

Hydrophone for Ultrasonic Power Measurement

Ultrasonic cleaning systems are currently used in a wide variety of industries. In all cleaning applications, it is important to control ultrasonic power to match your desired cleaning result.

Excessive ultrasonic power can cause damage to your delicate product, while too little of ultrasonic power will not deliver your expected level of cleaning. Our hydrophone set provides you with the visibility of the power of your ultrasonic cleaning system.

The meter offers a usable frequency range of 1Hz to 170kHz and a high sensitivity relative to its size. It further more provides uniform omnidirectional sensitivities in both horizontal and vertical planes up to high frequencies.

The meter is an excellent transducer for making absolute sound measurements and calibrations within a broad frequency range



Key Features Include:

- NEW – Large 50,000 count, 1/4 VGA display with white backlight. Multiple sets of measurement information can simultaneously be displayed at the same time.
- NEW - Logging function with TrendCapture is an essential tool for documenting the performance of your designs, processes or systems, monitoring unattended while you work on other projects. It plots measurements as a single line to help detect signal anomalies over time, storing up to 10,000 readings. Using on-board TrendCapture, you can graphically view logged readings without a PC. (Software and interface cable optional).
- NEW – Log multiple sessions or log data continuously for over 200 hours. This is useful for characterizing the performance of a design or for unattended monitoring.
- NEW - i-info button on board help screens for measurement functions. Unsure about a function? Go to that function and Press the "i" button.
- NEW – LoZ Volts. Low impedance voltage function prevents false readings due to "ghost voltage". It is also the recommended mode when testing for absence or presence of live power.
- NEW – Low Pass Filter for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment.
- 50 ohm range – useful for measuring and comparing differences in motor winding resistance, low ohm measurements, or other contact resistance. Two terminal 50 ohm range with 1 milliohm resolution, 10 mA source current.
- NEW – Saved measurements allow you to name and recall measurements made in the field
- Real Time Clock – for automatic time stamping of saved readings
- NEW - Field upgradeable and expandable meter lets you stay current as new capabilities are added
- NEW - Multi-lingual interface
- Min/Max/Average with Time Stamp to record signal fluctuations
- Soft keys, scroll buttons and easy navigation control access to secondary functions. Create custom displays too.
- 0.025% Basic DC accuracy
- 100 kHz ac bandwidth
- True-rms ac voltage and current for accurate measurements on complex signals or non-linear loads.
- Measure up to 10A (20 A for 30 seconds; 10A continuous)
- 100 mF capacitance range
- Temperature function
- Relative mode to remove test lead resistance from low ohms or capacitance measurement
- Peak capture to record transients as fast as 250 μs
- Premium test leads and alligator clips included
- CAT III 1000 V / CAT IV 600 V safety rated

Specifications

Voltage DC

Accuracy	0.025 %
Range and Resolution	50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0V

Voltage AC

Accuracy	0.4 %(true-rms)
Range and Resolution	50.000 mV, 500.00 mV, 5.0000 V, 50.000 V, 500.00 V, 1000.0V

Current DC

Accuracy	0.06 %
Range and Resolution	500.00 μ A, 5000.0 μ A, 50.000 mA, 400.00 mA, 5.0000 A, 10.000 A

Current AC

Accuracy	0.61 %(true-rms)
Range and Resolution	500.00 μ A, 5000.0 μ A, 50.000 mA, 400.00 mA, 5.0000 A, 10.000 A

Resistance

Accuracy	0.05 %
Range and Resolution	500.00 Ω , 5.0000 k Ω , 50.000 k Ω , 500.00 k Ω , 5.0000 M Ω , 50.00 M Ω , 500.0 M Ω

Resistance 10 50 Ω (2 wire connection)

Accuracy	0.15 % + 20
Range and resolution	50.000 Ω

Capacitance

Accuracy	1.0 %
Range and Resolution	1.000 nF, 10.00 nF, 100.0 nF, 1.000 μ F, 10.00 μ F, 100.0 μ F, 1000 μ F, 10.00 mF, 100.00 mF Ω

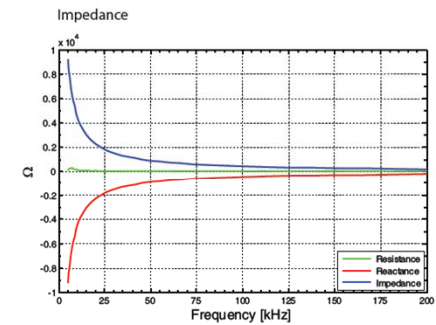
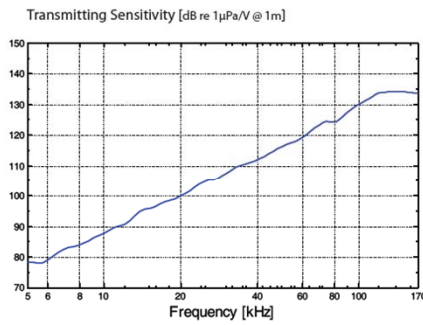
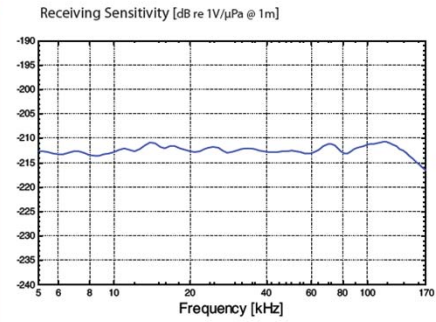
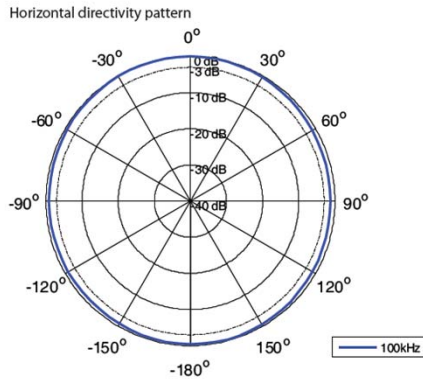
Frequency

Accuracy	0.005% + 5
Range and Resolution	99.999 Hz, 999.99 Hz, 9.9999 kHz, 99.999 kHz, 999.99 kHz

Additional functions/features

Multiple on-screen displays	Yes
True-rms AC bandwidth	100 kHz
DBV/dBm	Yes
DC mV resolution	1 μ V
Megohm range	Up to 500 M
Conductance	50.00nS
Continuity beeper	Yes
Battery/Fuse access	Battery / Fuse
Peak	250 μ S
Elapse time clock	Yes
Time of day clock	Yes
Min-Max-Avg	Yes
Frequency	Yes
Duty Cycle	0.01 % to 99.99 %
Pulse Width	0.025 ms, 0.25 ms, 2.5 ms, 1250.0 ms
Hold	Yes
Isolated Optical Interface	Yes
Auto/Touch Hold	Yes
Reading memory	Yes
Log to PC	Yes
Interval/Event Logging	Yes
Logging Memory	Up to 10,000 readings
Resistance Low Ohm	0.001 Ω to 50.000 Ω 10 mA source
LoZ	Yes
Low Pass Filter	Yes

Usable Frequency range:	1Hz to 170kHz
Receiving Sensitivity:	-211dB \pm 3dB re 1V/ μ Pa
Transmitting Sensitivity:	130dB \pm 3dB re 1 μ Pa/V at 1m at 100kHz
Horizontal Directivity Pattern:	omnidirectional \pm 2dB at 100kHz
Vertical Directivity Pattern:	270° \pm 3dB at 100kHz
Nominal capacitance:	3.4nF
Operating depth:	700m
Survival depth:	1000m
Operating temperature range:	-2°C to +80°C
Storage temperature range:	-40°C to +80°C
Weight (in air):	75g
Cable length:	Standard length 6m Optional cable lengths available on request
Encapsulating material:	Special formulated NBR (Nitrile Rubber)



Outline Dimensions

