

# SONO Sphere 012

Reciprocal transducers

A low-frequency transducer for transmit and receive applications →



**SONO Sphere 012** is a horizontally omni-directional, reciprocal transducer useful in applications requiring low-frequency acoustic source references.

SONO Sphere 012 is made in hard ceramic making it a highly reliable transducer. It is offered in a robust and durable bulkhead mounted housing.

### Key features

- Low-frequency acoustic source
- Horizontally omni-directional
- Vertical directionality greater than 270 °
- Long-term stability
- Durable and reliable construction

### Applications

- Acoustic reference standard for test and evaluation
- Ideal for specialised UUV medium frequency underwater communications 8 kHz to 16 kHz
- Operations across the littoral

### SONO Sphere 012

Nominal resonant frequency	12 kHz
Receive sensitivity @ 14.5 kHz	-181 dB re 1V/mPa
Recommended receive frequency range	10 Hz – 20 kHz
Transmit sensitivity @ 12.5 kHz	+148 dB re 1µPa/V @ 1 m
Recommended transmit frequency range	10 – 16 kHz
Maximum applied voltage at resonance	530 Vrms
Low frequency capacitance (@ 1 kHz)	63 nF
Horizontal beam pattern	Omni-directional +/- 1.5 dB @ 10 kHz
Vertical beam pattern	>270° +/- 2 dB

### Mechanical

Dimensions	Ø 248 mm x 336 mm
Weight in air / water	Approx. 20 kg / 6 kg
Maximum recommended operating depth	600 m
Operating temperature	-5° C to +35° C
Mounting	Bulkhead mounting