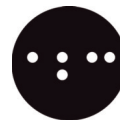


# Orbis MU 23

Digital Chairman Microphone Unit with Loudspeaker

Order # 725.714



Supplied without gooseneck microphone

## FEATURES

- Coated plastic housing with metal bottom plate
- Inserts made of optically hardened acrylic glass
- 5-pin XLR connection with hidden lock for removable Classis gooseneck microphone in different lengths
- Red LED on the gooseneck microphone displays ready-to-speak status
- Microphone button to turn the microphone on or off
- Three-coloured backlit silicone microphone button:  
White = microphone unit on  
Green = microphone on  
Red = microphone off
- Clear button to clear/deactivate all active delegate microphone units
- Configurable function button
- Voice-controlled activation of the microphone possible
- Integrated loudspeaker with voice equalisation
- Loudspeaker is automatically turned off when microphone is turned on
- Headphone output (3.5 mm stereo jack) with control to select volume and channel (original and 1 AUX-IN e.g. foreign language channel)
- Two RJ45 sockets to connect to the control unit or to another microphone unit/system unit
- Automatic power off when the control unit is turned off
- Two holes on the bottom plate for permanent attachment to a table (theft protection)

# Orbis MU 23

## DESCRIPTION

The Orbis MU 23 chairman microphone unit is equipped with one microphone button, clear button and configurable function button in the housing. The microphone button is used to turn 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 until the maximum number of open microphones is achieved.

### 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 automatically turned on when the participant speaks into it, until the number of open microphones is achieved.

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 integrated loudspeaker reproduces the audio signal of the whole conference system. When the participant turns on the microphone, the loudspeaker is automatically turned off to avoid feedback.

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 CAT5e cables (S/UTP, AWG 26 or better) are used. Thus, one cable ensures the audio transmission, power supply and control. The microphone units are very economical and use 1 watt at maximum in operation at maximum volume.

### Connection to a control unit without redundancy

A maximum of 50 microphones can be connected to one of the two lines 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 reliability. 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.

The threads at the bottom of the microphone unit allow the unit to be attached to a tabletop by using screws. In this way the microphone unit is protected against theft.

# Orbis MU 23

## TECHNICAL SPECIFICATIONS

### General

Voltage supply via control unit	Bus voltage (48 V DC)
Power consumption	max. 1 W
Max. number of audio channels	2 useable channels per system
Signal-to-noise ratio	80 dB(V) typ., unweighted (external voltage)
Integrated loudspeaker	equalised
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]
Dimensions (without microphone)	Length: 140 mm [5.51"] Width: 135 mm [5.31"] Height: 42 mm [1.65"]
Weight	670 g [1.47 lbs]

### 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
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)
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## 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

## OPTIONAL ACCESSORIES

### 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 desktop microphone unit shall be used as a chairman version without microphone. The high-quality plastic housing with matt black Alexit paint shall feature inlays made of hardened acrylic glass and a metall bottom plate. 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 an integrated wideband loudspeaker with voice equalisation for decentral sound reinforcement; when the microphone is turned on, the loudspeaker is automatically turned off. Furthermore, there shall be a headphone output (3.5 mm stereo jack) with control for volume and channel selection (original and AUX-IN, e.g. a foreign language channel).

The microphone unit shall be connected via two RJ45 sockets to the control unit or another microphone/system unit. The microphone unit shall have a variable cable routing with integrated strain relief, which allows routing the cables discretely to the back or downwards.

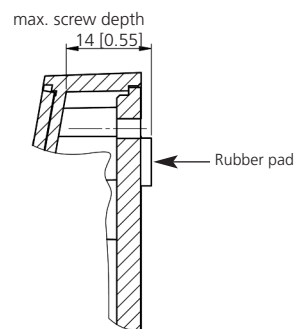
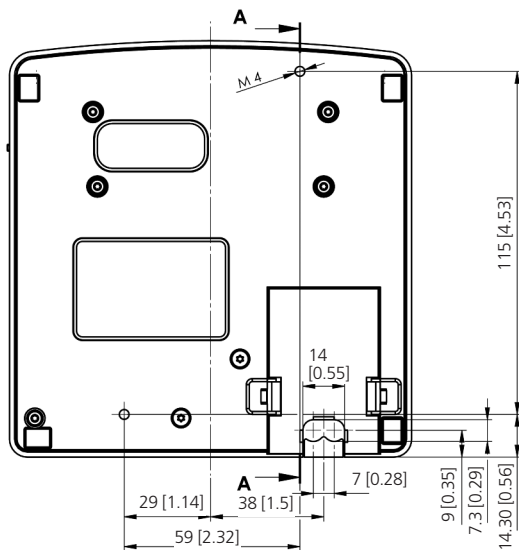
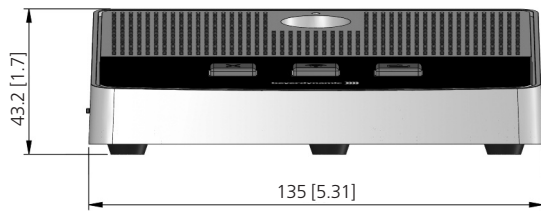
For a permanent mounting to a table (theft protection) there shall be two drilled threads at the bottom of the microphone unit.

Dimensions (LxWxH): 140 x 135 X 42 mm. Weight: 670 g.

Manufacturer:	beyerdynamic
Type:	Orbis MU23

# Orbis MU 23

## DIMENSIONS MICROPHONE UNIT



All dimensions in mm [inch]

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For further distributors worldwide, please go to [www.beyerdynamic.com](http://www.beyerdynamic.com)  
Non-contractual illustrations. Contents subject to change without notice. E2 / Orbis MU 23 (08.18)



# Orbis MU 23

## GM 31x Q GOOSENECK MICROPHONE



### 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"]

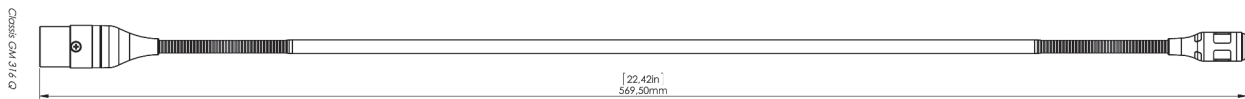
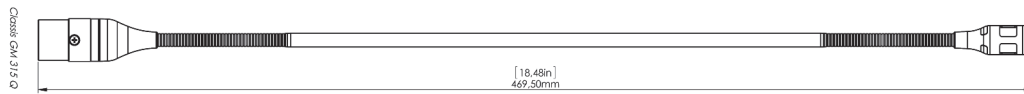
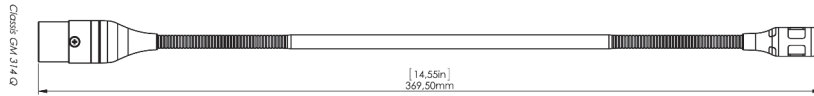
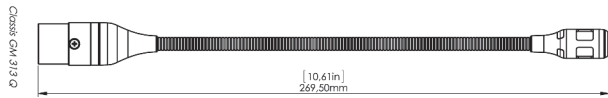
GM 316 Q = 600 mm [23.62"]

### TECHNICAL SPECIFICATIONS

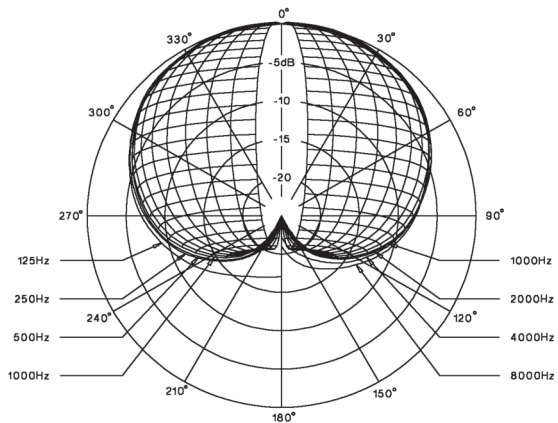
Transducer type	Condenser (electret)
Operating principle	Pressure gradient
Frequency response	50 - 19,000 Hz
Polar pattern	Cardioid
Open circuit voltage at 1 kHz	17 mV/Pa
Nominal impedance	< 200 Ohm
Load impedance	≥ 1 kOhm
Max. SPL	107 dB [SPL @ 1% THD]
Signal-to-noise ratio/Noise voltage	69 dB [A] / 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"]

# Orbis MU 23

## GM 31x Q MICROPHONE



## POLAR PATTERN



# Orbis MU 23

## 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

# Orbis MU 23

## 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 matt 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

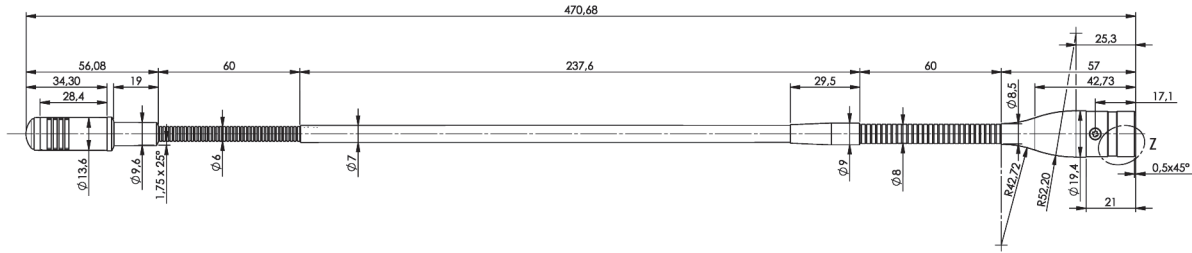
Transducer type	Condenser (electret)
Operating principle	Pressure gradient
Frequency response	
Close miking	40 - 13,000 Hz
Distant miking (distance 1 m)	200 - 13,000 Hz
Polar pattern	Cardioid
Open circuit voltage at 1 kHz	-17.8 mV/Pa = -35 dBV ±3 dB*
Nominal impedance	2.2 kΩ
Max. SPL	112 dB [SPL @ 1% 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



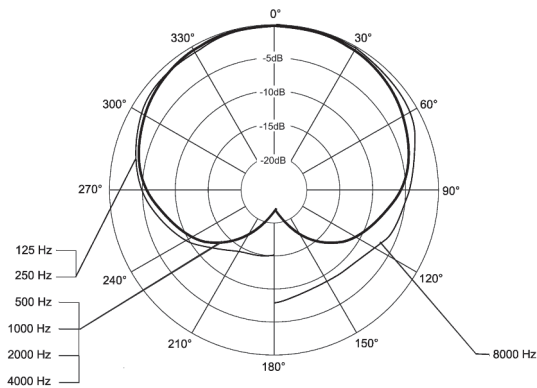
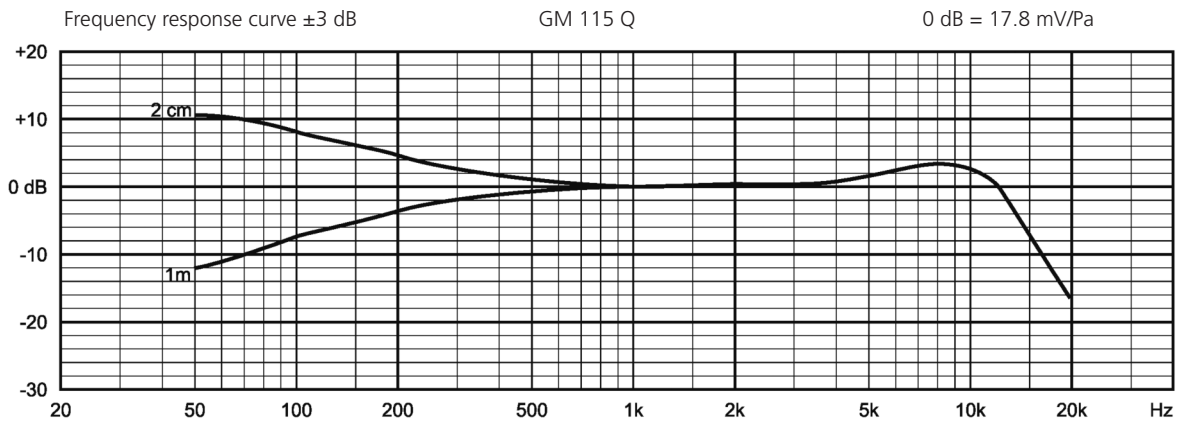
# Orbis MU 23

## DIMENSIONS



## FREQUENCY RESPONSE & POLAR PATTERN

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



## WIRING DIAGRAM

