

## MEASUREMENT MICROPHONE

### M4260



### M2210 Enhanced Performance

## FEATURES

- M2210 - Enhanced Performance - Measurement Microphone with Class 1 frequency response acc. to IEC 61672-1
- M4260 Measurement Microphone with Class 2 frequency response acc. to IEC 61672-1
- Electronic Data Sheet
- Build-in Pre-amplifier
- Easy Calibration

## APPLICATIONS

- Measurement microphones for sound level monitoring and room acoustical measurements.
- Microphones can be connected with the ASD Cable for measurements at remote locations or reducing acoustical reflections.
- The M4260 and M2210 measurement microphones form with the XL2 a comprehensive sound level meter and acoustic analyzer.

## INTRODUCTION

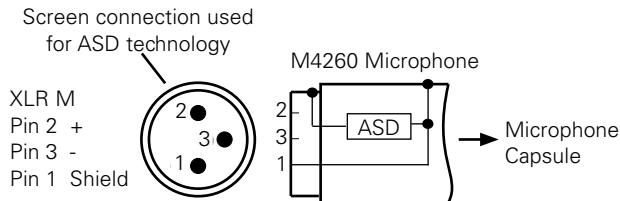
The plug-on measurement microphones M4260 or M2210 form together with the XL2 a comprehensive sound level meter and acoustic analyzer. The microphones are 48 VDC phantom powered and include an electronic data sheet.

### Integrated Preamplifier

The microphone bodies contain the pre-amplifier and require 48 VDC phantom power supply for operation. They combine high dynamic range and wide frequency range with low noise. The measurement microphones can also be connected with the ASD Cable to the XL2 Audio and Acoustic Analyzer for measurements at remote locations or reducing acoustical reflections.

## ELECTRONIC DATA SHEET

The M4260 and M2210 measurement microphones include an electronic data sheet. The automated sensor detection (ASD) of the XL2 Analyzer reads this data sheet, enabling the XL2 to automatically recognize the microphone model, sensitivity and calibration data. This ensures correct measurement results using the M4260 or M2210 microphones.



Connection Diagram of Measurement Microphones  
M4260 and M2210 - Enhanced Performance

## CONNECTING TO XL2

### Microphone plugs directly to the XL2

The XL2 automatically reads ASD electronic data sheet of the connected microphone as follows:

- Connect the measurement microphone to the XL2.
- Switch on the XL2 with the on/off button.
- The XL2 reads the electronic data sheet of the connected microphone during a short initialization process prior the first measurement.

### Microphone Connection via the ASD Cable

The measurement microphones M4260 and M2210 can be connected with the ASD Cable to the XL2 Audio and Acoustic Analyzer for measurements at remote locations or reducing acoustical reflections. The ASD Cable includes a separate line for transmitting the electronic data sheet to the XL2, thus not affecting the measurement data.

The electronic data sheet is transmitted via the XLR connector's housing and the shield lead of the ASD Cable. Do not touch these parts during the short initialization period to ensure the complete data sheet is recognized by the XL2. The automated sensor detection does not disturb any measurements. You may chain up to 4x ASD Cables together in tandem. The ASD technology supports accurate data communication up to a length of 20 meters (= 65 feet).

### Microphone Connection via a professional Audio Cable

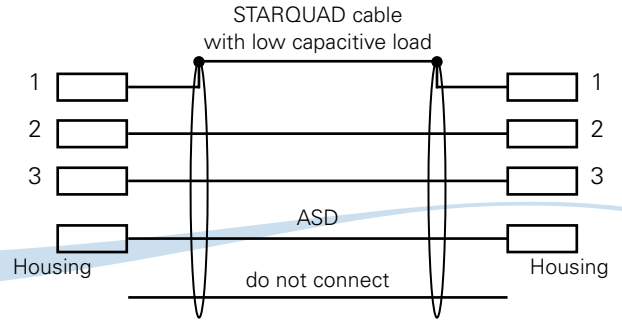
For distances longer than 20 meter (= 65 feet) use a high quality, low capacitance standard professional audio cable. In this scenario, no separate data line for the transmission of the electronic data sheet is available, thus the microphone sensitivity has to be entered manually into the XL2 Analyzer.

# TECHNICAL SPECIFICATIONS

	<b>M4260</b>	<b>M2210 - Enhanced Performance</b>
Microphone Type	Omni-directional, pre-polarized condenser, free field microphone	
Capsule / Transducer	1/4" permanently installed capsule	1/2" detachable capsule with 60UNS2 thread
Flatness	Class 2 (IEC61672-1)	Class 1 (IEC61672-1)
Frequency Range	20 Hz - 20 kHz	1 Hz - 20 kHz
Residual Noise Floor typ.	29 dB(A)	19 dB(A)
Linear measurement range with XL2	35 dB(A) - 136 dB acc. IEC 60804	24 dB(A) - 144 dB acc. IEC 60804
Maximum SPL @ THD 3%, 1 kHz	136 dB	144 dB
Sensitivity typical	-30 dBV/Pa ± 4 dB (30 mV/Pa) @ 1kHz	-34 dBV/Pa ± 3 dB (20 mV/Pa) @ 1kHz
Temperature coefficient	0.05 dB / °C @ +10 to +50°C	0.01 dB / °C @ -10 to +50°C
Electronic Data Sheet	NTi Audio ASD according IEEE P1451.4 V1.0, Class 2, Template 27	
Output Impedance	100 Ohm balanced	
Power Supply	48 VDC phantom power, 3 mA typical	
Dimensions	Length 150 mm (5.9"), diameter 20.5 mm (0.8")	
Connector	Balanced 3-pole XLR	

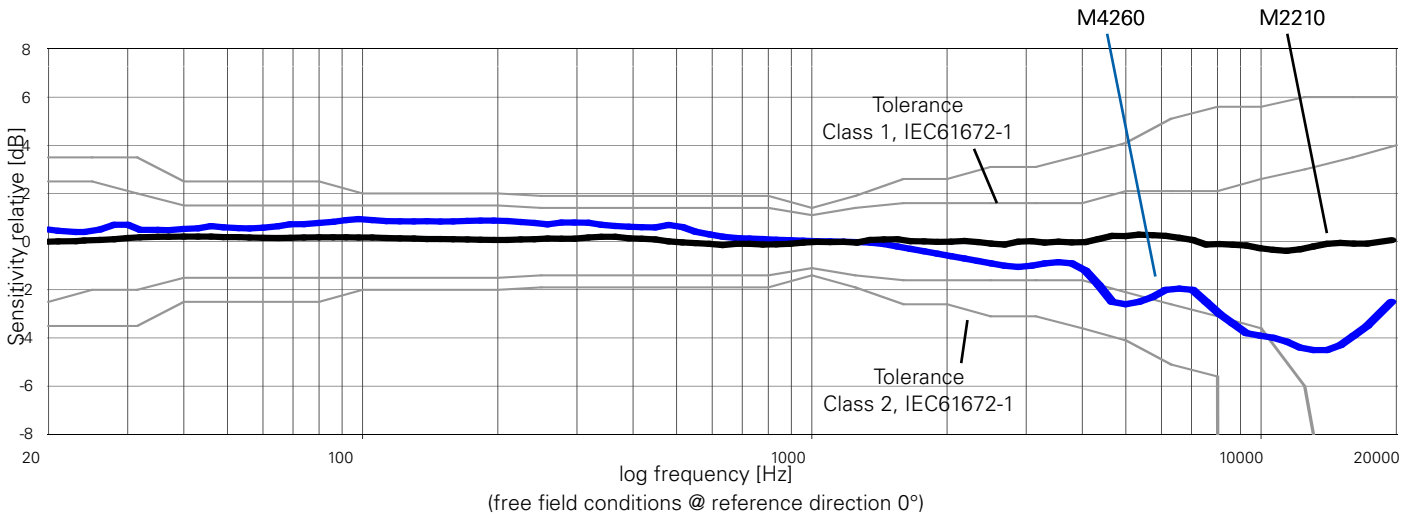
- o M4260 Measurement Microphone  
S/N =                      Sensitivity =                      mV/Pa
- o M2210 - Enhanced Performance Measurement Microphone  
S/N =                      Sensitivity =                      mV/Pa

### Technical specifications of ASD Cable:



Capacity between ASD line to shield < 2.7nF

# TYPICAL FREQUENCY RESPONSE



## GENERAL

### Content

- M4260 or M2210 Measurement Microphone
- Product Data
- Pouch, NTi Audio #: 600040030
- 1/4" Windscreen, NTi Audio #: 150000024  
or 1/2" Windscreen, NTi Audio #: 150000025
- Microphone-holder + Adapter 5/8" - 3/8"  
NTi Audio #: 160000039

### Notes

- Use the microphone for the intended purpose only.
- Protect the microphone from contamination by always using the supplied windscreen.
- Never use the microphone in a damp or wet environment.
- Do not jar or drop the microphone.
- Do not remove the microphone protective grid.
- Do not touch the microphone membrane.
- Remove the white dust cap of the M2210 measurement microphone prior to use.

### Warranty Terms

NTi Audio guarantees the measurement microphone and its components against defects in material or workmanship for a period of one year from the date of original purchase. Read the full warranty terms at [www.nti-audio.com](http://www.nti-audio.com).

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## ACCESSORIES

### ASD Cable

The ASD Cable allows for extended connections of the measurement microphones M4260 or M2210, while maintaining the automated sensor detection functionality. You may chain up to 4x ASD Cables together in tandem. Length = 5 meter (16 ft).  
NTi Audio #: 600 000 336

### Precision Calibrator

Class 1 sound calibrator providing 114 dB SPL @ 1 kHz for the reference frequency calibration of measurement microphones.  
NTi Audio #: 640 300 101

## CALIBRATION

### Calibration Certificate for new Microphone

An individual, detailed calibration certificate may be ordered together with the new product. The standardized capsule dimensions allow easy measurement of the microphone sensitivity by 1/2" or 1/4" calibrators.

### Calibration and Service

The M4260 and M2210 measurement microphones are recommended to be calibrated at yearly intervals. A detailed calibration certificate will be issued following the standards EN ISO / IEC 17025. For service and calibration follow the guidelines at [www.nti-audio.com/service](http://www.nti-audio.com/service).