

DualSense 012

Spherical Projector



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Chelsea's DualSense 012 is a reliable, horizontally omni-directional, spherical, reciprocal transducer.

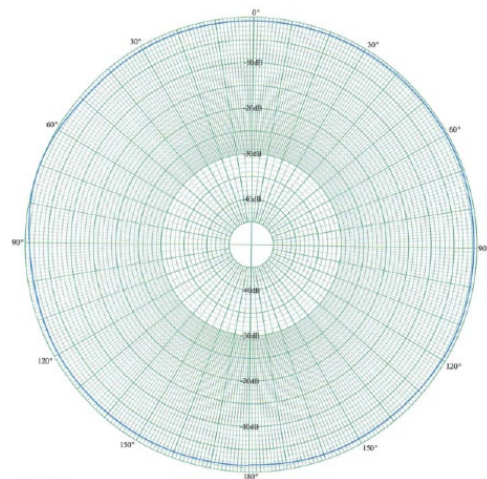
The DualSense 012 is useful in applications requiring low frequency acoustic source references. Made with a hard ceramic it is ideal for transmitting applications.

The transducer is concealed in a robust, durable bulkhead mounted housing.

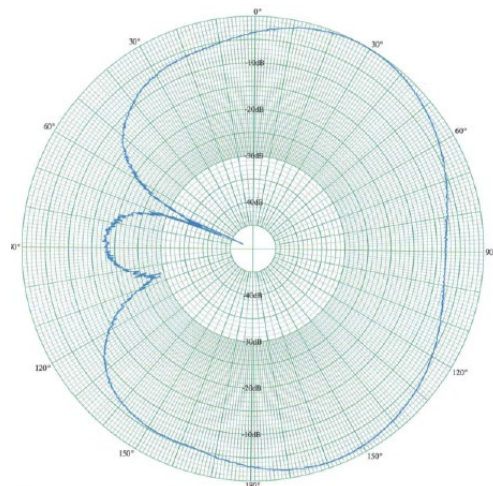
Connector Layout

Pin	Signal Name
1	+ Signal
2	- Signal
3	Ground
4	N/A
5	N/A
6	N/A

Horizontal Beam Pattern @ 10 kHz

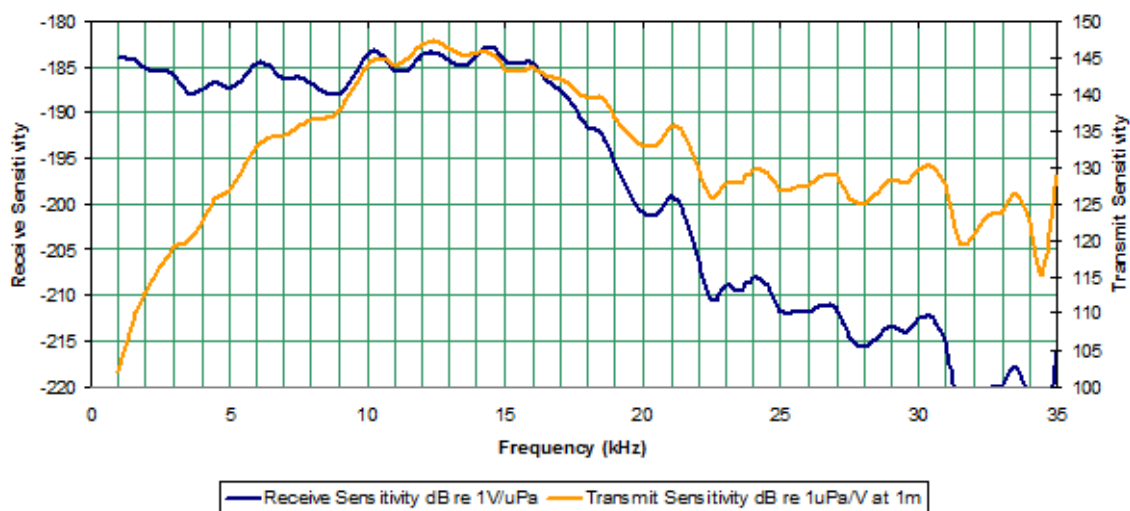


Vertical Beam Pattern @ 5 kHz

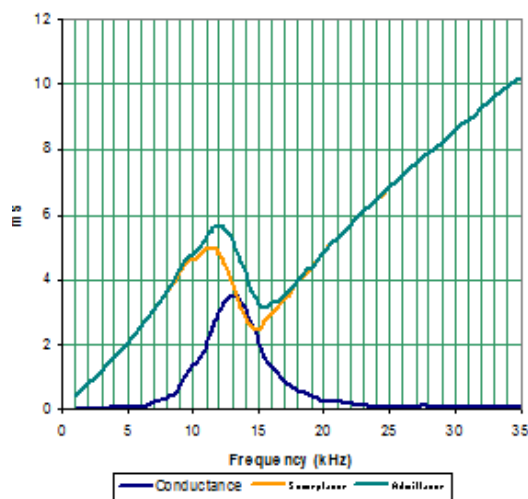




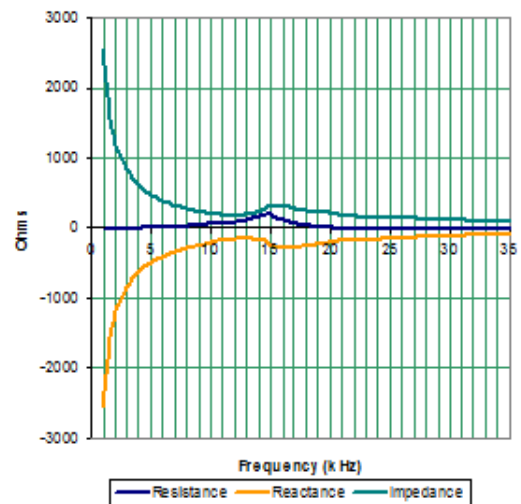
▲ Sensitivity



▲ Admittance



▲ Impedance



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Advantages

- Horizontally omni-directional
- Long-term stability
- Durable and reliable construction
- Low frequency acoustic source

Applications

- Acoustic reference standard
- High power sound source
- Underwater communication applications

Variations

- Broadband 012 - Tuned Projector**
- Resonant frequency of 12 kHz

Technical Specification

Nominal resonant frequency	12.5 kHz
Receive Sensitivity @ 14.5kHz	-183 dB re 1V/ μ Pa
Recommended receive frequency range	10 Hz – 20 kHz
Maximum acoustic input @ 14.5kHz	+237 dB re 1 μ Pa
Transmit sensitivity @ 13.5 kHz	+147 dB re 1 μ Pa/V at 1 m
-3 dB bandwidth	3.5 kHz
Quality factor	3.5
Recommended transmit frequency range	7-20 kHz
Maximum source level at 13.5 kHz	+201 dB re 1 μ Pa at 1 m
Maximum applied voltage	530 Vrms
Low Frequency capacitance (@ 1 kHz)	63 nF
Horizontal beam pattern	Omni-directional +/- 2 dB at 10 kHz
Vertical beam pattern	Hemispherical +/- 4 dB at 5 kHz

Mechanical Specification

Dimensions	248 mm outer diameter x 336 mm length
Transducer mass in air	Approx. 20 kg
Transducer mass in water	Approx. 6 kg
Maximum recommended operating depth	600 m
Survival depth	1,200 m
Operating temperature range	-5 to +35 °C
Cable	None as standard
Connector	LPMBH-6-M Connector
Mounting	Bulkhead mounting

*In view of our continual improvements, the designs and specifications of our products may vary from those described.

Please specify any additional cable, alternative connectors and/or calibration requirements with orders



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