Technical specifications

Microphones*

Free-field microphones

Type	40AF/ MCP212	40AE/ MCE212	40BF	40BE	
Sensitivity	50	50	4	4	mV/Pa
Frequency range (± 2 dB)	3.15-20k	6.3-20k	10-100k	10-100k	Hz
Dynamic range	15-146	15-146	40-174	40-168	dBre.2x10^{-5}Pa
Polarization voltage	200	0	200	0	V
Outside diameter (with protection grid)	13.2	13.2	6.9	6.9	mm

Pressure microphones

Type	40AP	40BP	40DP	
Sensitivity	40	1.6	1	mV/Pa
Frequency range	3.15-10k	10-70k	10-160k	Hz
Dynamic range	17-148	45-174	50-184	dBre.2x10^{-5}Pa
Polarization voltage	200	200	200	V
Outside diameter (with protection grid)	13.2	6.9	3.2	mm

Outdoor microphones

Type	41AM / 41CN	41AL
Sensitivity	50mV/Pa (unified)	50mV/Pa (nominal)
Dynamic range	20-136dB (re.2x10^{-5}Pa)	20-148dB (re.2x10^{-5}Pa)
Frequency response	IEC 60651 type 0 and ANSI Sl.4-1983 type 0	IEC 60651 type 0 and ANSI Sl.4-1983 type 0
Cal. level of electro-static Actuator	90dB at 1000 Hz	
Output connector	6 Pin Lemo connector	7 Pin Lemo 1B, 3m cable
Pole adaptor	50mm (1.97") G 1 1/2" (ISO 228/1)	50mm (1.97") G 1 1/2" (ISO 228/1)

Random microphones

Type	40AR	40 AQ	
Sensitivity	50	50	mV/Pa
Frequency range	3.15-12.5k	3.15-12.5k	Hz
Dynamic range	17-148	17-148	dB re. 2x10^{-5} Pa
Polariz. voltage	200V	0	V
Outside diameter (with protection grid)	13.2	13.2	mm

Preamplifiers*

	PRE12H 1/2"	26AK 1/2"	26AB 1/4"
Frequency range (± 0.2 dB)	1 Hz - 20 kHz	2 Hz - 200 kHz	2Hz-200kHz
Input impedance	20 GΩ, 2.5 pF	20 GΩ, 0.2 pF	20 Ω, 0.2pF
Output impedance	< 50 Ω	55 Ω typical	55 Ω typ.
Noise	A-weighted typical: 2.5µV	A-weighted <2.5 µVrms	A-weighted <2.5 µVrms
Gain	typical: -0.035dB	typical: -0.25dB	typ. -0.25dB

Calibrators

Reference	Cal01	Cal02
Level	94dB ± 0.3 dB	94dB ± 0.5dB
Other levels	74dB/114dB	
Stability (better than)	± 0.1dB	± 0.2dB
Frequency	1 kHz ± 2%	1 kHz ± 4%
Frequency stability (better than)	± 0.5%	± 1%

Spare parts*

Windscreen: BAP012; Nosecone: 1/4"-RA0022, 1/2"-RA0020

Cables

Reference: RAL0197, exists in various lengths

(*) *Not restrictive, please contact our sales department for more information.*

Benefits

- High quality and precision
- General and special purposes
- Low noise preamplifiers
- Special application accessories
- Standard connections

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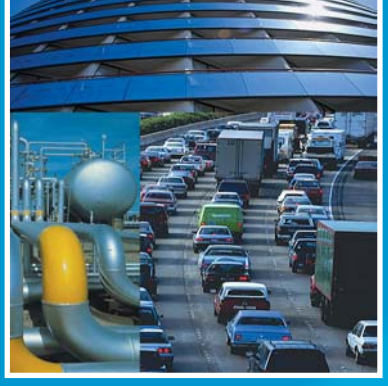
In collaboration with G.R.A.S.

Production and servicing for calibration and repair

Rev : July 2001



MICROPHONES

Acoustic Transducers and accessories

01dB-Stell
MVI technologies group

Overview

To complement the powerful measurement systems from 01dB-Stell, a choice set of microphones is available for accurate and reliable acoustical measurements.

A full range of calibrators and preamplifiers, as well as connecting cables (of any length) and other accessories (outdoor units, conditioners, carrying cases, etc.) will help you to build up your measurement chain for any acoustical application.

01dB-Stell distributes a large range of transducers for acoustical measurements, as well as for vibration or sound intensity measurements.

This documentation presents only a part of our whole product range. Please contact your distributor for more information.

MICROPHONES

Our whole range of Transducers includes 1/2, 1/4, as well as 1/8 inch condenser microphones for environmental, building and industrial use. All microphones are factory-calibrated. The microphones are manufactured in non-corrosive stainless materials and are able to withstand rugged handling and corrosive environment. The condenser microphones are a new generation of precision measurement microphones with improved performances and long term stability.

Free field Microphones

General purpose and high precision microphones, prepolarized or 200 V polarized covering a large frequency range.
Free field microphones are used for sound level meters according to IEC standards, for general electro-acoustical measurements on loudspeakers and sound sources in general, when the sound waves arrive perpendicular to the diaphragm. The free field microphone should be pointed towards the sound source.

Pressure Microphones

General purpose and high precision microphones covering a large frequency range.
Pressure microphones are used for closed coupler measurements for earphones, audiometric test equipment, telecommunication equipment, in boundary layer measurements, flush mounted, etc. In these applications the presence of the microphone in the sound field is intended.

Random Incidence

Special microphones with the frequency response optimized to measure correctly in random, diffuse/reverberant sound fields where the sound waves arrive from all directions.

Outdoor Microphones

Outdoor microphone units (41AM, 41CN) for permanent outdoor installation in, for example, airport noise monitoring systems or traffic noise monitoring systems. The units have built-in A-weighting, +/- 20dB amplifier and electro-static actuator for complete check of system functionality. Type 41AL environmental microphones is a low cost alternative for outdoor microphones, intended to semi-permanent outdoor applications.

Special Microphones

Special microphones can be proposed for very specific measurements of very low frequency sound, high level and high frequency sound, high temperature or airflow situation. Please ask your distributor.

ACCESSORIES

Preamplifiers

The type PRE12H 1/2" preamplifiers are used with pre-polarized or externally polarized microphones. They are designed to drive cable lengths up to 30m and all models allow insert calibration. The insert voltage generator is connected via the output connector. Type 26CA 1/2" ICP® preamplifier with standard BNC output connector is designed for use with pre-polarized microphones.

The type 26AA, 26AB, 26AC and 26AL 1/4" preamplifiers are small rugged units optimized for acoustical measurements with condenser microphones. They have a very low inherent noise level, a wide dynamic range and a frequency range from below 2 Hz to above 200 kHz. Type 26CB 1/4" ICP® preamplifier with standard BNC output connector is intended for use with pre-polarized microphones. Special 1/4" to 1/2" adapter is available to use with 1/2" microphones.

Spare parts

Type BAP012 windscreens protect the 1/2" microphone transducer and the preamplifier. 1/2" and 1/4" nosecones allow measurements in laminar airflow and decrease turbulence around the microphone. Different right angle and straight adapters are available for different mounting and adaptation of different microphone and preamplifier sizes.

Calibrators

The calibrators* Cal01 and Cal02 are sound pressure sources dedicated to the on-site calibration of noise measurement systems before and after each measurement session, as defined in most regulations.

Battery operated and lightweight, they comply with the specifications of the IEC942 standard as either class 1 (Cal01) or class 2 (Cal02) acoustic calibrators.

These devices may be used with either typical sound level meters or PC-based noise measurement systems independently of the weighting network or filter used because of a nominal 1 kHz calibration frequency.
Cal01 and Cal02 are designed for use with 1" microphones and delivered with a 1/2" microphone adapter.

Complete Solutions

Our range of high-quality microphones and their accessories complement perfectly our PC-based and hand-held measurement systems.

We offer signal conditionning unit like OPUS* for acquisition systems requiring external transducer supply.

Our cables of different lengths are equipped with standard LEMO connectors.

** refer to the appropriate datasheet*