

Specifications for The "Alternative" Family of Products

IEC61094-4 COMPLIANT											
ACO Pacific Model No.	7022	7023	7012	7013	7046	7047	MK224	7016	7017	7052E	
Nominal Diameter	1 Inch		← 1/2 Inch →				1/4 Inch		1/2 Inch		
Response Characteristic	Free Field 0°	Pressure	Free Field 0°	Pressure	Free Field 0°	Pressure	Free Field 0°	Free Field 0°	Pressure	Free Field 0°	
OPEN CIRCUIT SPECIFICATIONS											
Frequency Response ± 2dB	2Hz to 20kHz	2Hz to 10kHz	2Hz to 40kHz	2Hz to 20kHz	2Hz to 20kHz	2Hz to 10kHz	8Hz to 18kHz	5Hz to 120kHz	5Hz to 70kHz	3Hz to 25kHz	
Sensitivity dB re: 1V/Pa (mv/Pa)	-26dB (50)		-36dB (15)	-38dB (12.5)	-26dB (50)	-28dB (40)	-26dB (50)	-49dB (3)	-58dB (1)	-29dB (35)	
Dynamic Range (3% THD) Typ.	8dBA-150dB		18dBA-160dB		12dBA-145dB		14dBA-145dB	35dBA-164dB	45dBA-175dB	16dBA-148dB	
Nom. Polarization Cartridge Cap.	60pF		18pF		20pF		18pF	6.5pF		18pF	
Polarization Voltage	← 200 Vdc →						0 Vdc	200 Vdc		0 Vdc	
Temperature Coefficient -10°C to +50°C	+ 0.007dB/°C				(-30°C to +80°C < +0.25dB)				0.01 dB/°C		
Influence of Humidity 55°C - 95%	<±0.1dB (non condensing)										
Long Term Stability 20°	>900 years/dB						>250 years/dB	>900 years/dB		>250 years/dB	
MECHANICAL DIMENSIONS											
Height of Cartridge with grid	18.5 mm		12.7 mm		16.7 mm		10.5 mm		13 mm		
Without grid	17.0 mm		11.5 mm		15.5 mm		15.5 mm		9.0 mm		
Diameter of Cartridge with grid	23.77 mm		← 13.2 mm →				7.0 mm		13.2 mm		
Without grid	23.77 mm		← 12.7 mm →				6.35 mm		12.7 mm		
Thread for Grid or Coupler	23.11 mm 60UNS2		← 12.7 mm 60UNS2 →				6.36 mm 60UNS2		12.7 mm 60UNS2		
Thread for Preamp Mounting	23.11 mm 60UNS2		← 12.7 mm 60UNS2 →				5.7 mm 60UNS2		12.7 mm 60UNS2		
Equivalent Bruel and Kjaer Type	4145	4144	4133/4191	4134/4192	4165	4166	4155/4189	4135	4136	-	
Companion Preamplifier	4022 (4012 + AD0122)		4012				4012E, 4212, 4048	4016 (4012 + AD0016)		4012E, 4212, 4048	

◆ ACCESSORIES ◆



521 SPL Calibrator
1 kHz at 94 dB SPL
"0" dB reference freq.
for "A" "C" "D" filters
IEC 60942:2003 Class 1
For 1/2 Inch capsules
QD7 1/4 Inch adaptor option
9Vdc (NEDA 1604A)

Accessories:
AD0122 - 1 inch Mic to 1/2 inch Preamp Adapter
AD0016 - 1/4 inch Mic to 1/2 inch Preamp Adapter
DM2-22 - 1/2 inch Dummy Mic/BNC -22pF input
MATT-10, 20, 30 dB Mic. Attenuator Standard

Windscreens-Standard:
WS1 - For 1/2 inch Microphones - 3" diameter
WS7 - For 1/2 inch Microphones - 7" diameter

Rain Resistant Windscreens:
WS1-80T - For 1/2 inch Microphones - 3" diameter
WS7-80T - For 1/2 inch Microphones - 7" diameter

Cables:
CA4012-5 - 5 Pin XLR Cable - 2 meters - Supplied w/4012
CA4012-L7 - Lemo • Norsonic • B&K Pinout - Supplied w/4012L7
Extension CE4012-X-Y
Lemo 7 pin (-L7) • XLR 5 pin (-5) • Y=Length in Ft.



AD0015
DM2-22
AD0122

IEPE/ICP™(PCB) ADAPTERS

IEPE1248-Phantom
◆ XLR 3 Pin Male Connection conforms to Industry Standard Balanced Phantom Power Configurations.
◆ Operates from 18-48 Vdc 12Vdc w/reduced performance
◆ BNC Male Coaxial Cable Connection
◆ Supplies 3-4 mA Constant Current From Balanced Phantom Sources (Custom mA available)

PSIEPE4-PS9200
◆ Adapt your PS9200 to power your ACOTron™, IEPE or CCLD devices.
◆ The PSIEPE4 supplies a low noise 3-4 mA constant current from the PS9200's 28Vdc.
◆ Now you can operate your microphone on one channel while you power an accelerometer.
◆ BNC Male Coaxial Cable Connection



WS7-80T & WS1-80T
UV Resistant Windscreens

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Specifications subject to change without notice.



2604 Read Avenue • Belmont, CA 94002 • Tel: (650) 595-8588 • Fax: (650) 591-2891
www.acopacific.com • sales@acopacific.com
ACOustics Begins with ACO™

For Over 35 Years ACOustics begins with ACO™



Community • Industrial
Noise Mitigation
Live Sound
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Indoors and Out

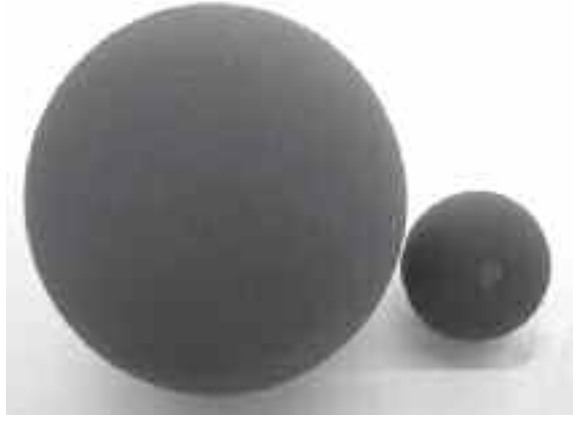
Microphone Systems
Standalone
IEPE Powered • Phantom Power



Measurement Microphones
Polarized and Electret



Windscreens
3 to 18 inch & Custom
Weather/UV Resistant



ACO Pacific, Inc.
www.acopacific.com sales@acopacific.com

PS9200

Precision Microphone Power Supply Family



- 2 and 4 Channel Models
- 3 way operation, Internal 9Vdc Battery
- AC Wall Adapter, External 6 to 16Vdc
- Over 40 hours battery life (One 4012 Preamp and Mic)
- Power On/Low Battery Indicator
- Output AC Coupled
- Industry Standard Connectors
- Input - 5 pin XLR or Lemo 7 pin
- Output - BNC Coaxial
- Locking Toggle Switch

Specifications:
Preamplifier Supply:
 Voltage - (+) 28Vdc±5%
 Current - 10 mA total

Polarization Supply:
 Voltage - (+) 200 Vdc±2% max 0.5% typical
Power Requirements - DC:
 Voltage Input 4.5 to 18Vdc
 Operational Range 5.5 to 16Vdc
 Current @ 9 Vdc - One channel - 4 mA typical
 Low Battery Indication: 6.3 Vdc typical
 Battery - 9Vdc Alkaline (NEDA 1604A)
Accessories:
PS9: 110VAC Adapter
PS29: 220VAC Euro Adapter
Options:
PS9250: 50 Vdc Preamp Voltage - Permits Higher Output Voltage - 40Vpp
PS9200L7: (PS9204L7) - 2 & 4 Channel Units with 7 pin Lemo Connector
 Lemo Pinout Compatible with Norsonics and B&K

CONNECTION DRAWINGS



4012 1/2 Inch Microphone Preamplifier



- Detachable cable provides: Ease of installation, Storage of Mic and Preamp, Ease of repair
- Low power • Wide Frequency Response
- High Input Impedance • Low noise

Specifications:
Microphone Connection: 11.7mm - 60 UNS Thread
Power: 28 Vdc @ 700 uA typical
Insertion Loss: <0.2 dB typical @ 22 pF (DM2-22)
Output Voltage: 7Vrms @ 1 kHz (28 Vdc)

Frequency Response: 2Hz to 200kHz ± 0.5db typical
Noise @ 22pF: "A" weighted - 1.5 uV typical, Linear 20Hz to 20kHz - 3uV typical, Input Impedance: >25GΩ || 0.1 pF typical

Options:
XLR & Lemo Versions: 1 inch Preamplifier - 4022 (4012+AD0122)
 1/4 Inch Preamplifier - 4016 (4012+AD0016)



4212 ACOtron™

IEPE Powered (2-20 mA)

New 7052SYS MK224SYS (mic + 4212) Combos

IEPE Adapters:
 PSIEPE4 & IEPE1248
 IEC61094-4 Compliant

Specialty Preamps

4212RAS

NOT SHOWN
 4012RAS & 4022RAS
 AVAILABLE



Specifications:
Frequency Response: @ 22pF
 Lower Limits -3 dB 5 Hz - 200 kHz typ.

Loss (Attenuation):
 re: 1 kHz (-)1.4 dB typical

Input Impedance: 1GΩ || 0.6 pF typical

Noise: @ 22pF
 1.8 uV "A" weighted, 8 uV 20 - 20 kHz typical

Output Connector: BNC Socket (Female)

Power: 2-20 mA, 18 to 30 Vdc recommended

Microphone Connection: 11.7mm - 60 UNS Thread

Temperature: Operating -20 to 70°C

Option: 4212RAS Right Angle Preamp

THE SLARM™ SOLUTION



Sound Level Alarms Wired and Wireless

The **NetSLARM™** family of SPL alarms feature:

- Operates Stand-Alone or with PC
- Ethernet, USB, RS232 Connectivity
- Network Appliance
- Password Protected Security Layers
- Programmable: dBSPL Thresholds, Leq Periods
- A, C, and Z (Lin) Weighting
- Real-time Clock Calendar - 24/7 Alarm Scheduler
- 20 to 120 dBSPL, 40 to 140 dBSPL
- 7052E Titanium Measurement Mic (std) - IEC61094-4 Compliant
- Remotable Mic/Preamp - to >300 feet
- Mic Calibration with 521 calibrator (opt)
- 2 Optically Isolated Signal (Alarm) closures (50 V/50 mAdc)
- WS1 Windscreen standard
- WS1-80T (treated- opt)
- 12-24 Vdc Power - SW12 AC Adaptor
- Din Connector for Alarm Outputs
- SLARMsoft™ software included

APPLICATIONS: • Amphitheaters • Auditorium • Stage • Community Compliance
 • Industrial • Machine/Plant Noise • Environmental • Equipment Yards • Construction Sites

SLARM™ ACCESSORIES

SLARMulti™ Multiple Mic Combiner

- Permits Area Wide Monitoring
- Connects to NetSlarm™ Mic In
- High SPL at any Mic triggers Alarm
- Supports up to 3 Microphones
- Individual Cal of Mic sensitivity
- Rugged Outdoor Housing



ODM FAMILY

Outdoor Mic Assembly



ODM1 ODM2

- Designed for outdoor installation
- Accepts 1/2 inch Preamps
- WS1-80T Treated Windscreen
- Hydrophobic and UV resistant
- Improved Wind Noise Reduction
- Standard 3/4 inch EMT Fittings
- ODM1 Wall Mount
- ODM2 Pole Mount
- ODM3 Right Angle Mount (Not Shown)

7052SYS & 7052PH

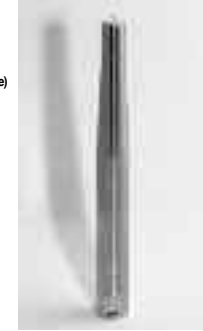
Measurement Microphone Systems
 IEC61094-4 Compliant



7052E FF Mic, WS1 Windscreen 4212 ACOtron™ IEPE Preamp or 4048 Phantom Preamp
 Also Available: MK224SYS - MK224PH - PSIEPE4 - IEPE1248 - WS1-80T

4048 ACOtron™ 1/2 Inch Phantom Preamp

Input Freq. Response @ 22pF: 5Hz to 200 kHz (-2 dB)
Loss @ 22 pF: 1.5 dB typ.
Noise Floor @ 22 pF: 2uV typ.
Output Performance 60 to 18 V Phantom: (12Vdc reduced performance)
 1 kHz - 14 Vpp (5Vrms) into a 5000pF load <1% THD
Mic Mounting Thread: 11.7 mm 60UNS2
Power/Output Connector: XLR 3 pin -male



7052PH and MK224PH System Packages
 Includes: Mic, 4048 Preamp and WS1 Windscreen

Options
Windscreens: WS7, WS1-80T and WS7-80T (treated)
 521 SPL Calibrator

S17KITS FOR ADDITIONAL SAVINGS
S17BNC FOR USE WITH 4212 PREAMPS
S17BNC-SYS- IEPE SI SURVEY SYSTEM

- LOW COST
- RUGGED SIDE BY SIDE PER IEC 1043
- 18 INCH EXTENSION
- TRIPOD MOUNTING
- 12.5 -100 mm MIC SPACING
- STANDARD ACOtron™ PREAMPS
- COMPATIBLE WITH PS9200



EXTREMELY RANDOM™ NOISE GENERATOR

3025 White, Pink & 1kHz Precision Noise Generator

- Application:**
 Signal Source for:
 Intensity Calibrators
 Reverberation Testing
 Vibration Applications
 Electronic Applications
 Psycho-acoustics
- Features:**
 Pink and White Noise 1 kHz Sine
 6.5 Day Randomness
 Step/Variable Attenuator to -52dB
 Crystal Controlled DDS
 Direct Speaker Drive
 Portable-Battery and AC Power
 2 BNC Outputs

The "Alternative" Family - IEC61094-4 Compliant



FREQUENCY RESPONSE

