

## PHANTOM POWERED MICROPHONES



## EMM-13D082 PHANTOM series

1/4" front - 1/2" body Measurement microphone, phantom powered

- super compact design
- Mini XLR connector
- Human readable Calibration files included (ASCII data/ Text file)
- Printed frequency response data
- on-axis and diffuse-field calibration data included at no additional cost

### Features:

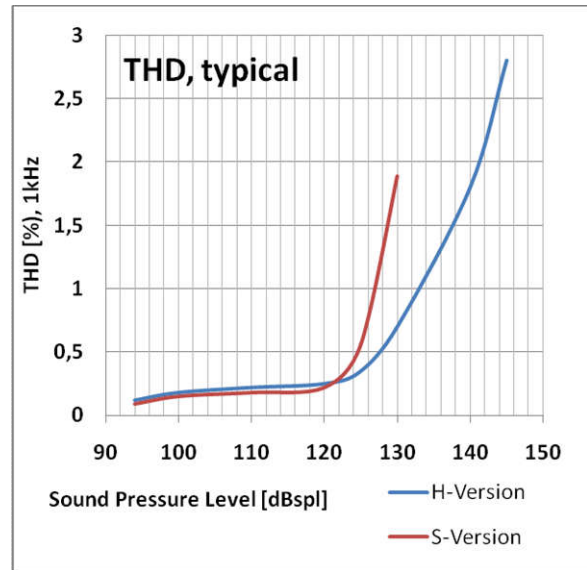
- Phantom power 12 / 24 / 48Volts
  - Linear frequency response
  - 10...20000 Hz (calibration chart)
  - Omnidirectional
- Large Dynamic Range
  - Stainless steel housing
  - Polyurethane and calibration file included)sealed
  - ESD and Surge-Voltage Protection

### Included Accessories:

5m MiniXLR to XLR Cable



### 3% distortion vs Sound Pressure Level



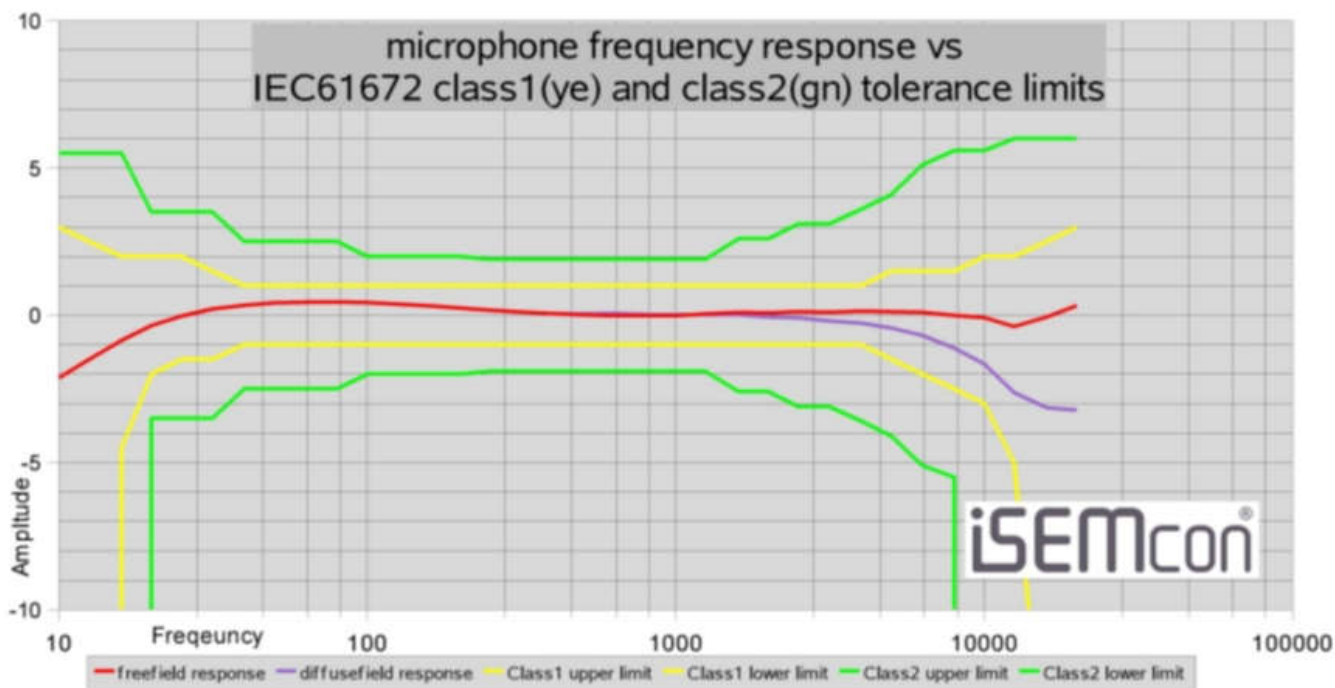
### Data file format stored in #####.cal

Human readable ASCII file:

www.iSEMcon.com freefield  
 Sensitivity 30,88 mV/Pa @1kHz  
 10,00 -0,02  
 10,40 0,03  
 10,82 0,06  
 11,26 0,10  
 11,71 0,14  
 12,18 0,17

.....  
 ..... 0,94  
 19945,31 0,94  
 19968,75 0,93  
 19992,19 0,93

^ frequency (Hz) ^amplitude response (dB)



Excerpt from cal-sheet.

|                          |                         |           |           |                   |
|--------------------------|-------------------------|-----------|-----------|-------------------|
| Microphone sensitivity:  | P48: 6,37               | P24: 6,13 | P12: 5,90 | mV @ 94dBspl,1kHz |
| Microphone power supply: | Phantom 12V / 24V / 48V |           |           |                   |

Ordering information : EMM-13D082-series

| Order No. | Name                | Sensitivity, typ. mV @ 94dBspl | Signal polarity | Max. SPL, 3% distortion limit |
|-----------|---------------------|--------------------------------|-----------------|-------------------------------|
| 140011    | EMM-13D082/H-P48/RM | 6                              | Non-inverting   | 140 (145)                     |
| 140010    | EMM-13D082/S-P48/RM | 30                             | inverting       | 125 (130)                     |

## SPECIFICATIONS EMM-13D082/#-P48/RM

Values for: 24V Phantom Power; 23°Celsius

### PERFORMANCE

|                                    |                |
|------------------------------------|----------------|
| Frequency Response characteristic  | Free-Field     |
| Polarization Voltage               | Prepolarized   |
| Nominal Sensitivity @1kHz          | See order info |
| Microphone Polarity                | See order info |
| Frequency Response calibrated      | 10...20.000 Hz |
| Frequency Response ± 1dB           | 50...8000 Hz   |
| ± 2dB                              | 20...12000 Hz  |
| ± 3dB                              | 10...18000 Hz  |
| Phase Match 100-5000 Hz            | ± 5°           |
| Inherent Noise 100-10000 Hz        | <30dB typ.     |
| Inherent Noise 1/3 Oct.            | <15dB typ.     |
| Dynamic Range (3% distortion) typ. | See order info |

### ELECTRICAL

|   |            |
|---|------------|
| Output Impedance  | <100 Ω     |
| Phantom Power (requires XLRmale to BNC connector adapter) | 12...52Vdc |

### ENVIRONMENTAL

|                             |             |
|-----------------------------|-------------|
| Operating Temperature range | -10...+55°  |
| Storage Temperature Range   | -20...+70°  |
| Operating Humidity Range    | 0...90%r.H. |
| Axial Vibration Sensitivity | ~ 50dB      |

### PHYSICAL

|                  |                          |
|------------------|--------------------------|
| Housing Material | Stainless Steel          |
| Sealing          | Polyurethane/Epoxy       |
| Output Connector | SMB coaxial socket       |
| Dimensions       | Ø ¼" (7mm) x 3 ¼" (82mm) |
| Weight           | 0.8 oz (25g)             |

### CONFORMITY

IEC 61000-6-1

### SPECIAL FUNCTIONALITY

ESD and Surge Voltage protection

## EMX-7150 PHANTOM series

### TYPICAL APPLICATIONS

Sound-power and sound-field analysis  
Industrial Acoustics  
Room acoustics analysis  
Sound reinforcement  
Real time analyzers

The EMX-7150 is a 1/4" microphone made from stainless steel and using state of the art water tight Neutrik<sup>3</sup> connectors has a very accurate frequency response combined with the capability to measure high sound pressure levels up to 145dBspl. It is low impedance measurement microphone that can be operated from 12...52 V Phantom Power which is available on most professional microphone preamplifiers and professional computer interfaces. With its mechanically robust design it is well suited for harsh environment use such as open air sound reinforcement measurements. Its class 1 frequency response (*NOTE: NOT A CLASS 1 MICROPHONE*)\*1 makes it predestined for Room acoustics analysis including recording studios and home theaters. It can normally be used without the included freefield calibration data file for compensation. In this case take the individual calibration data as proof of its superb performance.

Our super protection windshield SWS -7 is recommended for open air use when limited amounts of spraying water as well as trickling water impact the microphone.

### FEATURES

Frequency range **10Hz...20kHz**  
Sensitivity **6mV/Pa** typ.  
Dynamic range ~30... >140dBspl  
3% distortion limits **146dBspl** typ.  
**Calibration** chart and calibration data files included on CD  
**IEC 61672 class 1** frequency response  
Dimensions: acoustic port dia. 1/4" (**7mm**)  
Microphone body **0.75"** (19mm)  
Overall length **6"** (**152mm**)  
Weight **0.3oz** (**75 grams**)

### ACTUAL SIZE

Small windshield included

High SPL capability  
freefield calibration data  
diffusefield calibration data<sup>\*2</sup>

1/4" acoustical port

Long microphone body  
reduces early reflection effects

All stainless steel body

Factory replaceable electronics & capsule

O-Ring seal

Water tight connection  
when using Neutrik<sup>3</sup> NC-3FX-HD  
connector



\*1: Class 1 Freq.Response under limited conditions (23°C ± 3°C, 1013 mbar ± 30mbar)

\*2: approximated by 90deg incidence response

\*3: The corporate names and names of the products stated in this brochure are trademarks or registered trademarks of the respective companies.

# SPECIFICATIONS

Values for 23° Celsius and 48V Phantom Power

## PERFORMANCE

Frequency Response characteristic  
 Polarization Voltage  
 Nominal Sensitivity @1kHz  
 Microphone Polarity  
 Frequency Response calibrated  
 Frequency Response IEC61672 \*1  
 Inherent Noise 100-10000 Hz  
 Inherent Noise 1/3 Oct.  
 Max. SPL. (3% distortion limit)  
 Max. SPL. (3% distortion) typ.

Free-Field  
 Prepolarized  
 6mV/Pa  
 Non-Inverting  
 10...20.000 Hz class 1  
 <30dB typ.  
 <15dB typ.  
 > 140dBspl  
 146 dBspl

## ELECTRICAL

Output Impedance < 200 Ω  
 Phantom Power 12...52Vdc

## PHYSICAL

Housing Material Stainless Steel  
 Sealing O-ring/Polyurethane/Epoxy  
 Output Connector XLR male  
 Dimensions Ø ¼“(7mm) x 6“(152mm)  
 Weight 0.3 oz (75g)

## ENVIRONMENTAL

Operating Temperature range -10...+55°  
 Storage Temperature Range -20...+70°  
 Operating Humidity Range 0...90%r.H.  
 Axial Vibration Sensitivity ~ 50dB

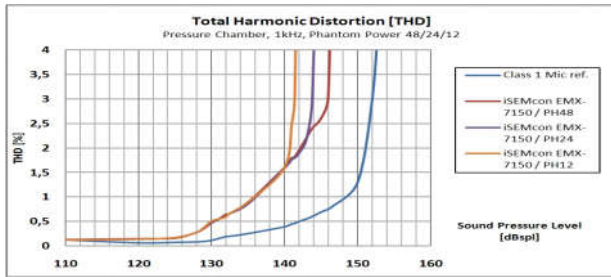
## CONFORMITY

IEC 61000-6-1;  
 IEC 61010-1

## SPECIAL FUNCTIONALITY

Voltage surge protection ü

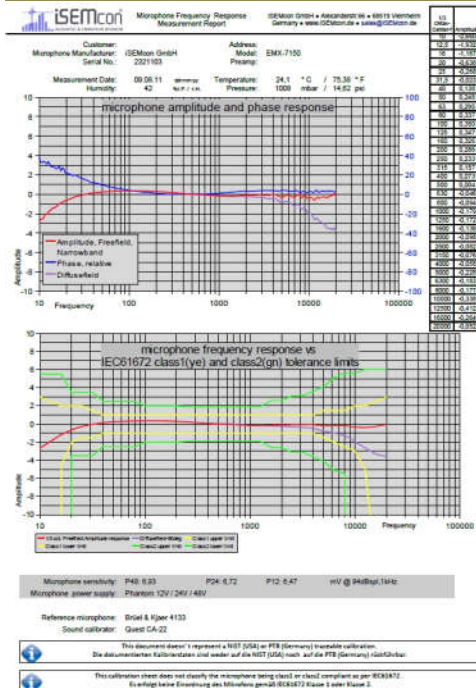
## THD , ref 1kHz



## CALIBRATION DATA FILE ORMAT

Human readable ASCII file:  
[www.iSEMcon.com](http://www.iSEMcon.com) freefield  
 Sensitivity 5.88 mV/Pa @1kHz  
 10.00 -0.02  
 11.26 0.10  
 .....  
 19992.19 0.93  
 ^ frequency (Hz) ^amplitude response (dB)

## FREQUENCY RESPONSE



## Ordering information :

| Order No. | Name           |  |
|-----------|----------------|--|
| 800060    | EMX-7150-CF1   | EMX-7150, clamp, USB Stick, cal Adapter          |
| 800070    | EMX-7150-CF2   | 2x EMX-7150, shock-mount, USB Stick, cal Adapter |
| 800080    | EMX-7150-CF/MP | 2x EMX-7150, clamps, USB Stick, cal Adapter      |
| 800081    | EMX-7150-CF/MT | 3x EMX-7150, clamps, USB Stick, cal Adapter      |
| 800082    | EMX-7150-CF/MQ | 4x EMX-7150, clamps, USB Stick, cal Adapter      |
| 150010    | EMX-7150       | EMX-7150, clamp,                                 |

## SUPPLIED ACCESSORIES



**Small windshield**



**Universal holding clamp**

## OPTIONAL ACCESSORIES



**SWS-7 windshield**

Metal grid guard covered from impregnated foam. Protects microphone port from spraying water. Slide on retainer with O-ring prevents from trickle water



**MB-230-BOX**  
O-Ring seal  
Water protection  
Dust protection  
**Dimensions [mm]**  
210 x 167 x 90



**SOUND CALIBRATOR SC-1** 94dBspl and 110dBspl switchable. Standard and custom size adapters. Calibration data included (includes individual pressure chart)

## POLAR PATTERNS, typical

