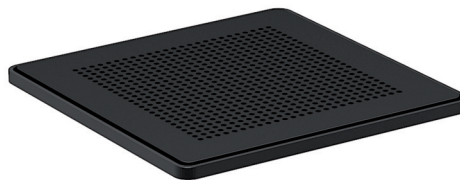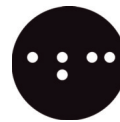# Orbis MU 43

Digital Flush Mount Chairman Microphone Unit

Order # 725.730

Optional CA OL loudspeaker module, not included

Table installation – supplied without gooseneck microphone

FEATURES

- High-quality flush mounting plate with metal housing and insert of optically hardened acrylic glass
- Round edges for flush mounting into tables
- Removable gooseneck microphone in different lengths, with Scudio® technology, 5-pin XLR connection with hidden lock
- Red LED on the gooseneck microphone displays ready-to-speak status
- Microphone button to turn the unit and microphone on or off
- White = microphone unit on
  Green = microphone on
  Red = microphone off

- Clear button to clear/deactivate all activated microphones of the delegate units
- Configurable function button
- Voice-controlled activation of the microphone possible
- Headphone output (3.5 mm stereo jack) and buttons to set volume or channel (Original or 1 foreign language channel)
- Two RJ45 sockets to connect to the control unit or to another microphone unit/system unit
- Phoenix® connector for external loudspeaker (the loudspeaker is automatically deactivated when the microphone is turned on)
- Configuration via Orbis CU control unit as semi-chairman microphone or press unit possible

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Orbis MU 43

DESCRIPTION

The Orbis MU 43 flush mount chairman microphone unit is equipped with one microphone button, clear button and configurable function button in the mounting plate. The microphone button is used to turn the unit and the microphone on or off. The ready-to-speak status of the microphone is displayed by the red LED on the gooseneck microphone and the green backlit microphone button.

The chairman does not depend upon the limited number of open microphones (NOM). Each chairman microphone unit is permanently allocated to a channel (max. 8) in the system.

When using the clear button all activated delegate microphones are turned off.

When using the function button the chairman can intervene into the discussion and mute or clear all activated delegate microphones depending on the system configuration.

Depending on the configuration of the Orbis CU control unit one of the following operating modes is possible:

Normal
Each participant can turn on his/her microphone unit.

FiFo
Each participant can turn on his/her microphone. If the selected number of open microphones (NOM) is exceeded, the microphone of the participant who turned on his/her microphone first is turned off when another participant turns on his/her microphone.

Voice-controlled Activation
The microphone is turned on when the participant speaks into it, unless the number of open microphones is exceeded.

The function button is configured via the Orbis CU control unit. The following functions are possible:

Normal:
All activated delegate microphones are cleared and the microphone of the chairman microphone unit is turned on. The function button of the chairman microphone unit is illuminated red. The delegates can turn on their microphone only when the priority mode has been finished. The chairman microphone which has automatically been activated, remains active until the chairman turns it off by using the microphone button.

Mute:
All active delegate microphones are muted when the chairman is speaking. The function button of the chairman microphone unit is illuminated red. When the priority mode is finished, all delegate microphones that had been active before, will be activated again. Microphones which have been activated by voice control, remain deactivated after finishing the priority mode. The chairman microphone which has automatically been activated, remains active until the chairman turns it off by using the microphone button.

The microphone unit's design follows the UN convention on the rights of persons with disabilities. It includes silicone buttons with tactile feedback and Braille marking. A headphone or induction loop for people with a hearing aid can be connected to the mini jack output. The volume of the headphone is adjusted with a separate control. Furthermore, by pressing the volume control the participant can toggle between two channels (e.g. original and 1 AUX-IN e.g. foreign language channel).

The microphone units are connected in a daisy chain to the Orbis CU control unit, i.e. the first microphone unit is connected to the control unit, the second microphone unit is connected to the first, the third microphone unit to the second and so on. For connection standard Cat5 cables are used. Thus, one cable ensures the audio transmission, power supply and control. The microphone units are very economical and use less than 1 watt in operation and at maximum volume.

Connection to a control unit without redundancy
A maximum of 50 microphones can be connected to one line of the Orbis CU control unit, i.e. a total of 100 microphone units can be operated with one Orbis CU control unit.

Connection to a control unit with redundancy
A maximum of 50 microphone units is connected in a ring to the Orbis CU control unit, i.e. the last microphone unit is connected to the previous microphone unit and the control unit. The redundancy provides maximum reliablility. Should a defect in a cable occur at one side of the microphone unit, the microphone unit will not fail to operate, because it will still be supplied via the cable from the other side. The cable in question or a defect microphone unit as well can be replaced during operation without causing any problems with the other microphone units.

An optional external loudspeaker can be connected to the Phoenix® connector.

The rounded edges allow the microphone unit to be flush mounted into a table.

SUPPLIED ACCESSORIES

1 x Mounting bracket incl. adjusting screw

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Orbis MU 43

TECHNICAL SPECIFICATIONS

General

Voltage supply
via control unit . . . . Bus voltage (48 V DC)
Power consumption . . . . max. 1 W
Temperature range
(humidity < 90%) . . . . +10 °C to +40 °C
[+50 °F to +104 °F]
Storage temperature
(humidity < 90%) . . . . -20 °C to +55 °C
[-4 °F to +131 °F]

Connections

System connection . . . . 2x RJ45 socket
(not for Ethernet)
Max. cable length
Line CU – MU . . . . 80 m [87.49 yd] with AWG 24
Max. cable length
Line MU – MU . . . . 80 m [87.49 yd] with AWG 24
Specification line cable . . . . CAT5 S/UTP, cross-section min.
AWG 26
Specification line connector . . . . . RJ45 acc. to EIA/TIA 568 B,
shielded
Loudspeaker output . . . . Phoenix® connectors,
contact spacing 5.08 mm [20"]
Min. output impedance . . . . 8 Ω
Frequency response . . . . 20 - 15,000 Hz
THD . . . . 0.3% at 400 mW / 1 kHz / 8 Ω
Headphone output . . . . Mini jack socket (3.5 mm stereo)
Min. output impedance . . . . 16 Ω, short-circuit proof
Frequency response . . . . 20 - 15,000 Hz
THD . . . . 0.01% at 8 mW / 1 kHz / 16 Ω

Microphone

Connector . . . . 5-pin XLR male
Pin 1 = GND (ground)
Pin 2 = Audio +
Pin 3 = Audio -
Pin 4 = LED -
Pin 5 = LED Power (+5 V)

AB powering . . . . 2.2 V (2.2 kΩ)

Classis GM 313 Q - GM 316 Q Microphone

Polar pattern . . . . Cardioid
Frequency response . . . . 50 - 19,000 Hz
S/N ratio . . . . 69 dB(A) / 6µV(A)
Max. SPL . . . . 107 dB (equalised)

GM 115 Q Microphone

Polar pattern . . . . Cardioid
Frequency response . . . . 100 - 15,000 Hz
Max. SPL . . . . 100 dB (equalised)

OPTIONAL ACCESSORIES

Loudspeaker

CA OL   Loudspeaker module for
Orbis MU 41/43 and Orbis SU 63 . . Order # 725.765

OPTIONAL ACCESSORIES

Gooseneck microphones

Classis GM 115 Q   Condenser gooseneck microphone
(electret), cardioid, matt black,
500 mm [19.69"] . . . . Order # 726.095
Classis GM 313 Q   Condenser gooseneck microphone
(electret), with Scudio® technology,
cardioid, matt black,
300 mm [11.81"] . . . . Order # 724.203
Classis GM 314 Q   same as above,
but 400 mm [15.75"] . . . . Order # 724.211
Classis GM 315 Q   same as above,
but 500 mm [19.69"] . . . . Order # 724.238
Classis GM 316 Q   same as above,
but 600 mm [23.62"] . . . . Order # 724.351

Cables

CA OC 1   System cable, CAT5 with
RJ45 connector, 1 m [3.28 ft] . Order # 725.811
CA OC 2   same as above,
but 2.5 m [8.20 ft] . . . . Order # 725.838
CA OC 5   same as above,
but 5 m [16.4 ft] . . . . Order # 725.846
CA OC 10   same as above,
but 10 m [32.81 ft] . . . . Order # 725.854
CA OC 20   same as above,
but 20 m [65.62 ft] . . . . Order # 725.862
CA OC 50   same as above,
but 50 m [54.68 yd] . . . . Order # 725.889

IL 200   Induction loop,
cable length 20 cm [7.87"],
extension cable 77 cm [30.31"],
mini stereo jack plug
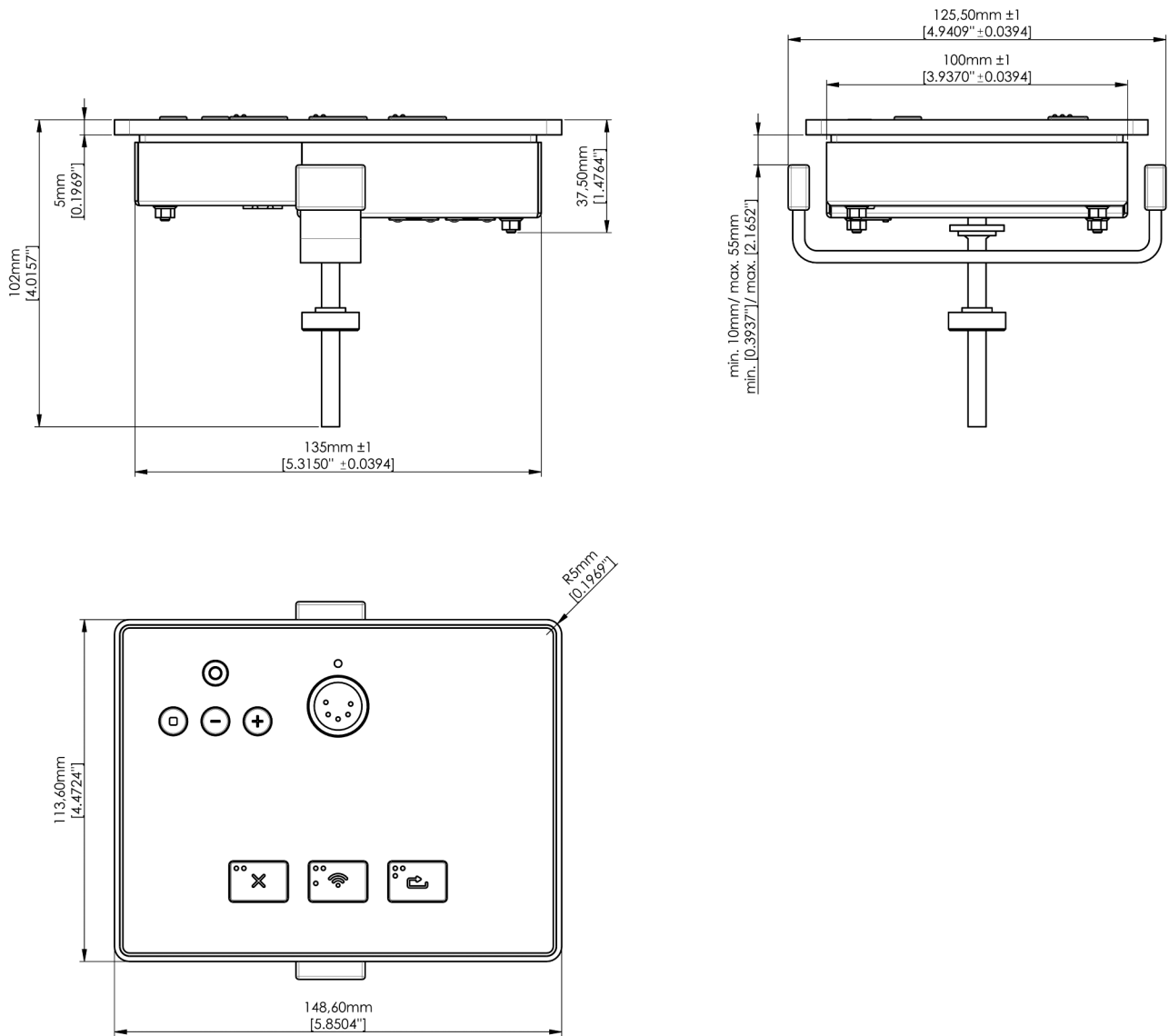(3.5 mm) . . . . Order # 725.161

ARCHITECT'S SPECIFICATIONS

The wired digital built-in microphone unit shall be used as a delegate version without microphone. The high-quality mounting plate shall be provided with an insert made of optically hardened acrylic glass. Rounded corners shall ensure a flush-mount table installation. The 5-pin XLR connector with hidden lock shall connect gooseneck microphones with integrated LED ring in different lengths. The microphone unit shall be provided with three soft touch buttons with tactile feedback for turning the microphone on/off, for clearing all active delegate microphone units and for the priority (mute or normal) or a freely programmable function in conjunction with the serial interface on the control unit. The buttons shall be backlit in three colours and labelled with braille writing.
The chairman microphone unit shall not depend on the maximum number of open microphones (NOM). Each chairman microphone unit shall be allocated to a fixed channel in the system (max. 8).
The microphone unit shall have a headphone output (3.5 mm stereo jack) and soft touch buttons for setting the volume and channel (original and 1 foreign language channel), as well as a Phoenix connector for an external loudspeaker.
The microphone unit shall be connected via two RJ45 sockets to the control unit or another microphone/system unit.
Dimensions (LxWxH): 148 x 113 X 37 mm.

Manufacturer: beyerdynamic
Type: Orbis MU 43

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Orbis MU 43

Dimensions

All dimensions in mm and [inch]

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Orbis MU 43

GM 31x Q Gooseneck Microphone

GM 313 Q   GM 314 Q   GM 315 Q   GM 316 Q

Description

The GM 31x gooseneck microphone is available as optional accessory to connect to the microphone unit.

Due to the cardioid polar pattern this microphone has a high gain before feedback and provides highest intelligibility of speech. The LED ring displays the ready-to-talk status of the microphone.

Inside the microphone there is a filter to eliminate wind and pop noise.

The microphone features the innovative Scudio™ technology, making the microphones absolutely insensitive to wireless communication devices such as mobile phones.

The microphone is mounted on a 6 mm thick gooseneck and due to its mat black, non-glare surface almost invisible.

The following lengths are available:
GM 313 Q = 300 mm [11.81"]
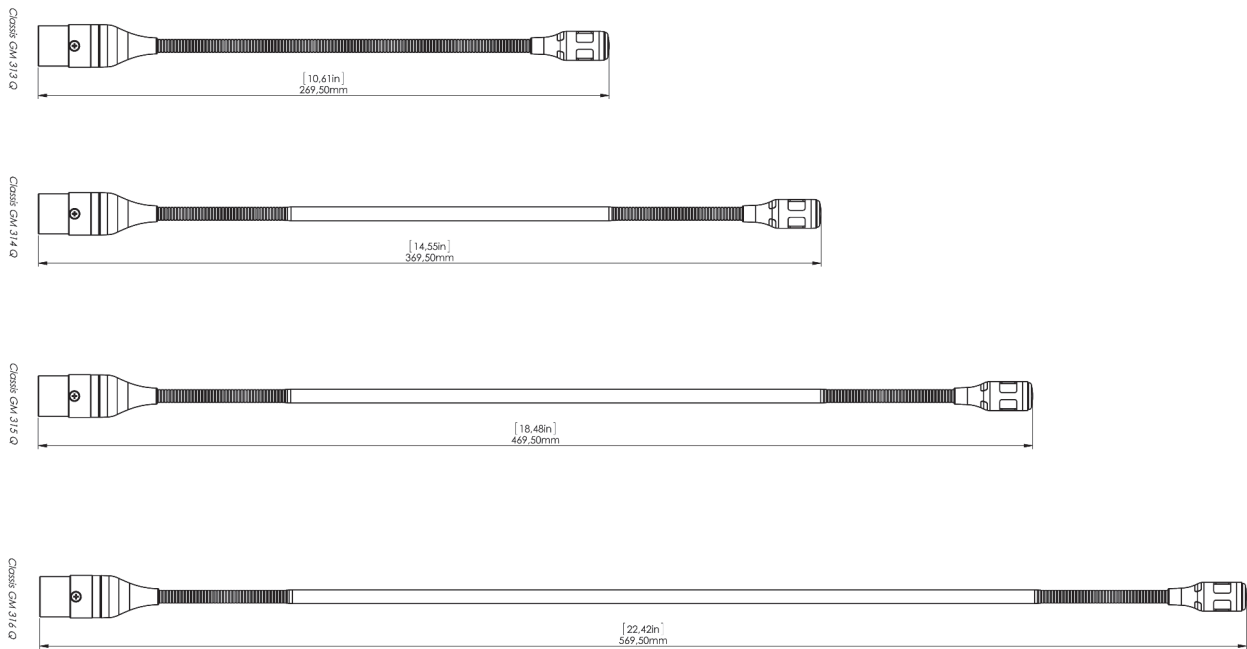GM 314 Q = 400 mm [15.75"]
GM 315 Q = 500 mm [19.69"]
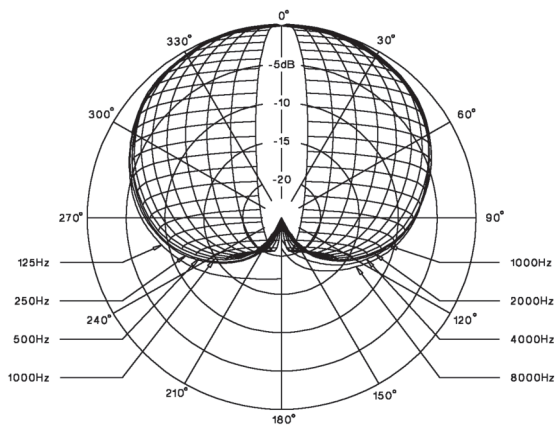GM 316 Q = 600 mm [23.62"]

Technical Specifications

Transducer type . . . . Condenser (electret)
Operating principle . . . . Pressure gradient
Frequency response . . . . 50 - 19,000 Hz
Polar pattern . . . . Cardioid
Open circuit voltage at 1 kHz . . . . . . 17 mV/Pa
Nominal impedance . . . . < 200 Om
Loead impedance . . . . ≥ 1 kOhm
Max. SPL . . . . 107 dB [SPL @ 1% THD]
Signal-to-noise ratio/Noise voltage . . 69 dB [A] / 6.0 µV [A]
Equivalent SPL . . . . 25 dB[A]
Microphone connection . . . . 5-pin XLR (male)
Head diameter with pop shield . . . . . approx. 26 mm [1.02"]
without pop shield . . . . approx. 13.6 mm [0.56"]
Gooseneck diameter . . . . 6 mm [0.24"]
Total length
GM 313 Q . . . . 270 mm [16.63"]
GM 314 Q . . . . 370 mm [14.57"]
GM 315 Q . . . . 470 mm [18.5"]
GM 316 Q . . . . 570 mm [22.44"]

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Orbis MU 43

GM 31x Q Microphone

Classic GM 313 Q
[10,61in]
269,50mm

Classic GM 314 Q
[14,55in]
369,50mm

Classic GM 315 Q
[18,48in]
469,50mm

Classic GM 316 Q
[22,42in]
569,50mm

Polar Pattern

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Orbis MU 43

Architect's Specifications

The cardioid condenser gooseneck microphone (electret) shall be connected to the Quinta desktop microphone unit. The LED ring integrated in the microphone head shall indicate the ready-to-speak status. The filter in the microphone basket shall suppress wind and pop noise. The Scudio® technology shall eliminate interferences from other wireless communication devices. The housing shall be coated with a non-glare mat black paint. The gooseneck diameter shall be 6 mm [0.24"]. The total length shall be 300 mm [11.81"] when connected to the microphone unit (measured from the table's edge). The delivery shall include a wind shield.

Manufacturer: beyerdynamic
Type: Classis GM 313 Q

The cardioid condenser gooseneck microphone (electret) shall be connected to the Quinta desktop microphone unit. The LED ring integrated in the microphone head shall indicate the ready-to-speak status. The filter in the microphone basket shall suppress wind and pop noise. The Scudio® technology shall eliminate interferences from other wireless communication devices. The housing shall be coated with a non-glare mat black paint. The microphone shall be provided of two goosenecks with a diameter of 6 mm [0.24"] and a rigid tube in between. The total length shall be 400 mm [15.75"] when connected to the microphone unit (measured from the table's edge). The delivery shall include a wind shield.

Manufacturer: beyerdynamic
Type: Classis GM 314 Q

The cardioid condenser gooseneck microphone (electret) shall be connected to the Quinta desktop microphone unit. The LED ring integrated in the microphone head shall indicate the ready-to-speak status. The filter in the microphone basket shall suppress wind and pop noise. The Scudio® technology shall eliminate interferences from other wireless communication devices. The housing shall be coated with a non-glare mat black paint. The microphone shall be provided of two goosenecks with a diameter of 6 mm [0.24"] and a rigid tube in between. The total length shall be 500 mm [19.69"] when connected to the microphone unit (measured from the table's edge). The delivery shall include a wind shield.

Manufacturer: beyerdynamic
Type: Classis GM 315 Q

The cardioid condenser gooseneck microphone (electret) shall be connected to the Quinta desktop microphone unit. The LED ring integrated in the microphone head shall indicate the ready-to-speak status. The filter in the microphone basket shall suppress wind and pop noise. The Scudio® technology shall eliminate interferences from other wireless communication devices. The housing shall be coated with a non-glare mat black paint. The microphone shall be provided of two goosenecks with a diameter of 6 mm [0.24"] and a rigid tube in between. The total length shall be 600 mm [23.62"] when connected to the microphone unit (measured from the table's edge). The delivery shall include a wind shield.

Manufacturer: beyerdynamic
Type: Classis GM 316 Q

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Orbis MU 43

GM 115 Q Gooseneck Microphone

Classis GM 115 Q without pop shield

Classis GM 115 Q with pop shield

Description

The Classis GM 115 Q gooseneck microphone is used for direct connection to the Quinta or Orbis microphone units.

The microphone features a cardioid polar pattern with a high gain before feedback. The ready-to-speak status of the microphone is displayed by an LED ring. Inside the microphone grille there is a filter to eliminate wind or pop noise.

The microphone is mounted on a 6 mm thick gooseneck and due to its mat black, non-glare surface it discretely blends into the environment.

Architect's Specifications

The condenser gooseneck microphone (electret) with cardioid polar pattern shall be used for direct connection to Quinta and Orbis microphone units. A filter inside the microphone grille shall eliminate wind or pop noise. It shall be protected against interference from wireless communication devices. The fully metal housing shall be matt black. The two flexible goosenecks (8 mm bottom, 6 mm top) shall have a rigid tube in between. The total length when mounted to a microphone unit shall be 500 mm (measured from the edge of the table). It shall be supplied with a wind shield.

Manufacturer: beyerdynamic
Type: Classis GM 115 Q

Technical Specifications

Transducer type . . . . Condenser (electret)
Operating principle . . . . Pressure gradient
Frequency response
Close miking . . . . 40 - 13,000 Hz
Distant miking (distance 1 m) . . . . . 200 - 13,000 Hz
Polar pattern . . . . Cardioid
Open circuit voltage at 1 kHz . . . . . . -17.8 mV/Pa = -35 dBV ±3 dB*
Nominal impedance . . . . 2.2 kΩ
Max. SPL . . . . 112 dB [SPL @ 1% THD]*
Signal-to-noise ratio . . . . 62 dB [A, rms]*
Equivalent SPL . . . . 32 dB [A, rms]*
Power supply . . . . 1.5 - 9 V DC
Microphone connection . . . . 5-pin XLR (male)
Head diameter with pop shield. . . . . approx. 25 mm [0.98"]
without pop shield. . . . . approx. 14 mm [0.55"]
Gooseneck diameter . . . . approx. 7 mm [0.28"]
Total length . . . . approx. 470 mm [18.5"]
Weight. . . . . approx. 110 g [3.8 oz]

*depending on the connected electronics

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Orbis MU 43

DIMENSIONS

FREQUENCY RESPONSE & POLAR PATTERN

This polar pattern and frequency response curve (measuring tolerance ±3 dB) correspond to a typical production sample for this microphone.

Frequency response curve ±3 dB   GM 115 Q   0 dB = 17.8 mV/Pa

WIRING DIAGRAM

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