

Transducer Specification

| | | | | |
|---|--|-----------------|-----------------------------|---------------------------|
| Part Number: | BII-7506/15 | | | |
| Signal Type: | Pulsed SINE, Chirp, PSK, FSK, etc.; Pulsed Square Waveform | | | |
| Resonant Frequency fs: | 15 kHz | | | |
| Quality Factor: | 5 | | | |
| Transmitting Voltage Response: | 150.0 dB μ Pa/V@1m @ fs | | | |
| Free-field Voltage Sensitivity: | -198.0 dB V/ μ Pa @ fs. | | | |
| -3dB Beam Width: | 40° | | | |
| Beam Pattern: | Conical | | | |
| Side Lobe Level: | \leq -17.7 (dB) | | | |
| Free Capacitance: | 69 nF @ 1kHz | | | |
| Dissipation: | 0.005 @ 1kHz | | | |
| Admittance or Impedance: | G=2.73 mS, B=5.0 mS @ fs | | | |
| MIPP: | 980 Watts, Maximum Input Pulse Power. Note: with built-in impedance matching unit, MIPP can reach 2400W. Contact BII for details. | | | |
| MPW @ MIPP: | 230 Seconds, Maximum Pulse Width | | | |
| MCIP: | 40 Watts, Maximum Continuous Input Power. | | | |
| Cable: | 1. Two Conductor Shielded Cable (SC) 2. 50 Ω RG58 Coax (RG58) Note: Operating depth is limited by the cable length without a suitable underwater sealing part. | | | |
| Cable Length: | 1. Default: 1m 2. Custom | | | |
| Connector: | 1. Default: Wire Leads (WL) 2. 50 Ω BNC Male (BNC) 3. Underwater Mateable Connector (UMC) 4. MIL-5015 Style (5015) 5. Custom (custom) Note: Underwater Mateable Connector is for uses underwater. Other connectors and wire leads are for dry uses, and are not water proofed. | | | |
| Mounting Options: | 1. Default: Free Hanging (FH) 2. Thru-hole Mounting with Single O-ring (THSO) 3. Thru-hole Mounting with Double O-ring (THDO) 4. Bolt Fastening Mounting (Stainless Steel): (BFMSS) 5. End-face Mounting: (EFM) 6. Flange Mounting: (FGM) | | | |
| Maximum Operating Depth: | 50m, Limited by cable length with wire leads. | | | |
| Size: | Φ D xH = Φ 168 x 110 mm, actual length depends on Mounting Parts. | | | |
| Weight: | 6.6 kg with 10m 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. | | | |
| Wiring: | Two Conductor Shielded Cable | Coax/BNC | Underwater Connector | MIL-5015 Connector |
| Transmitting + | White or Red | Center Contact | Contact 2 | Contact C |
| Transmitting - | Black | Shield | Contact 1 | Contact B |
| Shielding and System Grounding | Shield | Shield | Contact 3 | Contact A |
| How to determine pulse width, duty cycle and off-time with input pulse power (peak power): | | | | |
| 1. Determine the input pulse power (IPP, peak power) with sound intensity required by the project. IPP MUST be less than MIPP; | | | | |
| 2. Pulse Width \leq (MIPP * MPW*(120°C-T)/103°C)/IPP; T: Water Temperature in °C. | | | | |
| 3. Duty Cycle D \leq MCIP*(120°C-T)/103°C)/IPP; | | | | |
| 4. Off-time \geq PW*(1-D)/D. | | | | |
| WARNING: DANGER — HIGH VOLTAGE on wires. Wires shall be insulated for safety. DO NOT TOUCH THE WIRES BEFORE THE DRIVING SIGNAL IS SHUT DOWN. Cable shield must be grounded firmly for safety. | | | | |
| for 50 Ω BNC Male connector, it is buyer's sole responsibility to make sure that the (female) BNC shield of the signal source is firmly grounded for operating safety before hooking up transducer/hydrophone to the signal source. Coax with BNC is not intended for hand-held use at voltages above 30Vac/60Vdc. | | | | |