REVISED on 2025/2/12.



Benthowave Instrument Inc.

Underwater Sound Solutions www.benthowave.com

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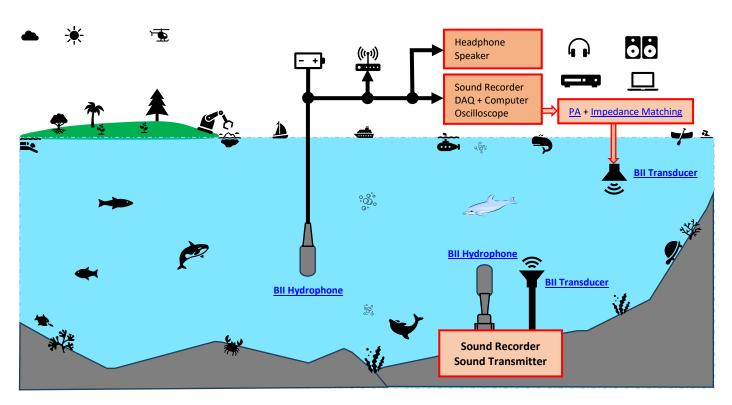
BII7120 Series Low Noise, Low Power, and Low Frequency Hydrophone: Noise Level Below Sea State Zero

BII's low noise hydrophones are optimized to possess self-noise levels below sea-state zero with omnidirectional response in low frequency range and toroidal response in high frequency range. Its streamlined hemispherical dome minimizes drag force and hydrodynamic noise. The power consumption can be customized to be 1 to 2 mA quiescent current at 9 VDC for battery powered underwater instrumentation. A spatial array of multiple hydrophones can be set up for directional measurement system.

The hydrophones can measure underwater sounds and pressure fluctuations down to <u>0.1Hz infrasonic sounds</u>: surface waves (Wave-height Sensor), turbulences, seismic, ocean traffics, industrial noises, precipitations, biologics, ...

With these low power hydrophones, battery and system lifetimes are extended, and lighter portable systems with lower-capacity batteries can be achieved. Its compact small size and hemispherical dome reduce interferences to acoustic field under test. Some <u>preamplifier</u> can drive cable up to 1000m without significant signal loss. Available cable terminals include audio connectors (TRS, DIN, XLR), BNC, and underwater mateable connectors. The housing and mounting part are corrosion resistant plastics and/or stainless steels.

Underwater Sound Listening, Recording, and Communication



Typical Applications

Underwater Sounds Recording, Listening, and Communication, Noise Measurement, Marine Bioacoustics, Passive Acoustic Monitoring (PAM System).

Coastal/Offshore Processes, Engineering & Management, Wave-Structure Interaction, Wave-height Sensor, Wave and Tide Recorder/Logger.

Surface Waves, Ocean Turbulences, Hydrodynamics, Marine Geophysics, Battery-Powered Instruments: Sonobuoy, Recorder, Transponder, Acoustic Release...

Questions

How do I set up my professional sound recorders to work with BII Hydrophones?

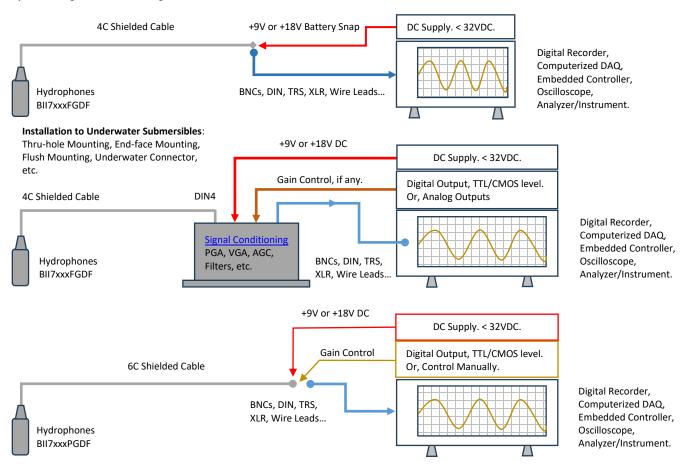
- 1. BII hydrophones have their own DC power supply to support Line Input of recorders, and Do NOT use phantom power 48V which may destroy the hydrophones.
- 2. Maximum Input Level (Line Input) of recorders should be large enough to avoid saturation or clipping during recording. Equivalent Input Noise of recorders should be low enough for the recorders to be sensitive to weak signal of the interest.
- 3. Sampling Rate of the recorder should be fast enough to avoid missing high frequency sound of the interest. Generally, the Sampling Rate should be at least two times greater than the maximum frequency of sound.
- 4. Calculate the memory size of data storage according to sampling rate, resolution, sampling channels, and recording time, and use suitable recording media.
- 5. Calculate battery service life according to battery power and consuming current.
- 6. When the cable is greater than 5m, balanced signal or differential signal is recommended to be in use over the cable.

How do I playback the recorded sounds in water?

System Setup: Recorder (Recorded Sounds) with Line or Phone Output -> Audio Power Amplifiers -> Impedance Matching Device -> Transducers (Projectors).

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System Configuration of Receiving Sounds and Waves.



Specification

The hydrophone is tested	in water unless stated otherwise.					
FG: Fixed Gain; PG: Progra	mmable Gain; DF: Differential Output; SE: Single Ended Output; BPF	: Band Pass Filter; HPF : High Pass Filter; LPF : Low Pass Filter.				
Part Number:	BII7121FGDF BII7121PGDF					
Sensitivity FFVS @ 1 kHz:	-185 + Preamp Gain, ± 2 dB V/μPa.					
Sensitivity FFV3 @ 1 kHz.	-160.0 dB V/μPa.	-165.0 and -135.0 dB V/μPa.				
Sensitivity Matching: (at 1 kHz)	When hydrophones are used as array elements, it is necessary for array elements to possess uniform sensitivities.					
	Available Options of Sensitivity Tolerance: a. ±2.0 (Default); b. ±1.0; c. ±0.5; d. ±0.3; e. ±0.1; in dB V/μPa.					
(at I KIIZ)	1. Sensitivity is tested at 1 kHz in water. 2. Hydrophones whose sensitivity variations are out of specified tolerance are rejected.					
FFVS:	Bespoke, Refer to Graph of FFVS vs. Frequency. Free-field Voltage	Sensitivity.				
Pressure Noise Density:	Refer to Graph of Pressure Noise Density, Referred to Input (RTI),	in μPa/VHz.				
	Bespoke HPF .	Bespoke HPF or BPF.				
	Minimum HPF: 0.2 Hz.	Minimum HPF: 1 Hz.				
	In Water: 0.2 Hz \sim 50 kHz at ±2 dB V/ μ Pa.	In Water: 1 Hz \sim 50 kHz at ±2 dB V/ μ Pa.				
	In Air: 0.2 Hz ~ 4 kHz at -3 dB V/μPa.	In Air: 1 Hz ~ 4 kHz at -3 dB V/μPa.				
Built-in Filters: at -3dB V/μPa.	1. Reduce Noise . Both ocean ambient noises and the self-noises of electronic devices decrease when frequency increases. It is recommended to choose a built-in high pass filter to reject noises in low frequency range. For example, if you are interested in the signals greater than 1 kHz, you may specify a high pass filter with -3dB cut-off frequency at 100 Hz to improve signal to noise ratio of the signals of the interest. 2. Avoid Saturation . When there are strong low frequency noises, disturbances, and/or vibrations, resulting from rough surface waves and/or mechanical movements of the platform, it is recommended to specify a high pass filter to avoid hydrophone saturation in these low frequency ranges.					
	2. Avoid Saturation. When there are strong low frequency noises,					
Preamp Gain:	2. Avoid Saturation . When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended					
Preamp Gain: Gain Selection Voltage:	 Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. 	to specify a high pass filter to avoid hydrophone saturation in these				
Gain Selection Voltage:	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. But the platform of the platform	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC.				
•	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. Butter 1	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s .				
Gain Selection Voltage:	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. Bulling Street Stree	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s . Low Noise Programmable Gain Preamp.				
Gain Selection Voltage: Bespoke Preamp:	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. Button Street	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s . Low Noise Programmable Gain Preamp.				
Gain Selection Voltage: Bespoke Preamp:	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. Strain Balance Ba	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s . Low Noise Programmable Gain Preamp.				
Gain Selection Voltage: Bespoke Preamp: -3dB Beam Width:	Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. Strong Balance Ba	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s . Low Noise Programmable Gain Preamp.				
Gain Selection Voltage: Bespoke Preamp: -3dB Beam Width:	2. Avoid Saturation. When there are strong low frequency noises, and/or mechanical movements of the platform, it is recommended low frequency ranges. 25 dB. N/A Low Power Fixed Gain Preamp. Specify bespoke preamp to fit your project better. Omnidirectional and Toroidal. Refer to Graph of Directivity Pattern Differential. Differential (balanced) outputs reject Electromagnetic How to use differential output as single-ended output?	20 and 50 dB. CMOS/TTL Compatible Logic Low 0: Gain Selection Wire to COM or 0 to +0.8 VDC. Logic High 1: Gain Selection Wire Open or +2.4 VDC to V _s . Low Noise Programmable Gain Preamp.				



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turbulence, cable movement, etc The translational acceleration in axial direction can be cancelled with special design an construction, and acceleration servitivity in other directions are also lower (partially cancelled). Spurious signals caused by induce vibration can be reduced. Acceleration Sensitivity with Compensation: 1. s 40 to 90 dB in axial direction of the hydrophone. 2. 9 80 to 100 dB in other directions of the hydrophone. Departing Depth: Maximum 300 m or 3 MPa pressure and limited by the cable length if the cable has wire leads or a non-waterproof connector. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Double O-ring Sealing (THDO-7)16"). 4. Thru-hole Inch Mounting with Double O-ring Sealing (THDO-7)16"). 5. Bolt Fastening Mounting (Stalines Sete) (BRM-NT716"). 6. Bolt Fastening Mounting (Stalines Sete) (BRM-NT716"). 7. Beas refer to online document Acoustic/system.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter 014.3 mm) for Output-s and Output- Signals. 3. DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter 017 mm). DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter 017 mm). 5. XLR Receptacle with 4 Male Pins (DIN4), (Max. Diameter 017 mm). 4. 1/8" (3.5mm) TRS Piug (TRS) (Max. Diameter 010.5 mm). XLR Receptacle with 4 Male Pins (MIM2), (Max. Diameter 020.2 mm). XLR Receptacle with 4 Male Pins (MIM2), (Max. Diameter 020.2 mm). XLR Receptacle with 4 Male Pins (MIM2), (Max. Diameter 020.2 mm). 4. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter 021.5 to 035 mm). Underwater Mateable Connector of the Male Pins (MIM2), (Max. Diameter 020.2 mm). 6. Underwater Mateable Connect	SE-SL-TLTAG-INL	Office Water South Solutions www.benthowave.com REVISED On 2025/2/12.						
Bespoke Vibration Compensation, available upon request: When suspended from a ship or boat, buoy, or used in towed array, the vibrothopone experiences a large movement and induced vibration resulting from surface vaves, currents, hydrodynamic flow turbulence, cable movement, etc The translational acceleration in axial direction can be caucelled with special design and construction, and acceleration sensitivity in other directions are also lower (partialty cancelled). Spurious signals caused by induce wibration can be reduced. Acceleration Sensitivity with Compensation: 1. s 40 to 90 db in axial direction of the hydrophone. 2. s 90 to 100 db in other directions of the hydrophone. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 4. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 5. Bolt Fastening Mounting (Stailers) Steel (JEM-7/16"). 6. Bolt Fastening Mounting (Stailers) Steel (JEM-7/16"). 6. Bolt Fastening Mounting (Stailers) Steel (JEM-7/16"). BrW-5/8"). Please refer to online document Acoustickysten and for a complete list of Mounting Options and more details. Cable Length: 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft; refer to hydrophone Cable Length). 1. Default: Wire Leads (WIU) 2. Two Male BNCs (BNC) (Max. Diameter 01.4.3 mm) for Output- and Output- Signals. 3. DIN Receptacie with 4 Male Pins (DINA), (Max. Diameter 01.7 mm). DIN Receptacie with 6 Male Pins (DINA), (Max. Diameter 01.7 mm). DIN Receptacie with 6 Male Pins (DINA), (Max. Diameter 01.7 mm). 3. XLR Receptacie with 6 Male Pins (LNGA), (Max. Diameter 02.0 mm). XLR Receptacie with 6 Male Pins (LNGA), (Max. Diameter 02.0 mm). XLR Receptacie with 6 Male Pins (LNGA), (Max. Diameter 02.0 mm). XLR Receptacie with 6 Male Pins (LNGA), (Max. Diameter 02.0 mm). Underwater Mateable Connector is a refer								
Acceleration Sensitivity: Underlinence, cable movement, etc The translational acceleration in axial direction can be cancelled with special design and construction, and acceleration in axial direction can be cancelled with special design and construction, and acceleration in scensitivity in other directions are also lower (partially cancelled). Spurious signals caused by induce vibration can be reduced. Acceleration Sensitivity with Compensation: 1. \$40 to 90 d8 in axial direction of the hydrophone. 2. \$ 90 to 100 d8 in other directions of the hydrophone. 2. Derautic Pree Hanging (PH). 3. Thru-hole inch Mounting with Single O-ring Sealing (THM-7/16"). 4. Thru-hole inch Mounting with Single O-ring Sealing (THM-7/16"). 5. Bott Fastening Mounting with Single O-ring Sealing (THM-7/16"). 5. Bott Fastening Mounting (Plastics) (SHPM-NPT)38"). 6. Bott Cable: Four Conductor Shielded Cable (SC) 1. Default: Verie Leads (WL) 2. Custom-fit Cable Length up to 305 m or 1000 ft; refer to Hydrophone Cable Length. 1. Default: Wrier Leads (WL) 2. Two Male BMCs (BNC) (Mas. Diameter 01.4.3 mm) for Output- and Output- Signals. 3. DIN Receptacle with 4 Male Pins (DNA), (Max. Diameter 017 mm). DIN Receptacle with 6 Male Pins (DNA), (Max. Diameter 017 mm). DIN Receptacle with 6 Male Pins (DNA), (Max. Diameter 017 mm). Underwater Mateable Connector (6 pins) (UMCP) (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Receptacle with 6 Male Pins (DNA), (Max. Diameter 020.2 mm). XLR Recepta		1 11 1 1						
turbulence, cable movement, etc The translational acceleration in axial direction can be cancelled with special design an construction, and acceleration seriality in other directions are also lower (partially cancelled). Spurious signals caused by induce vibration can be reduced. Acceleration Sensitivity with Compensation: 1. 24 to 19 08 dis in axial direction of the hydrophone. 2. ≤ 90 to 100 dis in other directions of the hydrophone. 2. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-716*). 4. Thru-hole Inch Mounting with Single O-ring Sealing (THM-716*). 5. Bolt Fastening Mounting (Stalines Steel) (BFM-7176*). 6. Bolt Fastening Mounting (Stalines Steel) (BFM-7176*). 6. Bolt Fastening Mounting (Stalines Steel) (BFM-7176*). 7. Bease refer to online document Acoustic/System and for a complete list of Mounting Options and more details. Cable Length: Cable Length: Cable Length: 1. Default: Wire Leads (WL) 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNIS (BNC) (Max. Diameter Ф14.3 mm) for Output- and Output- Signals. 3. DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 5 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 5 Male Pins (DIN4), (Max. Diameter Ф10.2 mm). 3. KR Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф10.2 mm). 4. 1/8° (3.5 mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. KIR Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ø35 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ø35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. 490/C Battery Snag (SS), for 490/C or +18VD C power supply (ONLY.) Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diamet								
turbulence, cable movement, etc The translational acceleration in axial direction can be cancelled with some construction, and acceleration servitivity in other directions are also lower (partially cancelled). Spurious signals caused by induce vibration can be reduced. Acceleration Sensitivity with Compensation: 1. ≤ 40 to 90 dB in axial direction of the hydrophone. 2. ≤ 90 to 100 dB in other directions of the hydrophone. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THDO-7/16"). 4. Thru-hole Inch Mounting with Single O-ring Sealing (THDO-7/16"). 5. Bolt Fastening Mounting (Plastics) (EFMP-NPT3/8"). 6. Bolf Fastening Mounting (Stainess Steet) (EFMP-NPT3/8"). 7. Bolt Fastening Mounting (Stainess Steet) (EFMP-NPT3/8"). 7. Flease refer to online document Acousticsystem.pdf for a complete list of Mounting Options and more details. 7. Custom-fit Cable Length up 10 305 nor 1000 ft. refer to hydrophone Cable Length. 1. Default: Wire Leads (WI). 2. Two Male RNGs (BRC) (Max. Diameter 01.4.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter 01.7 mm). DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter 01.7 mm). DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter 01.7 mm). 3. XLR Receptacle with 4 Male Pins (DIN3), (Max. Diameter 02.0 mm). XLR Receptacle with 4 Male Pins (DIN3), (Max. Diameter 02.0 mm). XLR Receptacle with 4 Male Pins (DIN8), (Max. Diameter 02.0 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter 02.1.5 to 035 mm). Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter 02.1.5 to 035 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VOE Dattery Snap (BS), for +9VOE or +18VDE opens yupply. 8. 4mm Bannan Plug Pair (Red and Black Color) (RP), for Dc opews supply ONLY. Underwater Mateable Connector (5 pins) (UMC6P) (Max. Diameter 02.1.5 to	Acceleration Sensitivity:							
wibration can be reduced. Acceleration Sensitivity with Compensation: 1. 4 do 19 0 90 dBin axial direction of the hydrophone. 2. 5 90 to 100 dBin other directions of the hydrophone. Operating Depth: Maximum 300 m or 3 MPa pressure and limited by the cable length if the cable has wire leads or a non-waterproof connector. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 4. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 5. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Staliness Sete) (BFM-7/16", BFM-5/8"). Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details. Four Conductor Shielded Cable (SC) Cable: Four Conductor Shielded Cable (SC) 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone. Cable Length. 1. Default: Zom (Es.Sch) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone. Cable Length. 1. Default: Wire Leads (WU) 1. Two Male BNCs (BNC) (Max. Diameter Ф1.4 a.mm) for Output+ and Output- Signals. 3. DIN Receptace with A Male Pins (DINA), (Max. Diameter Ф1.7 mm). DIN Receptace with 3 Male Pins (DINA), (Max. Diameter Ф1.7 mm). DIN Receptace with 3 Male Pins (DINA), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.2 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.2 c. mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diameter Ф1.7 mm). 3. Like Receptace with 4 Male Pins (KHAB), (Max. Diamet		, , , , , , , , , , , , , , , , , , , ,						
1. ≤ 40 to 90 dB in axial direction of the hydrophone. 2. ≤ 90 to 100 dB in other directions of the hydrophone.								
Departing Depth: Maximum 300 m or 3 MPa pressure and limited by the cable length if the cable has wire leads or a non-waterproof connector. 1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole linch Mounting with Single O-ring Sealing (THMO-716°). 4. Thru-hole lench Mounting (Stalines) (BFMP-NPT3/8°). 5. Bolt Fastening Mounting (Flatiscs) (BFMP-NPT3/8°). 6. Bolt Fastening Mounting (Flatiscs) (BFMP-NPT3/8°). Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) Six Conductor Shielded Cable (SC) 1. Default: 20m (65-6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN4), (Max. Diameter 4D17 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter 4D17 mm). DIN Receptacle with 6 Male Pins (DIN4), (Max. Diameter 4D17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10-5 mm). 5. XLR Receptacle with 6 Male Pins (DIN4), (Max. Diameter 4D2.2 mm). XLR Receptacle with 6 Male Pins (RIA4), (Max. Diameter 4D2.2 mm). XLR Receptacle with 4 Male Pins (RIA4), (Max. Diameter 4D2.2 mm). XLR Receptacle with 4 Male Pins (RIA4), (Max. Diameter 4D2.2 mm). XLR Receptacle with 6 Male Pins (RIA4), (Max. Diameter 4D2.2 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter 4D2.1 to 0.35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter 4D2.5 to 0.35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter 4D2.5 to 0.35 mm). Underwater Mateable Connectors are for underwater uses. Other connectors sylvine leads are for dry uses and are not waterproofed. 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for solided ca								
1. Default: Free Hanging (FH). 2. Free-hanging with Male Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-716"). 4. Thru-hole Inch Mounting with Double O-ring Sealing (THM-716"). 5. Bolt Fastening Mounting (Plastics) (EMFM-PNT36"). 6. Bolt Fastening Mounting (Plastics) (EMFM-PNT36"). 7. Bolt Fastening Mounting (Plastics) (EMFM-PNT36"). 8. Bolt Fastening Mounting (Plastics) (EMFM-PNT36"). 8. Bolt Fastening Mounting (Plastics) (EMFM-PNT36"). 9. Bolt Fastening Plastics (EMFM-PNT36"). 9. Bolt Fastening Plastics (Plastics) (EMFM-PNT36"). 9. Bolt Fastening Plast	On anatina Danath							
2. Free-hanging with Maile Underwater Connector (FHUWC-4P, FHUWC-6P). 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 5. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Statics) (BFMP-NPT3/8"). Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wize Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter OD4.3 mm) for Output- and Output- Signals. 3. DIN Receptacie with 3 Male Pins (DIN3), (Max. Diameter OD17 mm). DIN Receptacie with 4 Male Pins (DIN4), (Max. Diameter OD17 mm). DIN Receptacie with 4 Male Pins (DIN4), (Max. Diameter OD17 mm). 4. 1,8" (3.5mm) TRS Plug (TRS) (Max. Diameter OD1.5 mm). 5. KLR Receptacie with 3 Male Pins (XLR3), (Max. Diameter OD2.0 mm). 5. KLR Receptacie with 3 Male Pins (XLR3), (Max. Diameter OD2.0 mm). 5. KLR Receptacie with 5 Male Pins (XLR3), (Max. Diameter OD2.0 mm). 5. KLR Receptacie with 6 Male Pins (XLR3), (Max. Diameter OD2.0 mm). 5. KLR Receptacie with 6 Male Pins (XLR3), (Max. Diameter OD2.0 mm). 6. Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter OD2.1.5 to OD35 mm). UndC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Shap (BS), for +9VDC or +13VDC power supply) 6. Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter OD2.0 mm). 6. Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter OD2.0 mm). 7. +9VDC Battery Shap (BS), for +9VDC or +13VDC power supply) 7. +9VDC Battery Shap (BS), for +9VDC or +13VDC power supply) 7. +9VDC Battery Shap (BS), for +9VDC or +13VDC power supply) 8. Amm Banana Plug Pair (Red and Black Color) (BP), for DC power supply or connectors signals. Fastening Type: Threa	Operating Depth:							
Mounting Options: 3. Thru-hole Inch Mounting with Single O-ring Sealing (THM-7/16"). 4. Thru-hole Inch Mounting with Double O-ring Sealing (THDO-7/16"). 5. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Stainless Steel) (BFMP-NPT3/8"). Please refer to online document AcousticSystem off for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) 3. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to jlydrophone Cable Length). 1. Default: Wire Leads (ML) 2. Two Male BNIS (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptace with 3 Male Pins (DINA), (Max. Diameter Ф17 mm). DIN Receptace with 4 Male Pins (DINA), (Max. Diameter Ф17 mm). DIN Receptace with 5 Male Pins (DINA), (Max. Diameter Ф17 mm). 5. KLR Receptace with 3 Male Pins (KLR3), (Max. Diameter Ф10.2 mm). XLR Receptace with 4 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptace with 4 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptace with 4 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). 4. 1. Pay DC Battery Snap (BS), for +9VDC or +18VDC power supply OBS mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. Amm Banana Plug Pair (Red and Black Color) (Ref) (Max. Diameter Q21.5 to Q35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. HyDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. Amm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connector (Fe) pins (UMCAP) (Max. Diameter Q21.5 to Q35 mm). UMC is from global manufacturers of underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill-Conceman" is a ministarre quick connect/disconnect, audio frequency con								
A. Thru-hole Inch Mounting with Double O-ring Sealing (TH0O-7/16"). 5. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). Please refer to online document Acoustic/system.pdf for a complete list of Mounting Options and more details. Four Conductor Shielded Cable (SC) Six Conductor Shielded Cable (SC) 1. Default: Vize Leads (WL) 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Vize Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter 014.3 mm) for Output- and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter 017 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter 017 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter 010.5 mm). 5. XLR Receptacle with 3 Male Pins (XLR4), (Max. Diameter 020.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter 020.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter 020.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter 020.2 mm). A. 1/8" (3.5mm) TRS Ping (TRS) (INS) (XLR4), (Max. Diameter 020.2 mm). A. Receptacle with 4 Male Pins (XLR4), (Max. Diameter 020.2 mm). A. Receptacle with 6 Male Pins (XLR4), (Max. Diameter 020.2 mm). A. Receptacle with 6 Male Pins (XLR4), (Max. Diameter 020.2 mm). A. Receptacle with 6 Male Pins (XLR4), (Max. Diameter 020.2 mm). A. Holderwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter 021.5 to 035 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors ywire leads are for dry uses and are not waterproofed. 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for coaxial cable. Fastening Type: None. 3. DNI: Electrical cylindrical co		The state of the s						
S. Bolt Fastening Mounting (Plastics) (BFMP-NPT3/8"). 6. Bolt Fastening Mounting (Stainless Steel) (BFM-7/16", BFM-5/8"). Please refer to online document Acoustic/System.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) Six Conductor Shielded Cable (SC) Cable Length: 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN6), (Max. Diameter Ф17 mm). 5. XLR Receptacle with 3 Male Pins (XLR4), (Max. Diameter Ф17 mm). 5. XLR Receptacle with 3 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connectors (a pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connectors	Manustina Outlans							
6. Bolt Fastening Mounting (Stainless Steel) (BFM-7/16", BFM-5/8"). Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) Six Conductor Shielded Cable (SC) 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN3), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter O20.2 mm). 3. Distribution (4 pins) (4 pins)	Mounting Options:							
Please refer to online document AcousticSystem.pdf for a complete list of Mounting Options and more details. Cable: Four Conductor Shielded Cable (SC) 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNS (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN6), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN6), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.2 mm). XLR Receptacle with 4 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 3. S. XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 4. Underwater Mateable Connector (4 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (7 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (8 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (8 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (8 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connectors or serior underwater uses. Other connectors is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply ONLY. Underwater Mateable Connectors or serior underwater uses. Other connectors or serior underwater uses. Othe								
Cable: Four Conductor Shielded Cable (SC) 1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DINA), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DINA), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DINA), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DINA), (Max. Diameter Ф17 mm). 5. XLR Receptacle with 3 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). At Receptacle with 4 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). Connector: XLR Receptacle with 4 Male Pins (XLRA), (Max. Diameter Ф20.2 mm). 4. Underwater Mateable Connector (a pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +990C Battery Snap (BS), for +990C or +1890C power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Nell"—Concelman" is a miniature quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Load. 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, 020mm diameter, used for audio, RF, digital, an								
1. Default: 20m (65.6ft) for Non-Underwater Connector; 0.6m (2ft) for Underwater Connectors. 2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Φ14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Φ17 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN6), (Max. Diameter Ф17 mm). 3. XLR Receptacle with 5 Male Pins (XLR3), (Max. Diameter Ф17 mm). 5. XLR Receptacle with 5 Male Pins (XLR3), (Max. Diameter Ф10.2 mm). 5. XLR Receptacle with 5 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 5. XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 5. XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). UNC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Lock 2.3 mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect radio/audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch								
2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to Hydrophone Cable Length. 1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN4), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 4 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). SIR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 5 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Q20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Q20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Q20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Q20.2 mm). ALR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Q20.2 mm). ALR Recepta	Cable:							
1. Default: Wire Leads (WL) 2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter Ф20.2 mm). Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter 021.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter 021.5 to Ф35 mm). Underwater Mateable Connectors or the sworth of the swor	Cable Length:							
2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals. 3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Ф17 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 3 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2 mm). ALR Receptacle with 6 Male Pins (XLR8), (Max. Diameter Ф20.2		2. Custom-fit Cable Length up to 305 m or 1000 ft, refer to <u>Hydrophone Cable Length</u> .						
3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Φ17 mm). DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Φ17 mm). DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Φ17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Loci 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Loci 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for Shielded cable. Fastening Type: Bayonet Loci 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for Apple Contectors are the formation of the properties of the		1. Default: Wire Leads (WL)						
DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Ф17 mm). DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 3 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). AND SUBJECT (4 pins) (UMC4P) (Max. Diameter Ф20.2 mm). DINC is from global manufacturers of underwater Φ20.9 (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (9 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector of the Value of the Value of Value o		2. Two Male BNCs (BNC) (Max. Diameter Ф14.3 mm) for Output+ and Output- Signals.						
DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Ф17 mm). 4. 1/8" (3.5mm) TRS Pilg (TRS) (Max. Diameter Ф10.5 mm). 5. XLR Receptacle with 3 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). AND DIAMETER (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Loci 2. 3.5 mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): Supply Voltage Vs: +4.5 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use switching mode DC power supply. Physical Size: DO NOT use switching mode DC power supply. Physical Size: DO NOT use switching mode DC power supply. 2 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F.		3. DIN Receptacle with 3 Male Pins (DIN3), (Max. Diameter Φ17 mm).						
4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Φ10.5 mm). 5. XLR Receptacle with 3 Male Pins (XLR3), (Max. Diameter Φ20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Φ20.2 mm). XLR Receptacle with 6 Male Pins (XLR4), (Max. Diameter Φ20.2 mm). XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Φ20.5 mm). Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Φ21.5 to Φ35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Φ21.5 to Φ35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply ONLY. Underwater Mateable Connector (8 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater users. Other connectors/size in the part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill-Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for shielded cable. Fastening Type: Bayonet Loci 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: +9 to +32 VDC. +9 to +32 VDC. +9 to +32 VDC. +9 to +32 VDC. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. OD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Act		DIN Receptacle with 4 Male Pins (DIN4), (Max. Diameter Φ17 mm).						
S. XLR Receptacle with 3 Male Pins (XLR3), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). A. XLR Receptacle with 4 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl. 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shelded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: 4.9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: DD = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -20°C to +60°C or -4°F to 140°F.		DIN Receptacle with 6 Male Pins (DIN6), (Max. Diameter Φ17 mm).						
XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm). XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA 18.0 mA 19 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: ΦD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. 2.1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or -4°F to 140°F.		4. 1/8" (3.5mm) TRS Plug (TRS) (Max. Diameter Ф10.5 mm).						
XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm). 6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm). Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Locl 2. 3.5mm TS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Locl 2. 3.5mm TS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: Bayonet Locl 2. 3.5mm A Supply Voltage of balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA		5. XLR Receptacle with 3 Male Pins (XLR3), (Max. Diameter Φ20.2 mm).						
6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm).	Connector:	XLR Receptacle with 4 Male Pins (XLR4), (Max. Diameter Ф20.2 mm).						
Underwater Mateable Connector (6 pins) (UMC6P) (Max. Diameter Ф21.5 to Ф35 mm). UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA Supply Voltage Vs: +4.5 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: Weight in Air: De Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or -4°F to 140°F.		XLR Receptacle with 6 Male Pins (XLR6), (Max. Diameter Ф20.2 mm).						
UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail. 7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: None. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA 18.0 mA Supply Voltage Vs: 44.5 to +32 VDC. 49 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: DO NOT use switching mode DC power supply. DO = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.		6. Underwater Mateable Connector (4 pins) (UMC4P) (Max. Diameter Ф21.5 to Ф35 mm).						
7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply. 8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Φ20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: +4.5 to +32 VDC. +9 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: ΦD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.								
8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: 4-4.5 to +32 VDC. 4-9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: 4-10°C to +60°C or 14°F to 140°F. Operation Temperature: -10°C to +60°C or 14°F to 140°F. -20°C to +60°C or -4°F to 140°F.		UMC is from global manufacturers of underwater connectors. Its part number is listed in quote in detail.						
8. 4mm Banana Plug Pair (Red and Black Color) (BP), for DC power supply ONLY. Underwater Mateable Connectors are for underwater uses. Other connectors/wire leads are for dry uses and are not waterproofed. 1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: 4-4.5 to +32 VDC. 4-9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: 4-10°C to +60°C or 14°F to 140°F. Operation Temperature: -10°C to +60°C or 14°F to 140°F. -20°C to +60°C or -4°F to 140°F.		7. +9VDC Battery Snap (BS), for +9VDC or +18VDC power supply.						
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1. BNC: "Bayonet Neill—Concelman" is a miniature quick connect/disconnect radio/audio frequency connector used for coaxial cable. Fastening Type: Bayonet Locl 2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA 18.0 mA Supply Voltage Vs: +9 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: ΦD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or -4°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.								
2. 3.5mm TRS stand for Tip, Ring, and Sleeve, miniature, quick connect/disconnect, audio frequency connector used for shielded cable. Fastening Type: None. 3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA Supply Voltage Vs: +9 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: ΦD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or -4°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	1. BNC: "Bayonet Neill-Co							
3. DIN: Electrical cylindrical connectors, 3 to 14 contacts, Ф20mm diameter, used for audio, RF, digital, and DC or AC power signals. Fastening Type: Threaded. 4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA 19 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: Weight in Air: Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	•							
4. XLR: Employed for balanced audio and DC or AC power signal interconnections, 3 to 7 contacts. Fastening Type: Latch Lock. Current (Quiescent): 1.05 mA 18.0 mA 4.5 to +32 VDC. +9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: DD = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or -4°F to 140°F.	-							
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+9 VDC Battery, Marine Battery, Automobile Battery, Fixed DC Linear Power Supply, Not Included. DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: ΦD = Φ28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.								
Suggested DC Supply: DO NOT use variable power supply whose maximum supply voltage is higher than the rated voltage. DO NOT use switching mode DC power supply. Physical Size: DD = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.								
DO NOT use switching mode DC power supply. Physical Size: OD = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	Suggested DC Supply:							
Physical Size: D = Ф28.5 mm, Length ≥ 60 mm, and actual length depends on Mounting Parts. ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	Juppesica De Juppiy.	1 11 11 11 11 11 11 11 11 11 11 11 11 1						
Weight in Air: ≥ 1.5 kg with 20m cable. Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	Physical Size:							
Actual weight depends on Mounting Parts, Cable Types and Length. Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	, 5 . 6							
Operation Temperature: -10°C to +60°C or 14°F to 140°F. Storage Temperature: -20°C to +60°C or -4°F to 140°F.	Weight in Air:	- ·						
Storage Temperature: -20°C to +60°C or -4°F to 140°F.	Operation Temperature:							
	Storage Temperature:							
	<u> </u>							

How to Order Standard Hydrophones. BII Keeps Standard Products in Stock.

FG: Fixed Gain;	PG: Programmab	le Gain; DF : Differenti	al Output; SE : Single-ended Out	put; BPF : Band Pass Fil	lter; HPF : High Pass Filter; LPF : Low Pass Filter.		
Part Number	-Preamp Gain	-HPF or BPF Filter	-Mounting	-Cable Length	-Connectors for Signal/Gain Selection/DC Supply		
BII7121FGDF	35 db	0.2 Hz.	FH, BFMP-NPT3/8", BFM-7/16", BFM-5/8".	20m (65.6 ft)	WL, TRS, XLR3, DIN3, BNC, BS, BP; DIN4, XLR4.		
	25 dB.		FH, BFM-7/16", BFM-5/8".	0.6m (2 ft)	UMC4P		
			THM-7/16", THM-5/8".	0.6m (2 ft)	WL.		
		1 Hz.	FH, BFMP-NPT3/8", BFM-7/16", BFM-5/8".	20m (65.6 ft)	WL, TRS, XLR3, DIN3, BNC, BS, BP; DIN6, XLR6.		
BII7121PGDF	20/50 dB.		FH, BFM-7/16", BFM-5/8".	0.6m (2 ft)	UMC6P		
			THM-7/16", THM-5/8".	0.6m (2 ft)	WL.		
In-Stock Examp	oles:		Description				
BII7121FGDF-25dB-0.2Hz-FH-20m-WL		BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 0.2Hz, Free Hanging, 20m Shielded Cable, Connector: None, Wire leads.					
BII7121FGDF-25dB-0.2Hz-FH-20m-BNC/BS		BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 0.2Hz, Free Hanging, 20m Shielded Cable, Connector: Two BNC Male for Output+ and Output- Signals, 9V Battery Snaps for DC Supply.					
BII7121FGDF-25dB-0.2Hz-FH-20m-XLR3/BS		BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 0.2Hz, Free Hanging, 20m Shielded Cable, Connector: XLR3 for Signal, 9V Battery Snaps for DC Supply.					
BII7121FGDF-25dB-0.2Hz-FH-20m-XLR4			BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 0.2Hz, Free Hanging, 20m Shielded Cable, Connector: XLR4 for Signals and DC Power Supply.				



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BII7121PGDF-20/50 dB -1Hz-FH-20m-WL	BII7121PGDF Hydrophone, 20/50 dB Gain, High Pass Filter: 1Hz, Free Hanging, 20m Shielded Cable, Connector: None, Wire leads.						
BII7121PGDF-20/50 dB -1Hz-FH-20m-XLR3/WL/BS	BII7121PGDF Hydrophone, 20/50 dB Gain, High Pass Filter: 1Hz, Free Hanging, 20m Shielded Cable, Connector: XLR3 for Signal, Wire Leads for Gain Selection, 9V Battery Snaps for DC Supply.						
BII7121PGDF-20/50 dB -1Hz-FH-20m-XLR6	BII7121PGDF Hydrophone, 20/50 dB Gain, High Pass Filter: 1Hz, Free Hanging, 20m Shielded Cable, Connector: XLR6 for Signals, Gain Selection, and DC Power Supply.						
Non-stock Examples:	Description						
BII7121FGDF-25dB-10Hz-BFM-7/16"-100m-XLR3/BS	BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 10Hz, Bolt Fastening Mounting BFM-7/16", 100m Shielded Cable, Connector: 3-pin XLR for Signals and Battery Snap for +9VDC Batteries.						
BII7121FGDF-25dB-10Hz-FH-0.6m-UMC4P	BII7121FGDF Hydrophone, 25dB Gain, High Pass Filter: 10Hz, Free Hanging, 0.6m Shielded Cable, Connector: 4-pin Underwater Mateable Connector for Signals and DC Power Supply.						
BII7121FGDF-FHUWC-4P	BII7121FGDF Hydrophone, Free-hanging with Male Underwater Connector FHUWC-4P.						
BII7121PGDF-20/50 dB-1Hz/30kHz-BFM-7/16"- 100m-XLR3/WL/BS	BII7121PGDF Hydrophone, 20/50 dB Gain, Band Pass Filter: 1Hz to 30kHz, Bolt Fastening Mounting BFM-7/16", 100m Shielded Cable, Connector: 3-pin XLR for Signals, Wire Leads for Gain Selection, and Battery Snap for +9VDC Batteries.						
BII7121PGDF-20/50 dB-10Hz-FH-0.6m-UMC6P	BII7121PGDF Hydrophone, 20/50 dB Gain, High Pass Filter: 10Hz, Free Hanging, 0.6m Shielded Cable, Connector: 6-pin Underwater Mateable Connector for Signals, Gain Selection, and DC Power Supply.						
BII7121FGDF-FHUWC-6P	BII7121FGDF Hydrophone, Free-hanging with Male Underwater Connector FHUWC-6P.						

Wiring Information of BII7121FGDF:

Differential Output:	Wire Leads	UMC4P/XLR4P	DIN4P	DIN3/XLR3 + 9V BS		BNC + 9V BS	TRS + 9V BS
+VDC	Red	Pin 3	Pin 4	Battery Female Snap		Battery Female Snap	Battery Female Snap
Common	Black	Pin 1	Pin 1	Battery Male Snap		Battery Male Snap	Battery Male Snap
Signal+	White	Pin 2	Pin 3	DIN3 Pin 3	TRS Tip	#1 BNC Center	TRS Tip
Signal-	Blue, Green, or Yellow	Pin 4	Pin 2	DIN3 Pin 1	TRS Ring	#2 BNC Center	TRS Ring
Signal Common	Black	Pin 1	Pin 1	DIN3 Pin 2	TRS Sleeve	BNC Shell	TRS Sleeve
Shielding	Shield	Metal Shell	Metal Shell	DIN3 and XLR	3 Metal Shell	N/A	N/A

Wiring Information of BII7121PGDF:

Differential Output:	Wire Leads	UMC6P/XLR6	DIN6	BNC + 9V BS	DIN3/XLR3 + 9V BS		TRS + 9V BS	
+VDC	Red	Pin 3	Pin 4	Battery Female Snap	Battery Female Snap		Battery Female Snap	
Common	Black	Pin 1	Pin 1	Battery Male Snap, BNC Shield.	Battery Male Snap, DIN Pin 2 or XLR Pin 1.		Battery Male Snap, TRS Sleeve.	
Output Signal+	White	Pin 2	Pin 3	"1" BNC Center Pin	XLR Pin 3	XLR Pin 2	TRS Tip	
Output Signal -	Green	Pin 4	Pin 2	"2" BNC Center Pin	XLR Pin 1	XLR Pin 3	TRS Ring	
Digital A0	Blue	Pin 6	Pin 5	Blue	Blue		Blue	
Digital Common	Yellow or Brown	Pin 5	Pin 6	Yellow or Brown	Yellow or Brown		Yellow or Brown	
Shielding	Shield	Metal Shell	Metal Shell	BNC Shield	Metal Shell		N/A	
Selecting Sensitivity of One-bit Digitally Programmable								
FFVS Selection Wire A	0	Hydrophone Sen	sitivity FFVS at 1	kHz.				
0 (Logic Low) -185.0 + 20 dB V/μPa.								
1 (Logic High) -185.0 + 50 dB $V/μ$ Pa.								

Ouestion

What if the mating connector of my DAQ module or recording device is NOT available from BII? A bespoke connector adaptor might be assembled by BII and BII ships the adaptor to buyer as accessory of the device. Please contact BII for customizations. Many adaptors for standard connectors are available in worldwide electronic suppliers such as BNC to SMA, BNC to SMC, XLR to TRS, etc. Check out your local suppliers.

Is impedance matching necessary between hydrophones/sensors and preamplifiers/Recorders/Analyzers? it is NOT necessary to do impedance matching in low frequency range applications in which electromagnetic wave lengths are much greater than the cable length. High frequency transducers such as NDT pulsing transducers need 50Ω impedance matching among transducers, cables, and analyzers/digitizers.

My acoustic sensors generate differential signals in MHz range, are TRS connectors suitable for my applications? Bll's test shows TRS connectors (Plug and Jack) of Bll preamps can be used up to 20 MHz. Test Conditions: TRS Jack with 0.2m cable and TRS plug with 1m cable. Oscilloscope: $1M\Omega | 20pF$, Signal Source: DDS Signal Generator.

Can 3.5mm (1/8") TRS be configured for single-ended signal of a hydrophone/transducer which does not have built-in preamplifier? Yes, the preamp with differential-input TRS can accept single-ended signals from hydrophones/transducers whose TRS wiring should be like followings: TRS Tip: Signal. TRS Ring and Sleeve: Both terminals are soldered together for Signal Common and Shielding. Common and shielding should be "one-point" contact.

Can BII explain why the capacitance of my hydrophone/transducer affect high pass filtering? (1). Hydrophone/transducer is high impedance devices in low frequency range. Its simplified complex impedance = $j/(2\pi fC_h)$, C_h is the capacitance of hydrophone/transducer, f is frequency in Hz. This impedance is in series with preamp R_i and can reach several $M\Omega$ to hundreds $M\Omega$ depending on C_h and f. (2). Most high-performance operational amplifiers (IC chips) can use input resistors R_i up to 1 to 200 $M\Omega$ to avoid bumping into saturation issue.

Can the hydrophone with differential outputs be wired to single-ended inputs of a DAQ device (Data Acquisition Equipment) such as an Oscilloscope? Yes, output+ and Common of a BII hydrophone can be used a single-ended signal, or Output- and Common of the hydrophone can be used a single-ended signal.

- (1) The terminal of unused output MUST be insulated to avoid short circuit.
- (2) Neither output+ nor output of the hydrophone can be wired to common which is going to destroy the hydrophone by short circuit.



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When a **Gain Selection wire** is short to **Digital Common**, its digital logic is Low or "0. Gain of the built-in preamp is set to low gain such as 10 dB. When a **Gain Selection wire** is floating or open, its digital logic is High or "1". Gain of the built-in preamp is set to high gain such as 40 dB. The unused terminals and bare splice wire leads MUST be insulated to avoid short circuit.

What if the connector of my analyzer (instrument) is SMA or SMC Connector? Buyer may order a SMA (or SMC) to BNC (Male) adaptor from local electronic distributors in buyer's country. BII may ship the adaptor as accessory of the device if buyer requests when ordering. By default, BII does NOT supply the adaptor as accessories.

How to increase hydrophone sensitivity for extremely weak sounds?

BII low noise hydrophone with built-in preamp (Differential Output) -> Long Cable -> Standalone Preamp -> Analyzing Instrument or Recorder.

What components are necessary to compensate the propagation and spreading loss?

A low noise hydrophone + PGA amplifier with gain of 0/20/40/60 dB.

A low noise hydrophone + VGA amplifier with gain of 0 ~ 70 dB.

A low noise hydrophone + AGC amplifier with gain of -20 ~ 80dB.

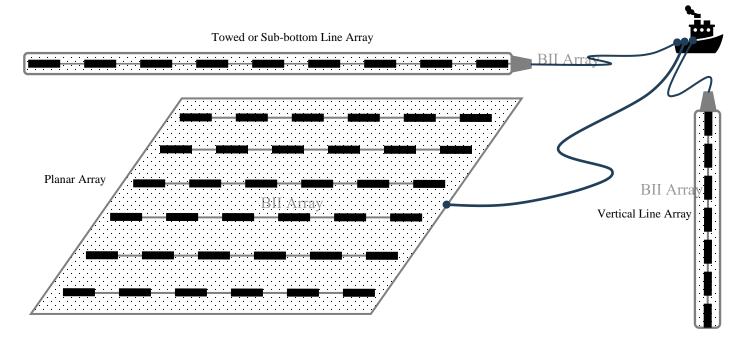
How do I use Gain Selection wires of a Programmable Sensitivity Hydrophone in field?

(1). Manual Gain Selection.

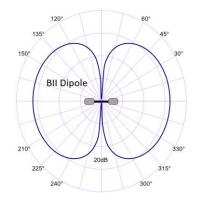
When a **Gain Selection wire** is floating or open, its digital logic is High or "1". When a **Gain Selection wire** is short to **Digital Common**, its digital logic is Low or "0". Sensitivity of a Hydrophone is fixed when its Gain Selection wires are fixed to **Digital Common** or open (floating) during operation.

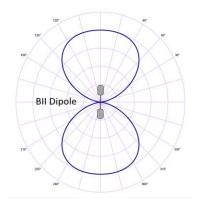
(2). Gain Selection with Digital Outputs. Digital Outputs of a DAQ (data acquisition device) select gains with TTL/CMOS logic levels.

Array Elements for Underwater Linear and Planar Arrays

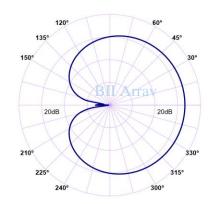


"Figure 8" Pattern of a Dipole (Pressure-Gradient).









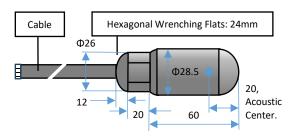


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Physical Size (Dimensional Unit: mm): The overall length varies with the length of the built-in preamplifier and mounting parts.

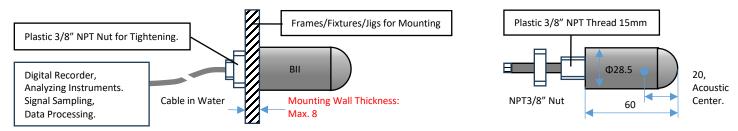
1. Free Hanging (FH).



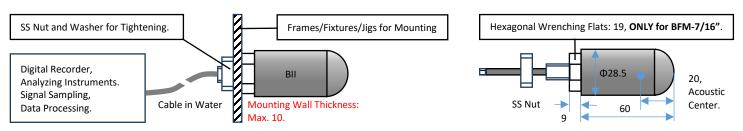


The hydrophone body has streamlined hemispherical domes which minimize the drag forces and the hydrodynamic noise caused by the hydrophone in motion or the flow past the hydrophone.

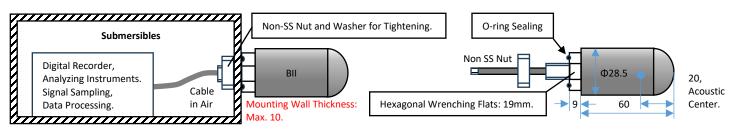
2. Bolt-Fastening Mounting BFMP-NPT3/8", 3/8" NPT Thread Length: 15mm. Nut Height: 5mm. Tips: Plastic material has less sound reflection.



3. Bolt-Fastening Mounting BFM-7/16" (7/16"-20x22 UNF-2A), and BFM-5/8" (5/8"-18x22 UNF-2A, BFM-5/8" does NOT possess Hexagonal Wrenching Flats.).



4. Thru-hole Mounting (Inch Thread) with Single O-ring Sealing THM-7/16" (7/16"-20x22 UNF-2A), and THM-5/8" (5/8"-18x22 UNF-2A, does NOT possess Hexagonal Wrenching Flats.).



5. Free-hanging with Underwater Connector FHUWC-4P, 4 Pins (Fixed Sensitivity); FHUWC-6P, 6 Pins (Programmable Sensitivity).

Mating Connector and Cable

UWC-Cable Length-Connector: Underwater Connector with Socket insert and Internal-Thread Mating Parts, customized-length shielded cable, a Connector (WL, XLR, TRS, DIN, MIL, UMC, etc.) to DAQ devices or Digital Recorders.

How to order cable with mating underwater connector? for example:

UMC4S-20m-WL: 20 m cable with Underwater Mateable Connector 4 Sockets (UMC4S) on one end and wire leads (WL) on other end. UMC4S-20m-XLR3/BS: 20 m cable with and Underwater Mateable Connector 4 Sockets (UMC4S) on one end and XLR Receptacle with 3 Male Pins (XLR3) and Two +9V Battery Snaps on other end.

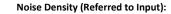


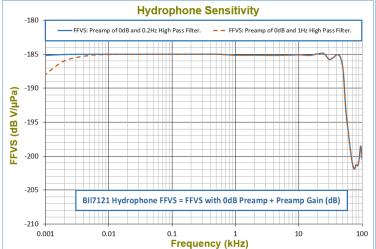
Underwater Sound Solutions

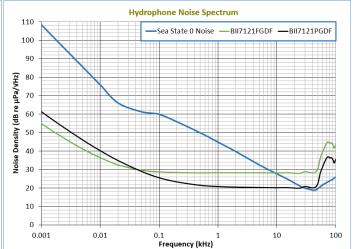
www.benthowave.com

REVISED on 2025/2/12.

Free-field Voltage Sensitivity:

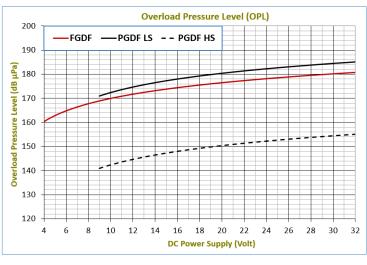


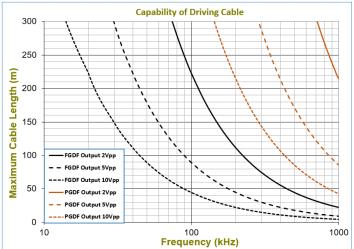




Overload Pressure Level (OPL), LS: Low Sensitivity, HS: High Sensitivity.

Hydrophone Cable Length





Directivity Pattern:

