

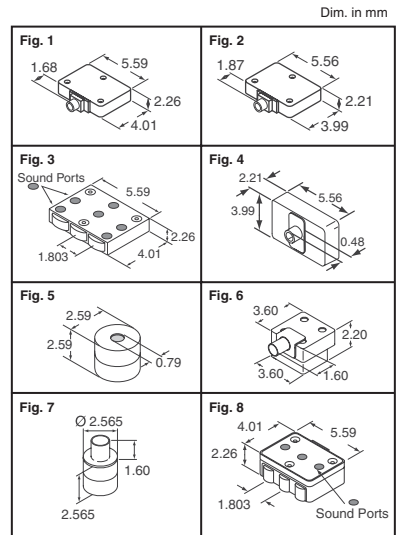


High Performance Audio Products Omni-Directional Electret Microphones

EK Series: • Integral FET amplifier • High electroacoustic sensitivity • Low vibration sensitivity • Low noise • 3-Wire configuration **EA Series:** • High resistance to mechanical shock • Rugged construction to withstand severe environmental conditions **FG Series:** • Integral FET amplifier • Wide, flat frequency response • Low noise performance • High electroacoustic sensitivity • 3-Wire configuration **EM Series:** • Integral FET amplifier • High electroacoustic sensitivity • Low vibration sensitivity • Low Noise • Small size **WP Series:** • Integral FET amplifier • High electroacoustic sensitivity • Low noise • Low vibration sensitivity • Flat response down to very low frequency • Survives submersion in water • 3-Wire configuration

Fig.	Sensitivity @ 1kHz		DC Supply Voltage	Max. Amplifier Current Drain (µA)	Max. "A" Weighted Noise (1kHz Equivalent SPL)	Output Imped. (Ω)	Digi-Key Part No.	Price Each			Knowles Acoustics Part No.
	(dB re 1V/Pa)	(dB re 1V/0.1 Pa)						1	10	100	
1	—	-53 ±2	1.3 - 10	50	26.0 dB	4400	423-1098-ND	27.16	23.38	20.22	EK-23024-P07
	—	-59 ±3	1.3 - 10	50	28.5 dB	3500	423-1124-ND	23.95	20.61	17.82	EA-21842-C36
	—	-53 ±2	1.3 - 10	50	26.0 dB	4400	423-1121-ND	24.91	21.44	18.55	EK-23024-C36
2	—	-53 ±2	1.3 - 10	50	26.0 dB	4400	423-1099-ND	27.16	23.38	20.22	EK-23133-C36
3	-33 ±3	-53 ±3	1.3 - 10	50	26.0 dB	4400	423-1008-ND	25.80	22.21	19.21	EK-23132-000
4	—	-53 ±2	1.3 - 10	50	26.0 dB	4400	423-1120-ND	24.91	21.44	18.55	EK-23027-C36
5	-33 ±3	—	0.9 - 1.6	50	28.0 dB	4400	423-1064-ND	35.16	30.25	26.17	FG-3629-P16
	—	-53 ±3	1.3 - 1.6	50	30.0 dB	4400	423-1119-ND	35.16	30.25	26.17	FG-23329-C05-D65
	-43 ±3	—	0.9 - 1.6	50	30.0 dB	4400	423-1068-ND	35.16	30.25	26.17	FG-3742-D36
	—	-53 ±3	1.3 - 1.6	50	28.0 dB	4400	423-1123-ND	35.16	30.25	26.17	FG-23629-C36-D65
6	-36 ±3	—	0.9 - 1.0	50	31.0 dB	4400	423-1062-ND	30.96	26.65	23.05	EM-3046-P16
	—	-56 ±3	1.3 - 1.0	50	31.0 dB	4400	423-1122-ND	30.96	26.65	23.05	EM-23046-C36
7	-33 ±3	—	0.9 - 1.6	50	28.0 dB	4400	423-1065-ND	35.16	30.25	26.17	FG-3652-C36-D65
	-33 ±3	—	0.9 - 1.6	50	28.0 dB	4400	423-1066-ND	35.16	30.25	26.17	FG-3652-P16
Waterproof Microphones											
8	-34 ±3	-54 ±3	1.0 - 10	50	26.0 dB	4400	423-1012-ND	38.29	32.95	28.50	WP-23502-000
	-32 ±3	-52 ±3	1.3	50	26.0 dB	4400	423-1132-ND	54.53	36.72	31.76	WP-23502-P07
	-34 ±3	-54 ±3	1.0 - 10	50	26.0 dB	4400	423-1054-ND	42.67	36.72	31.76	WP-3502-P16

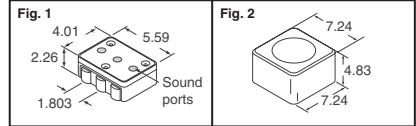
◆ RoHS Compliant • Has 1 inch long leads † Has 39.37 inch long leads



Noise-Canceling Close Talking Microphones

NR Series: • Integral FET amplifier • Diaphragm responds to pressure differential giving high rejection of background noise • Small size • High electroacoustical sensitivity • Low vibration sensitivity
CF Series: • Integral FET amplifier • Diaphragm responds to pressure differential giving high rejection of background noise • Withstands severe environmental conditions • Sound ports protected by woven mesh treated with water repellent • High resistance to mechanical shock
WP Series: • Integral FET amplifier • Survives submersion in 1m water • Corrosion resistant • Withstands explosive decompression • High resistance to mechanical shock • Small size

Fig.	Sensitivity @ 1kHz		Microphone Configuration	DC Supply (V)	Max. Amplifier Current Drain (µA)	Nominal Output Imp. (Ω)	Digi-Key Part No.	Price Each			Knowles Acoustics Part No.
	(dB re 1V/Pa)	(dB re 1V/0.1 Pa)						1	10	100	
1	-32 ±3	-52 ±3	2-Wire	1.0 - 10	200	2500	423-1010-ND	25.52	21.97	19.00	NR-23160-000
2	-42 ±3	-62 ±3	3-Wire	1.0 - 10	50	3500	423-1014-ND	32.32	27.81	24.06	CF-2949
Waterproof Microphone											
1	-34 ±3	-54 ±3	2-Wire	1.0 - 10	300	2500	423-1011-ND	38.29	32.95	28.50	WP-23501-000

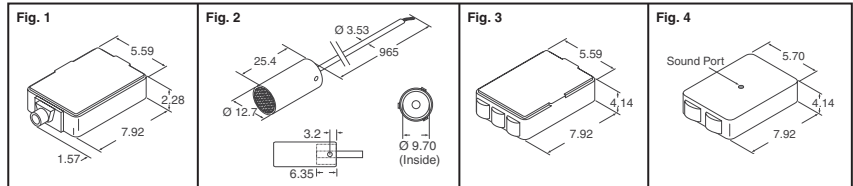


Piezo Ceramic, Accelerometer, Magnetic Balanced Armature

BL Series: • High sensitivity • Wide frequency range and flat response • Integral FET amplifier • High resistance to mechanical shock • BL-1785 typically used for instrumentation applications • 3-Wire configuration
BU Series: • Ceramic vibration transducer • High vibration sensitivity and small size • Wide frequency range • Integral FET preamplifier • 2 or 3-Wire configuration
BJ Series: • Balanced armature technology • High efficiency, stability and reliability • Self-shielded against external magnetic fields • Small size • Omni-directional • 2-Wire configuration

Fig.	Sensitivity @ 1kHz			DC Supply Voltage	Nominal DC Res. (Ω)	Max. Amplifier Current Drain (µA)	Max. "A" Weighted Noise (1kHz Equivalent SPL)	Output Imp. @ 1kHz (Ω)	Digi-Key Part No.	Price Each			Knowles Acoustics Part No.
	(dB re 1V/Pa)	(dB re 1V/0.1 Pa)	(dB re 1V/g)							1	10	100	
Piezo Ceramic Microphones													
1	-49 ±3	-69 ±3	—	1.3	—	160	34.0dB	4000	423-1003-ND	109.71	94.41	81.65	BL-21785-000
2	-49 ±3	-69 ±3	—	3.0	—	160	34.0dB	4000	423-1002-ND	195.87	168.54	145.77	BL-21994-000
3	—	-54.5 ±3	—	1.3	—	50	32.0dB	13000	423-1097-ND	70.17	60.38	52.23	BL-21671-140
Accelerometer (Vibration-Sensing Transducer)													
3	—	—	-45.0 ±4.5	1.5 - 10	—	50	—	5200	423-1004-ND	61.10	52.58	45.47	BU-21771-000
Magnetic Balanced Armature													
4	-55.5 ±3	-75.5 ±3	—	—	900	—	—	3900	423-1001-ND	42.12	36.25	31.35	BJ-21590-000

◆ RoHS Compliant



Waterproof Acoustical Transducers

MR Series: • Highly waterproof, no loss of performance after immersion in 15m water • Corrosion resistant • Withstands explosive decompression • Excellent environmental performance • High resistance to mechanical shock • Wire leads attached

Fig.	Sensitivity @ 1kHz		DC Supply Voltage	Max. Amplifier Current Drain (µA)	DCR @ 20 dC ±10% (Ω)	Max. "A" Weighted Noise (1kHz Equivalent SPL)	Load Condition (Ω)	Output Imp. @ 1kHz (Ω)	Digi-Key Part No.	Price Each			Knowles Acoustics Part No.
	(dB re 1V/Pa)	(dB re 1V/0.1 Pa)								1	10	100	
Electret Microphone													
1	-41 ±4	-61 ±4	1.0 - 20	50	—	30	10K	3.5K	423-1016-ND	63.57	54.70	47.31	MR-28406-000
Magnetic Microphone													
2	-67.5 ±3	-87.5 ±3	—	—	75.5	—	300	300	423-1015-ND	46.14	39.71	34.34	MR-23151-000

(Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

Free shipping on orders over \$200 CAD! All prices in Canadian dollars and include duty and brokerage fees.

1-800-344-4539 • www.digikey.ca • 218-681-6674 • Fax: 218-681-3380

(CA2011) 2469