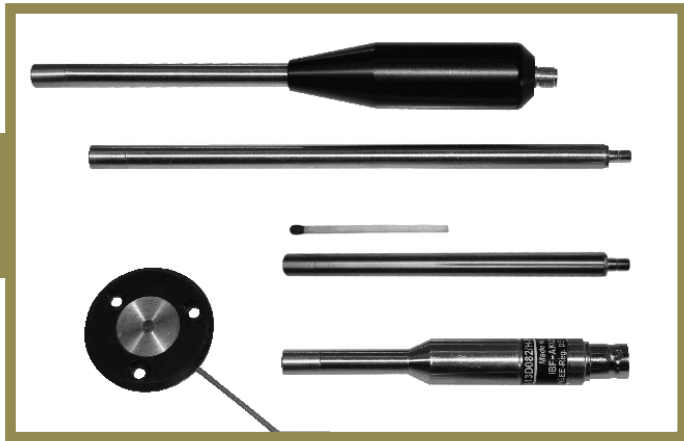


IEPE constant current powered MICROPHONES



(* ICP™, IEPE, DeltaTron™, CCP, ISOTRON™ compatible)

EMM-13D082 series



(* ICP™, IEPE, DeltaTron™, CCP, ISOTRON™ compatible)

**1/4"- 1/2" body, BNC
receptable.**

- long cable drive capability
- integral preamp
- small and rugged
- **large dynamic range**
- **stainless steel housing**
- **individual calibration chart**

For more technical data see EMM-7101 series microphone. Differs only in size and connector.

Ordering information : EMM-13D082-series

Order No.	Name	Sensitivity, typ. mV @ 94dBspl	Signal polarity	Max. SPL, 3% distortion limit
130021	EMM-13D082/H-CCP/C-T	6	Non-inverting	140 (145)
130020	EMM-13D082/S-CCP/C-T	30	inverting	125 (130)

SPECIFICATIONS EMM-13D082/#-CCP/#-T

Values for: 4mA CCP; 21V excitation voltage; 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

Constant Current Power	2...20 mA
Constant Current Power nominal	4 mA
Excitation Voltage	18...30V
Output Bias Voltage	7 ± 2 V
Output Impedance	<10 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 1/4" (7mm) x 3 1/4" (82mm)
Weight	1,1 oz (35g)

CONFORMITY

IEC 61000-6-1

SPECIAL FUNCTIONALITY

TEDS (IEEE 1451.4)	Template 27 prog.
ESD protection	30kV

EMM-7101 series

(* ICP™, IEPE, DeltaTron™, CCP, ISOTRON™ compati-



TYPICAL APPLICATIONS

Multi-channel measurements
Single-channel measurements
Sound-power and sound-field analysis
Low-cost in-car measurements
Industrial Acoustics

The iSEMcon® Array Microphone EMM-7101-CSTB is an economically priced prepolarized microphone for single and multi channel measurements in arrays and matrices. It is a full featured product with integrated CCP-Preamplifier and programmed TEDS-chip (Template 27). The long 4" body minimizes the sound field influence from holding clamp or array mechanics.

works from
Constant Current Power (CCP)
Phantom Power (PH)
By the use of a connector adapter
(no signal converter necessary)

FEATURES CSTB-Version

Frequency range **10...20000Hz**
Sensitivity **30mV/Pa** typ.
Signal polarity: positive
Dynamic range 30... >125dBspl
3% distortion limit **>130dBspl** typ.
Built-in **TEDS** (template 27)
on CD
Excellent amplitude and phase matching
SMB connector
CCP or Phantom Power
Dimensions: diameter 1/4" (**7mm**)
length w/ connector **4"** (**101mm**)
Weight **0.3oz** (**9grams**)

DIFFERENCE CHTB Version

Sensitivity **6mV/Pa** typ.
Signal polarity: positive
Dynamic range 30... >140dBspl
3% distortion limit **>145dBspl** typ.

SPECIFICATIONS

Values for: 4mA CCP; 21V excitation voltage; 23° Celsius

PERFORMANCE

Frequency Response characteristic	Free-Field
Polarization Voltage	Prepolarized
Nominal Sensitivity @1kHz	See order info
Microphone Polarity	See order info Inverting
Frequency Response calibrated	10...20.000
Frequency Response ± 1dB	50...8000 Hz
± 2dB	20...12000
± 3dB	10...18000
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

Constant Current Power	2...20 mA
Constant Current Power nominal	4 mA
Excitation Voltage	18...30V
Output Bias Voltage	7 ± 2 V
Output Impedance	<10 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

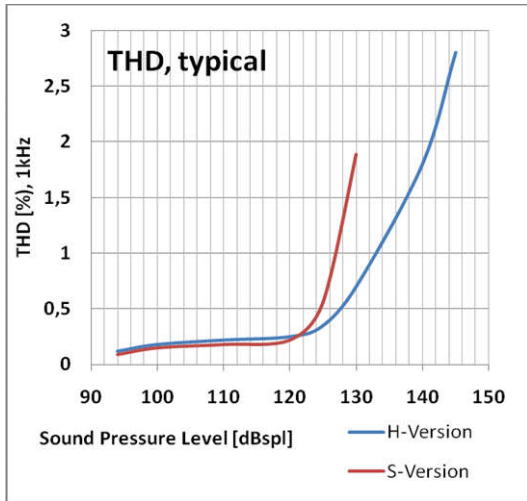
Housing Material	Stainless Steel
Sealing	Polyurethane/Epoxy
Output Connector	SMB coaxial socket
Dimensions	Ø 1/4"(7mm) x 4"(101mm)
Weight	0.3 oz (9g)

CONFORMITY

IEC 61000-6-1

SPECIAL FUNCTIONALITY

TEDS (IEEE 1451.4)	Template 27 prog.
ESD protection	30kV



The iSEMcon® EMM-7101-C#T# series consists of a special ICP and Phantom Power compatible circuitry. The built-in prepolarized microphone cartridge controls an AC/DC-Zener Diode circuitry with an output impedance as low as 10 Ohms (as per circuitry simulation). This is very unique and new in the market and makes the microphone compatible to Constant Current power (ICP) as well as Phantom Power without loss in functionality and signal quality and almost independent from source impedance.

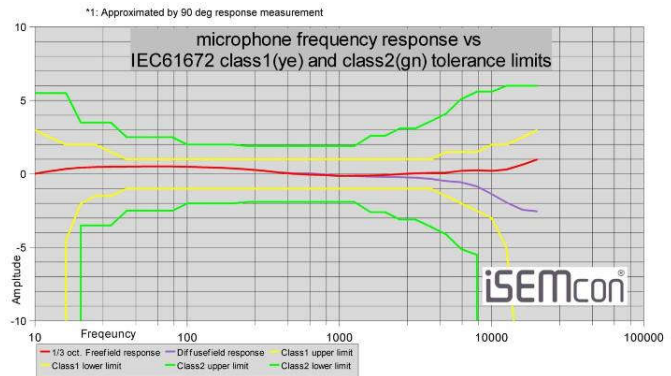
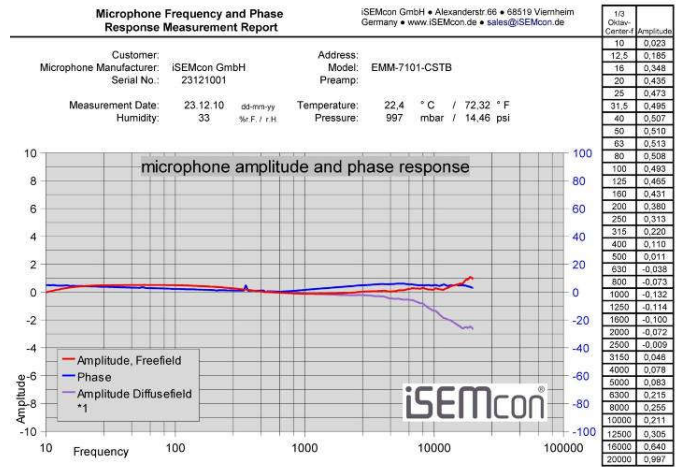
It also has a TEDS EEPROM built-in being fully compatible with the IEEE1451.4 standard.

Data as per IEEE 1451.4

TEDS IC:DS2431 Serial:0000028DFD06
Basic TEDS
 Check Sum:C9 Version letter:@
 Manu ID: Version number:1
 Model No: 30010 Serial number: 121001
Standard Template TEDS
 Selector:0 Polarity :positive
 Template:27 Mapping :0
 Sel Case:0 Sig Type :0
 Sens :30,9 AC/DC :1
 Ref Freq:989 Cal Date :23.12.2010
 Polar :Prepolarized Cal init :FRA
 Sel Case:0 Cal period:0
 Mic Type:Free Loc ID :0
 Mic Size:1/4" Selector :3
 Volume :0 End Select:0
 Sel Case:0

The microphone powers from Constant Current Power (ICP™, IEPE, DeltaTron™, CCP, ISOTRON™, AcoTron™ compatible *1) or from Phantom Power (12..52Vdc) by the use of an XLR to BNC connector adapter or XLR to SMB

cable. The microphone does not require an electronic signal converter. There are no limitations in functionality or loss in signal quality



Microphone sensitivity: 30.88 mV @ 94dBspl,1kHz
 Microphone power supply: CCP 4mA Excitation Voltage 21Vdc (18..30Vdc)
 Reference microphone: Brüel & Kjaer 4133
 Sound calibrator: Quest CA-22

while being powered from Phantom Power. Microphone sensitivity is almost independent from power source (less than 1 dBmV)

Power Source	18V	21V	30V	
ICP 2mA	30,18mV	30,22mV	30,31mV	
ICP 4mA	30,37mV	30,46mV	30,52mV	
ICP 10mA	30,64mV	30,78mV	30,82mV	
Phantom 48V / 6,8kΩ				30,60mV
Phantom 24V / 2,4kΩ				30,49mV
Phantom 12V / 2,4kΩ				29,93mV

Note: While applying phantom power the TEDS functionality is not available.

Ordering information : EMM-7101-series

Order No.	Name	Sensitivity, typ. mV @ 94dBspl	Max. SPL, 3% distortion limit	Signal polarity	Connector
130014	EMM-7101/S-CCP/A-T	30	125 (130)	Non inverting	SMA
130015	EMM-7101/H-CCP/A-T	6	140 (145)	inverting	SMA