



TC 12/24, 15/30 water-coupled Piezoelectric Transducers

The TC 12/24, 15/30 water-coupled Piezoelectric Transducers

The piezoelectric transducers are mainly used as downhole seismic receivers but, with optional accessories, can also be used as a bottom array for shallow waters and marsh areas and as a sensor array placed along tunnel walls, dams and other dry or wet concrete and rock structures.



THE TRANSDUCER MODULE:

Piezoceramic element

- Resonant frequency: >35KHz
- Dynamic response: 150-190 dB, nominal
- Pre-amplifier, differential or single-ended output.
(The amplifier characteristics can be modified to meet various requirements.)

Casing

- The casing has o-rings fittings, permitting easy service and even the replacement of a module, in case of malfunction after long-term service rough conditions. This solution prolongs significantly the operational life of the hydrophone chain as a whole.

The TC receivers are used with applications where 3-component data are not absolutely necessary.



The TC 12/48 can also be used on the sea, lake or river bottom (e.g. for river crossing surveys), in marsh, on snow and ice.



FUNCTIONAL CHARACTERISTICS

Frequency range: 15 Hz–35 kHz

(Optional 3 Hz–35 kHz, Low cut settable at manufacturing stage)

- * Sensitivity: 0.1 mA / m bar
- * Omnidirectional up to 35 kHz (the effect of the borehole not considered).
- * Output impedance: less than 110 W at 1 kHz
- * Power requirements: +/-12 V CC

DIMENSIONS

- * Diameter across the hydrophones: 40 mm / Length of the hydrophone: 135 mm
- * The standard housing of the TC hydrophones is cylindrical with cylindrical-conic endings.
(Housing available optionally in a range of shapes and materials).

OPERATIONAL CHARACTERISTICS

Operating depth:

- * 500 m with housing of Murytal C ®.
- * 1000m with housing of stainless steel.

