

Model H507A Ultra low noise wide band hydrophone



The H507A wide band (10 Hz to 100 kHz) hydrophone is a very small high sensitivity device incorporating an ultra-low noise preamplifier (-166 dB re 1V/√Hz at 10 kHz) and a circuit for the insertion of an electrical calibration signal. In addition the preamplifier can drive up to 200 meters of cable. The sensor and amplifier are electrostatically shielded and molded in hydrolytically stable, void free polyurethane.

Dynamic

Sensitivity, referred to input.....	-188 dB re 1 V/μPa
Frequency range, ±3 dB	10 to 100,000 Hz
Gain ¹	10 dB
Patterns:	
XY plane, nondirectional	±1 dB to 100 kHz
XZ or YZ plane, nondirectional.....	±1 dB to 10 kHz
XZ or YZ plane, nondirectional over 270° span.....	±1.5 dB to 100 kHz
(attenuation in direction of cable exit)	
Acceleration sensitivity, re 1 μPa/g, 10 Hz	162 dB
Noise, re 1 μPa/√Hz:	
1 kHz	31 dB
10 kHz.....	22 dB
100 kHz.....	18 dB

Electrical

Supply voltage	18 - 24
VDC Bias output voltage, nominal.....	10 VDC
Supply current	4 - 10 mA
Maximum output	3 V rms
Output impedance	50 Ω
Calibration pad	-14 dB, 40 Ω & 10 Ω 0.1W, 1 VAC rms max. input

Environmental

Operating depth.....	500 meters
Maximum depth.....	1000 meters
Maximum cable length, operation to 100 kHz	200 meters

Physical ^{2,3}

Cable	10 ft., 5 conductor plus shield, stripped & tinned polyurethane
External material	

Pin	Color	Function
1	shield	case ground
2	black	signal return, common
3	red	+24 VDC
4	green	calibration input
5	white	signal output
6	yellow	not used, open

Notes: ¹ Gain will vary as a function of crystal capacitance.
² Connectors are available with plastic or metal male locking sleeves.
Please specify at time of order.

