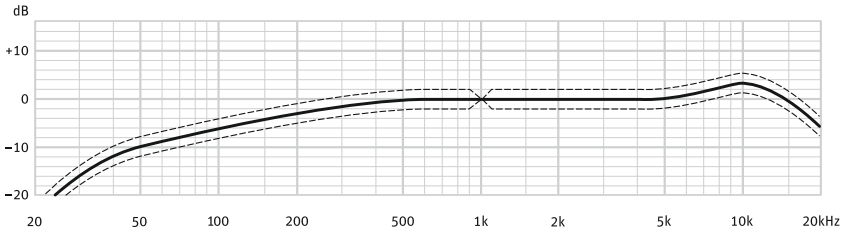


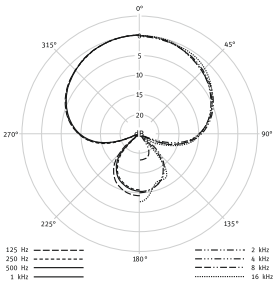
KM 184





KM 185





Technical Data KM 183 / KM 184 / KM 185

Acoustical operating principle	*Pressure/Pressure gradient transducer*
Directional pattern	*omnidirectional/cardioid/hypercardioid*
Frequency range	*20 Hz...20 kHz*
Sensitivity at 1 kHz into 1 kohm	*12/15/10 mV/Pa*
Rated impedance	*50 ohms*
Rated load impedance	*1000 ohms*
Signal-to-noise ratio, CCIR[1)] (rel. 94 dB SPL)	*70/72/70 dB*
Signal-to-noise ratio, A-weighted[1)] (rel. 94 dB SPL)	*81/81/79 dB*
Equivalent noise level, CCIR[1)]	*24/22/24 dB*
Equivalent noise level, A-weighted[1)]	*13/13/15 dB-A*
Maximum SPL for THD 0.5%[2)]	*140/138/142 dB*
Maximum output voltage	*10 dBu*
Supply voltage (P48, IEC 61938)	*48 V ± 4 V*
Current consumption (P48, IEC 61938)	*3.2 mA*
Matching connector	*XLR3F*
Weight	*approx. 80 g*
Diameter	*22 mm*
Length	*107 mm*

[1)] according to IEC 60268-1; CCIR-weighting acccording to CCIR 468-3, quasi peak; A-weighting according to IEC 61672-1, RMS [2)] measured as equivalent el. input signal

Application Hints

KM 183

- For close miking of instruments when there is no need to attenuate extraneous noise, and in a balanced acoustic environment to record
  - acoustic guitar,
  - wind instruments,
  - strings,
  - percussion,
  - drums
- Ideal as AB stereo pair because of the flat frequency response in the diffuse sound field
- As a main mic, especially for capturing room acoustics
- For stereo recordings with a baffle plate
- As a spot mic for
  - piano,
  - wind instruments,
  - organ,
  - choir

KM 184

- For universal use, especially for recording situations when it is necessary to attenuate off-axis sound (mainly from the rear) from other nearby instruments.
- As XY and ORTF stereo pair
- Announcer's mic for broadcasting
- Spot mic, overhead
- Close miking of
  - strings,
  - wind instruments,
  - percussion,
  - piano,
  - Leslie speakers,
  - guitar amps

KM 185

- Especially for recording situations when it is necessary to attenuate off-axis sound (lateral and rear) from other nearby instruments.
- As XY stereo pair
- Overhead, toms
- In situations that are susceptible to acoustic feedback
- To attenuate unwanted sound of nearby instruments
- Recording of speech, as in
  - TV,
  - movie and video productions,
  - PA systems
- Produces especially warm and bass supporting sound for artists who perform in proximity effect range

These are just some of the most common applications. We recommend additional experimentation to gain maximum use from this microphone.

Errors excepted, subject to changes • Printed in Germany • Publ. 05/12 058153/A07