

**HOLMBERG
GMBH & CO. KG
ELECTROACOUSTICS
BERLIN**



HOLMCO

Always a good connection ...



Table of contents

1. Introduction	3
2. Series MH-50 – handheld microphones	4
3. Series MG-50 and MG-60 – microphones with goosenecks	6
3.1. A wide range of variants ensures exceptional flexibility	8
4. Funk 75 – handsets with cradle	10
4.1. Mounting accessories	12
5. MW-17 – weather-proof wall mounted microphone	14
6. Transducers for any and all applications	16
7. MW-50 – dynamic desk microphone	17
8. All under one roof: design, development and production in Germany	18

Communications & transport

Transport routes play a fundamental role in the globalisation of the economy: increasing numbers of people and goods need to be transported safely and efficiently. Mastering this challenge requires a high degree of organisation as well as access to reliable means of communication.

Our high-quality communication equipment provides you with the tools to get everyone and everything to their desired destination safely and on time.

Our product line-up for railways

Our devices are known worldwide for their excellent speech intelligibility and reliability, even when used in noisy and harsh environments. All products are suitable for installation in vehicles as well as for stationary use.

We offer a wide range of **transducers**, **microphones** and **handsets** for use in trains and public transports.

Quality made in Germany

In the heart of Berlin, we develop and produce electroacoustic devices and components to the highest quality standards. We are certified according to DIN EN ISO 9100 (which includes DIN EN ISO 9001), EU Directive 2014/23/EU for devices operating in potentially explosive atmospheres and the environmental management standard DIN EN ISO 14001. Should you have any specific requirements, please feel free to contact us.

On request, our products can be certified according to DIN EN 50155:2017 (Electronic equipment on railway vehicles), whereby the products must pass the following tests:

- DIN EN 45545-2 (flammability)
- DIN EN 50121-3-2 (electromagnetic compatibility)
- DIN EN 60068 (environmental conditions)
- DIN EN 61373 (shock and vibration)

Series MH-50

Handheld microphones

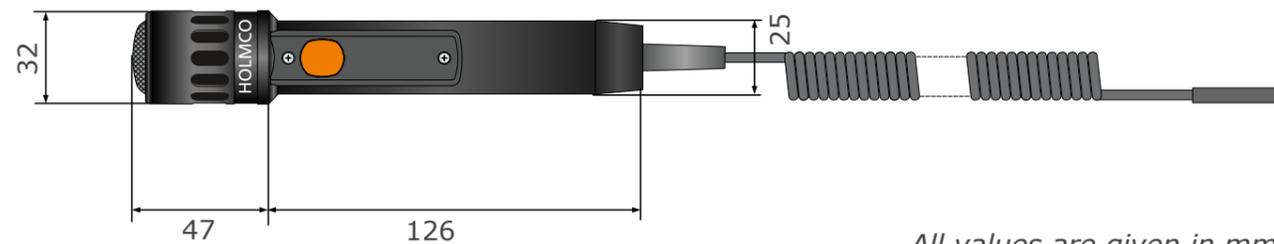


Handheld microphones of the **MH-50 series** are suited for both mobile and stationary use. The metal housing features both a timeless, ergonomic design and also is extremely robust. The microphone is designed to be very easy to repair and maintain.

The microphone has excellent acoustic properties with a frequency response optimised for voice communication and ambient noise cancelling. The transducer is particularly well protected against structure-borne noise.

Each MH-50 microphone can be outfitted with up to three freely configurable buttons. In their standard configuration the buttons feature a working contact. However, variants with up to two switching contacts are available on request.

Dimensions



All values are given in mm



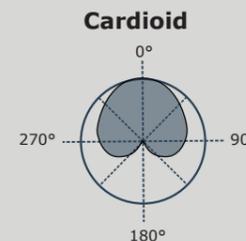
Microphone mount



MH-50 handheld microphone with roll over protection

The product at a glance

- Robust metal housing
- Available with dynamic (**MH-50-D**) or electret transducer (**MH-50-E**)
- With up to three long-lasting buttons
- Includes a pre mounted, high-quality coiled cable
- With or without pre-mounted connector
- Available in black or matte silver
- Optional: microphone mounted on a gooseneck



Directional characteristic

- Broad front recording angle
- Suppresses sound originating from the back (180°)



Speaking distance

- Proximity (approx. 5 cm)
- Medium distance (30 cm to 1 m)



Best suited for installation in:

- Driver's cab
- Bus driver's seat
- Control centres

Series MG-50 and MG-60

Microphones with gooseneck



Series MG-60

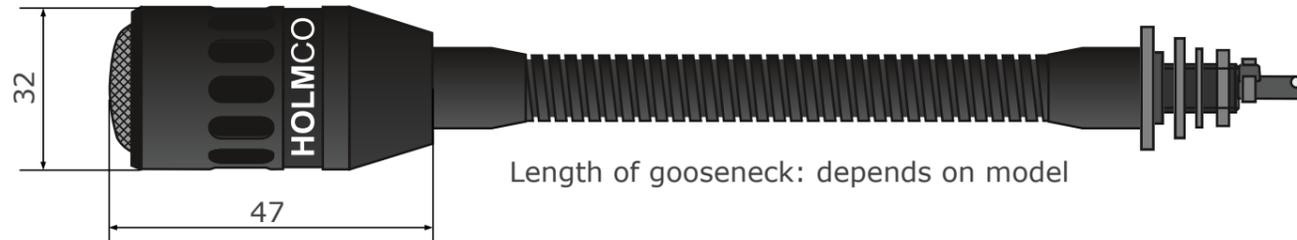
Series MG-50

Microphones from the **MG-50 and MG-60 series** are particularly well suited for use as announcement microphones in buses, trains as well as control centres. Both microphone variants follow the same design language as the **MH-50 series** handheld microphones, which ensures a uniform appearance.

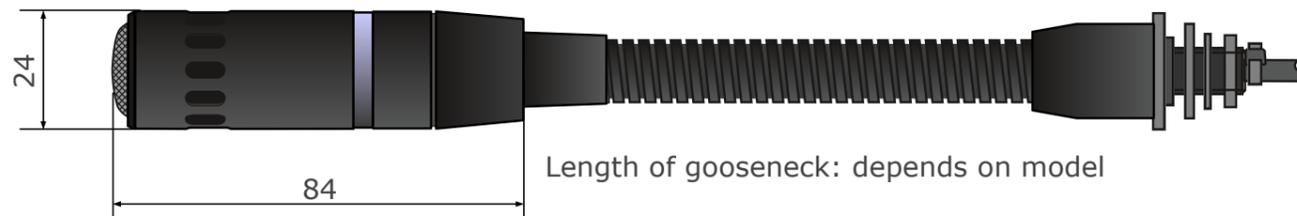
The gooseneck mounted microphones have excellent mechanical robustness, a frequency response optimised for voice transmission and excellent noise cancellation. They provide excellent speech intelligibility even in very noisy environments.

Dimensions

MG-50



MG-60



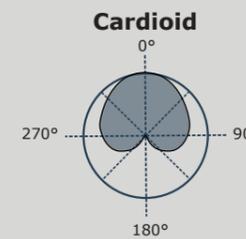
All values given in mm



The product at a glance

- Housed in robust metal casing, mounted on gooseneck with integrated cable
- Can be easily mounted on tables, walls or control panels
- With dynamic (**MG-50-D, MG-60-D**) or electret transducer (**MG-50-E, MG-60-E**)
- Microphone capsule insulated against structure-borne noise
- Goosenecks available with various lengths and diameters
- With or without pre-mounted plug on the connection cable
- Available in black or matte silver
- Optional: splash proof (IP54) variant **MG-60-E-W**

Directional characteristic



- Broad front recording angle
- Suppresses sound originating from the back (180°)

Speaking distance

- Proximity (approx. 5 cm)
- Medium distance (30 cm to 1 m)

Best suited for installation in:

- Driver's cab
- Bus driver's seat
- Control centres

Series MG-50 and MG-60

A wide range of variants ensures exceptional flexibility

Our gooseneck-mounted microphones can be easily adapted to a broad range of installation requirements thanks to a variety of configuration options.

In addition to the choice between microphone heads with different electroacoustic properties, you can also configure the following components of each **MG-50** and **MG-60**:

- A selection of goosenecks with lengths ranging from 100 mm to 900 mm and diameters from 11 mm to 18 mm
- Adjusting the length of the connection cable
- A choice of pre-mounted connector plugs or having open (tin-plated) ends on the connection cable
- Goosenecks can be outfitted with a thread or flange for mounting purposes
- Splash-proof (IP54) variant available
- Can be also offered with up to three freely assignable buttons on the microphone head



Microphones with goosenecks from the Series **MG-60** (front) and **MG-50** (back)

With thread or flange



With up to three freely configurable push button



Series Funk 75

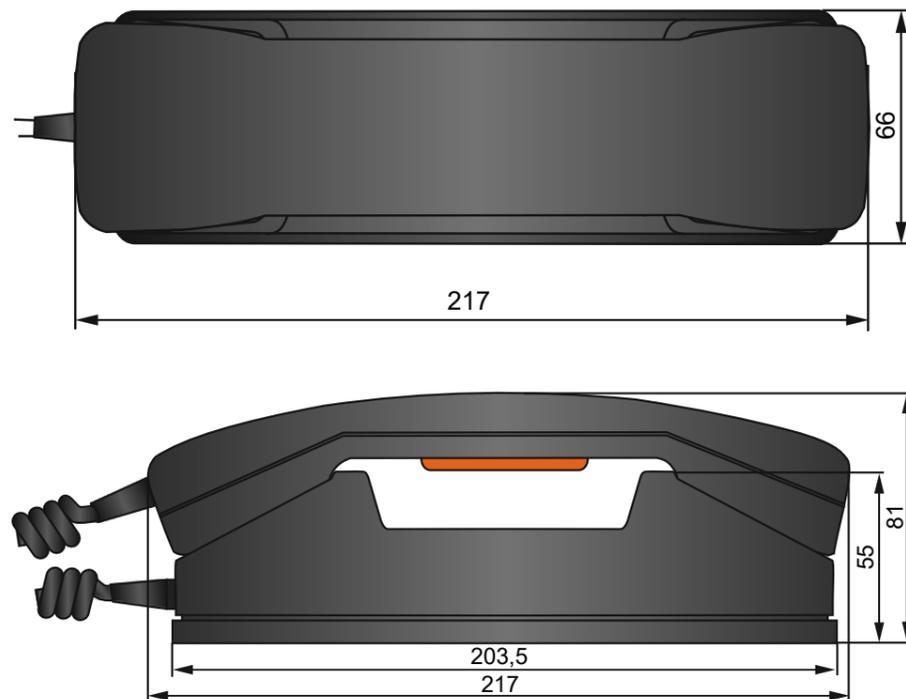
Handsets with cradle



The handsets with cradles from the **Funk 75 series** feature housings that are particularly robust, impact- and torsion-resistant. They are ideal for mobile as well as stationary use. Both handset and cradle are very ergonomic thanks to their rounded edges and the handset's soft, specially foamed back surface. The handset itself is securely held in place by a special locking mechanism that prevents it from sliding off the cradle even when subjected to high acceleration forces.

A large, ergonomically arranged push-to-talk button allows for easy operation. All parts of the set are made of flame-retardant, self-extinguishing materials. The handset is particularly durable. Low downtime and economical operations are ensured thanks to long availability of spare parts for each individual handset assembly.

Dimensions



All values given in mm



The product at a glance

- Optimised frequency responses ensure excellent speech intelligibility
- Handset with dynamic, electret or MEMS transducer
- Push-to-talk buttons with one or two working contacts optionally available
- Ideal for voice communication, even in noisy environments
- Cradle features telephone hook (optionally with one, two or three switching contacts)
- Optional: with built-in amplifier
- Optional: with additional loudspeaker built into the cradle



Best suited for installation in:

- Driver's cab
- Train attendant compartment
- Control centres



Series Funk 75

Mounting accessories

Handsets from the series **Funk 75** are widely used in the railway sector, both in the driver's cab as well as train attendant's areas.

The set's cradle is usually mounted to a desk or wall via the cradle's plastic bottom plate.

We also offer mounting accessory kits for special installation situations.

Pedestal for cradle

The height of the **Funk 75** cradle can be increased when using this pedestal.

First, the pedestal is mounted on the intended installation location by means of screws. The cradle is then screwed onto the pedestal.

The pedestal cup is made of the same impact-resistant plastic as the handset.



Ball joint with angle bracket and mounting plate

This installation kit allows attaching the **Funk 75's** cradle so that it forms a slope of 45°.

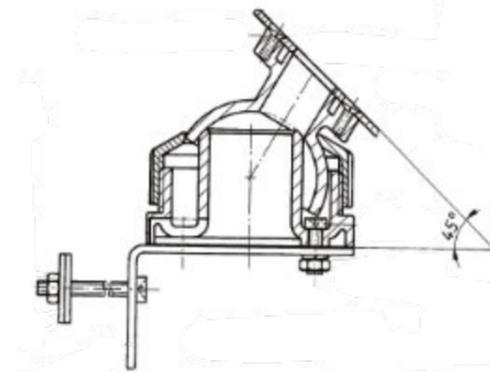
The angle holder and mounting plate are made of sheet steel, while the ball joint is made of impact-resistant plastic. The mounting plate can be attached to the ball joint lengthwise or upright.



Ball joint

Angle bracket

Mounting plate



Ball joint and angle bracket (without mounting plate)



MW-17

Weather-proof, wall mounted microphone for indoor and outdoor use

This weather-proof microphone is intended for use in emergency call boxes and intercom stations in locations with harsher environmental conditions.

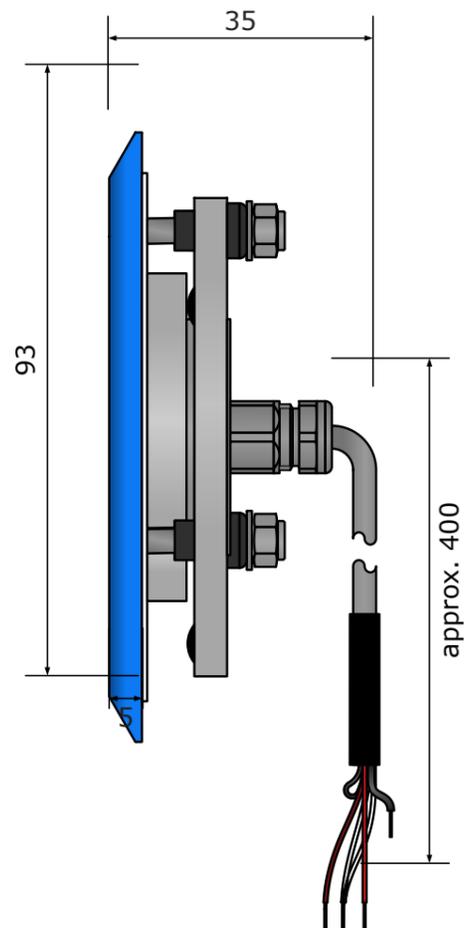
Its fully enclosed design ensures both good heat and cold tolerance as well as high resistance to dirt and chemicals, dust as well as moisture.

The front side of the **MW-17** rated for IP66 and has a graffiti-resistant coating, making it suitable for indoor and outdoor use in both stationary or mobile applications.

The MW-17 microphone can not only be used to transmit speech, but also makes a great acoustic sensor for detecting e.g., warning tones, ambient noise levels, or other acoustic events.



Dimensions



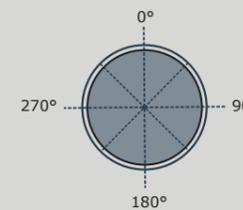
All values given in mm



The product at a glance

- Weather-proof and dirt resistant (front side resp. when mounted in a wall)
- Highly resistant against humidity, heat and cold
- Fully enclosed housing
- All mounting elements are located at the microphones back
- Graffiti resistant coating
- Operating temperature range: -40 °C to +80 °C

Omnidirectional



Directional characteristic

- Records sound equally from all directions
- Well suited for recording multiple speakers around the microphone



Speaking distance

- Proximity (approx. 5 cm)



Best suited for installation in:

- Emergency call boxes at railway stations and stops
- Passenger area in trains and subways

Transducers for any and all applications

We manufacture high-quality sound transducers that are available either in our finished communication devices or as individual components suitable for integration into your own products.

Our portfolio includes a broad range of dynamic and electret transducers, with or without integrated amplifiers. Each model provides different electroacoustic properties such as polar patterns (directional characteristic), frequency responses and optimal speaking distances.

Note that a transducers installation conditions are crucial for achieving optimal performance. We will gladly advise you on how to determine these optimal conditions.

A small selection of our dynamic transducers



Suitable for microphones
(Order No. 11-37-00002)



Suitable for microphones and receivers
(Order No. 80-11-11393)



Suitable for microphones
(Order No. 80-02-04210)



Suitable for microphones
(Order No. 80-04-08785)



Ideally suite for installation in:

- Handsets
- Microphones (hand-held or gooseneck-mounted)
- Loudspeakers / receiver
- Communication panels

MW-50

Dynamic desk microphone

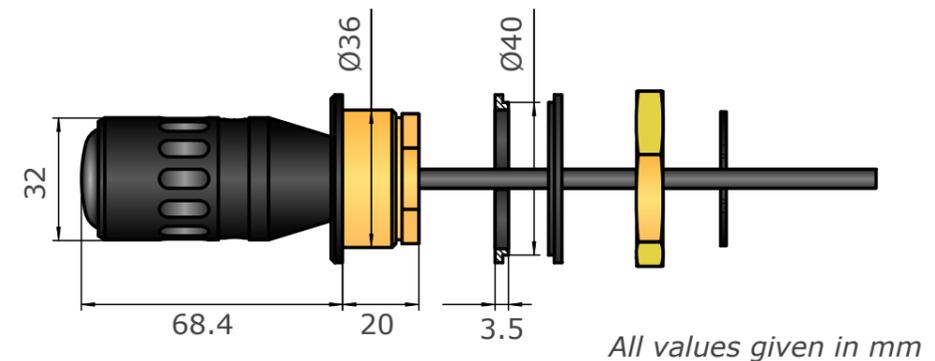
The **MW-50** desk microphone is ideally suited for installation in control panels in e.g., a driver's cab.

It functions as a hands-free microphone that allows the driver to communicate with passengers or other railway personnel.

The compact microphone head is extremely robust and very well protected against structure-borne noise.



Dimensions



The products at a glance

- **Dynamic microphone** with built-in amplifier
- Directional characteristic: cardioid
- Microphone capsule protected against structure-borne noise
- Ideal for mounting on control panels with a wall thickness of 3 mm
- Certified according to DIN EN 50155:2017, EN 45545-2:2013 + A1:2015, EN 45545-2:2020



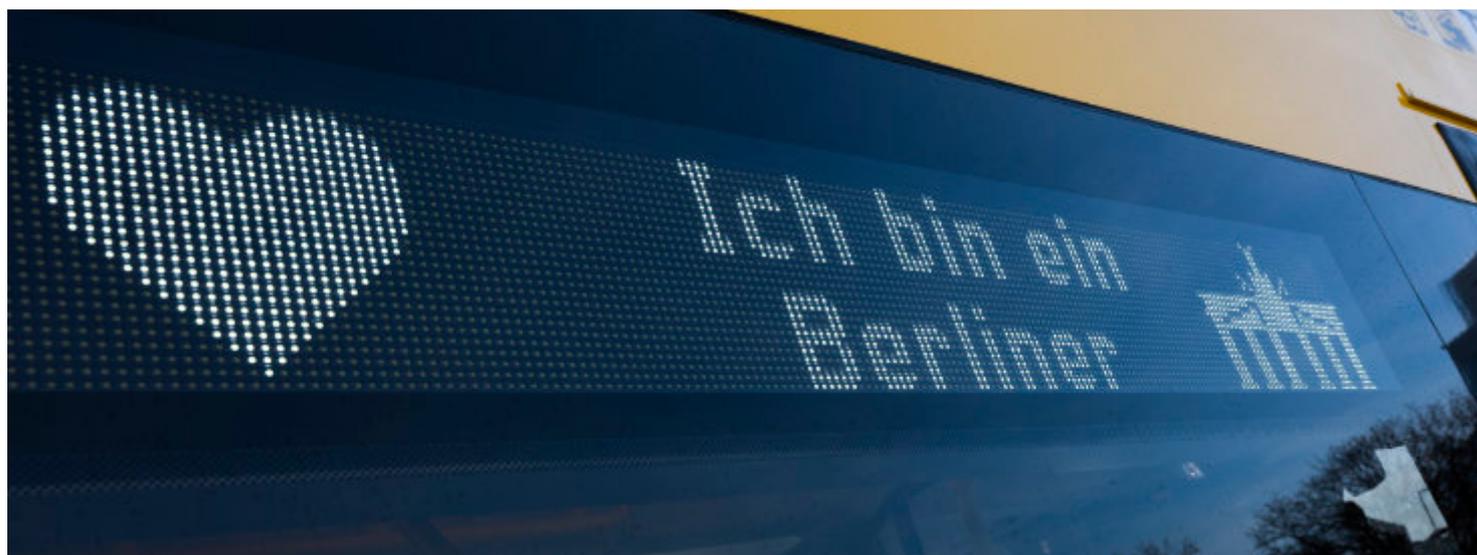
Speaking distance

- Medium distance (approx 0.8 m)



Ideally suite for installation in:

- Control desks in driver's cabs
- Communication panels



HOLMBERG GMBH & CO. KG

Ohlauer Str. 5 - 11

10999 Berlin

Phone +49 (0)30 617 80 - 0

E-mail info@holmco.de

Internet www.holmco.de