

MI-1271/3170

Microphone/ Preamplifier

MI-1271M12

TEDS Microphone



● Feature

MI-1271/3170 : 1/2-inch Free-field type Electret Condenser Microphone/ Preamplifier

- Conforming to IEC 61094-4:1995 Type WS2F
- Wide temperature range from -30°C to +80°C by adopting titanium vibrating membrane and improving electret performance
- Wide frequency range from 1 Hz to 20 kHz to reduce self noise.
- CCLD type preamplifier (MI-3170) can be connected to CCLD instruments by BNC cable. Amplifier is not necessary.

MI-1271M12 : TEDS Microphone*1

- TEDS microphone and preamplifier integrated type
- Enables simple unit calibration and reduction of the input error and processing time.

*1 TEDS specification ...IEEE 1451.4:2004 (Template: Microphone with built-in preamplifier Ver.1.0)

*2 TEDS supported models: DS-03xx, CF-9200/9400

TEDS microphone

Sensitivity information of microphone is easily sent to the connected TEDS instruments (FFT Analyzer etc.).*2

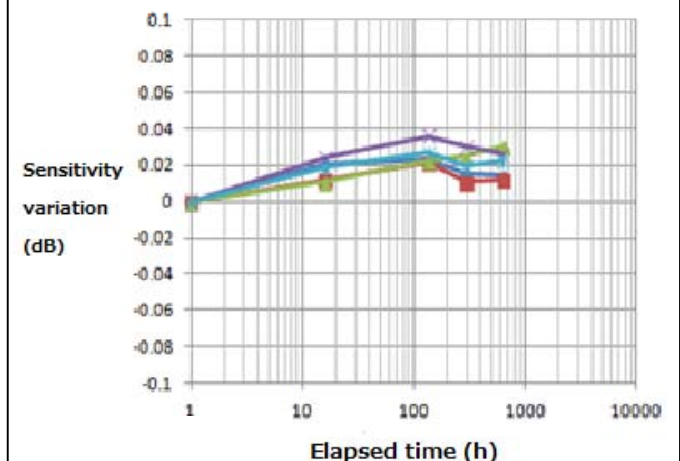
● Major specification (MI-1271M12)

Nominal diameter	1/2-inch
Response type	Free sound field
Polarization	Back electret type
Polarization voltage	0 V
Sensitivity	-26.0 ± 1.5 dB re.1 V/Pa (50 mV/Pa)
Frequency range	1 Hz to 20 kHz (±2 dB)
Capacitance	12 pF (representative value)
Maximum sound pressure level (Total harmonic distortion 3%)	135 dB or more
Intrinsic noise level (A-weighting)	14.0 dB (representative value)
Static pressure characteristics (250 Hz)	-0.013 dB/kPa
Temperature characteristics (250 Hz)	+0.005 dB/K
Humidity characteristics (250 Hz)	-0.0004 dB/%
Long term stability	0.03 dB/year or less (at reference environmental condition) 0.30 dB/year or less (at 80°C, 23%RH)
Operating temperature range	-30°C to +80°C
Operating relative humidity range	0%RH to 90%RH (with no condensation)
Storage temperature range	-40°C to +70°C
Storage relative humidity range	0%RH to 90%RH (with no condensation)
Input drive power	Constant current line drive (CCLD)
Drive current	2 mA to 4.5 mA (rated value 4mA)
Drive power voltage	18 V to 26 VDC (rated value 24 V)

Output connector	C02 (BNC)
Outer dimension	φ13.2 mm × 91.9 mm
Weight	Approx. 41g
Accessory	Instruction manual × 1, Calibration chart × 1, Preamplifier holder (MI-0301)
Reference environmental condition	23°C, 50%RH, 101.3 kPa

● Temperature test data

Example: 80°C, 23%RH



● Related products

Signal cable (BNC-BNC connector)

<-30°C to +80°C>

MX-1001 1.5m

MX-1005 5m

MX-1020 20m

<0°C to +60°C>

MX-2001 1.5m

MX-2005 5m

MX-2020 20m

*MI-0301 microphone holder is standard accessory of the MI-3170, MI-1271M12.

Recommended sound calibrator

SC-2500

Speaker type

IEC60942 CLASS1

JIS C 1515 class 1

114 dB

(Generation sound pressure level)

1 kHz (Generation frequency)



SC-3120

Piston phone type

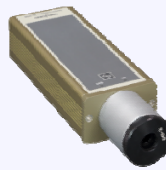
IEC60942 CLASS1/C

JIS C 1515 class 1 /C

114 dB

(Generation sound pressure level)

250 Hz (Generation frequency)



Related parts

- Windshield screen φ70mm

Wind noise is decreased by installing this windshield screen to the tip of a microphone. This is effective for the measurement in outdoor and the measurement near to an air outlet of an air conditioner.

- Extension rod MI-0311 (200 mm)

Used to connect a microphone preamplifier.

Sound reflection of tripod or microphone stand can be reduced.



Microphones etc.

- 1/2-inch Microphone for general purpose

MI-1235

(10 Hz to 20 kHz)

MI-1433

(20 Hz to 8 kHz)



- 1/2-inch Preamplifier for general purpose

MI-3111

Recommended signal cable

MX-2000 series (sold separately)



- 1/4-inch Microphone for wide band

MI-1531

(10 Hz to 100 kHz)

- 1/4-inch Preamplifier

MI-3140

Recommended signal cable (sold separately)

NP-0130 series + NP-0021 (conversion connector)



● Major application

- Sound measurement near to an engine
- Measurement of low-frequency sound
- Measurement on the engine bench which supports temperature variation etc.
- Cold start test, test at cold area

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