Underwater Sensor System Specifications

Underwater Strain Transducer

Compatible with the PDI Underwater Main Cable
Encapsulated and waterproof to at least 300 m (~1,000 ft) for at least 1 month
Waterproof to 1500 m (~5,000 ft) for 2 weeks
Underwater mated connector waterproof to 1500 m (~5,000 ft)
Effective Gage Length: 76 mm (3 in) standard
Size: 140 x 38 x 20 mm (5.5 x 1.5 x 0.75 in)
Material: Aluminum frame, encapsulated with polyurethane
Circuit: Full Wheatstone bridge
Cable: Thick jacket heavy duty underwater 4-conductor wire available in the standard 7600 mm (25 ft) length; other cable lengths available on request
Nominal Sensitivity: 500 με/mV/V
Strain Range: Nominally 3,000 με (functional to 8,000 με)
Shock Range: Nominally 5,000 g
Operating Temperature Range: -50° to 120°C (-58° to 248°F)
Attachment Method: bolts to pile
Nickel Plated Brass Threaded Marine Connector

Underwater Piezo Electric Accelerometer

Compatible with PDI Underwater Main Cable
Encapsulated and waterproof to at least 300 m (~1,000 ft) for at least 1 month
Waterproof to 1500 m (~5,000 ft) for 2 weeks
Underwater mated connector waterproof to 1500 m (~5,000 ft)
Mounting: Custom aluminum block (25 x 25 x 25 mm) (1.0 x 1.0 x 1.0 in)
Material: Aluminum frame, encapsulated with polyurethane
Cable: Thick jacket heavy duty underwater 4-conductor wire available in the standard 7600 mm (25 ft) length; other cable lengths available on request
Sensitivity: Nominally 1.0 mV/g with 10 V.D.C. bias voltage input
Range: 5,000 g (Limit 10,000 g)
Frequency Range: 0.25 to 7000 Hz (resonant freq; > 40 kHz)
Operating Temperature Range: -50° to 120°C (-58° to 248°F)
Time Constant: Nominally 3s
Attachment Method: Bolts to pile
Nickel Plated Brass Threaded Marine Connector

Underwater Main Cable

Compatible with PDI Underwater Sensors and PDA
Waterproof to 1500 m (~5,000 ft) for 2 weeks (except for top end connection to PDA)
Underwater mated connector waterproof to 1500 m (~5,000 ft)
Mounting support eyelet on molded breakout at bottom end
Material: Breakout encapsulated with polyurethane
Cable: Thick jacket heavy duty underwater 9 twisted shielded pairs wire available in standard
lengths in multiples of 75 m (250 ft), 150 m (500 ft), and 225 m (750 ft); other cable lengths available on request
Cable color: Orange or Yellow
Cable jacket: Polyurethane
Operating Temperature Range: -30° to 120°C (-22° to 248°F)
Nickel Plated Brass Threaded Marine Connector
Cable core strength member breaking load 1900 Kg (~4,200 lbs.)