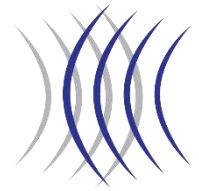


GeoPulse

Pinger Sub-Bottom Profiler



GeoAcoustics



Overview

The GeoPulse is a pinger sub-bottom profiler system with a long proven success due to its reliability, ruggedness, ease of operation and flexibility. Sub-seabed structures are delineated using reflections from a selectable single frequency multi-cycle high power signal, which is transmitted from either an over-the-side, towed or hull mounted platform.

The system comprises of the GeoPulse transmitter (5430A) which is connected to either 4, 9 or 16 T135 transducers. For a 4 transducer arrangement this can either be hull mounted, in a tow-fish (Model 136) or in an over-the-side mount assembly (Model 132). Hull mounting is used for 9 and 16 transducer configurations.

Output power from the transmitter is continuously adjustable up to 10 kW with a selectable frequency from 2 to 12 kHz. The optional receiver (5210A) allows the operator to apply gain up to 100 dB to the received signal, either manually or by using automatic algorithms, including bottom tracking time variant gain and automatic gain control.

Key Features

- Towed, over-the-side or hull-mounted versions available
- Frequency range between 2-12 kHz
- Output power up to 10 kW
- Operates down to 6000 m
- Penetration 60 m+ (material-dependant)
- Operation up to 12 knots

Applications

- Pipeline detection
- Geological surveys
- Dredging surveys
- Environmental surveys
- Buried object detection



Technical Specifications

Transmitter Model 5430A

Output	10 kW with 0.75 % duty cycle, continuously adjustable 2 to 12 kHz, continuously adjustable Short circuit-proof Impedance matched 1, 2, 4, 8, 16 or 32 cycles
Beam Width (Transmit)	55° using 3.5 kHz (combined mode, 4 transducers) 40° using 3.5 kHz (combined mode, 9 transducers) 30° using 3.5 kHz (combined mode, 16 transducers)
Source Level	217 dB ±3 dB re 1 µPa @ 1 m (4 transducers) 221 dB ±3 dB re 1 µPa @ 1 m (9 transducers) 224 dB ±3 dB re 1 µPa @ 1 m (16 transducers)
Penetration	60 m + (material-dependant)
Power	115/230 V _{AC} ± 10 %, 47 to 63 Hz, 220 W maximum
Environmental	10 % - 95 % RH, non-condensing -5 °C to 50 °C (operation), -15 °C to 85 °C (storage)
Dimensions	457 mm (L) x 430 mm (W) x 130 mm (H)
Weight	18 kg

Receiver Model 5210A

Amplifier	100 dB at 60 Hz. Sensitivity 30 µV RMS in, produces 1 V RMS out at 90 dB total gain with TVG
Coarse Gain	40 dB maximum
Fine Gain	0 – 30 dB in 3 dB increments
TVG	Rate and delay continually adjustable
AGC	Attack adjustable from 330 µs to 330 ms
Power	115/230 V _{AC} ± 10 % (internal switch selectable), 47 to 63 Hz, 45 W maximum
Environmental	10 % - 95 % RH, non-condensing -5 °C to 50 °C (operation), -15 °C to 85 °C (storage)
Dimensions	457 mm (L), x 430 mm (W), x 178 mm (H)
Weight	12 kg

Over-the-side mount assembly (Model 132B)

Dimensions	700 mm (L) x 520 mm (W) x 460 mm (H)
Mounting Pole	One section: 1830 mm Two sections: 3600 mm Three sections: 5370 mm
Weight	120 kg

Tow-fish (Model 136A)

Dimensions	156 cm (L) x 46 cm (W) x 46 cm (H)
Weight	125 kg

Hull Mount Options

Available Transducer Arrays	2 x 2 (4) 3 x 3 (9) 4 x 4 (16)
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Specifications subject to change without notice. E&OE