

*Precision detection of frequency and ultrasonic energy of an ultrasonic cleaning tank*

**"Achieving Total Process Control of an Ultrasonic Cleaning System !"**

**Using True RMS converter!**

**Dual Sensor for better accuracy!**

**Display Energy Reading in mV(millivolts)!**

**Improvement Linearity for Energy Reading!**

**Can be calibrated by Calibrated Signal Generator!**

**High & Low Alarm setting\***

**Optional 4~20mA Transmitter\***



**\*application for panel mount only**

Principle Of Operation

The dual sensors probe detect frequency and voltage signal from the ultrasonic cleaning tanks. The frequency are detected by one sensor and the voltage signal are processed individually by another highly accurate TRUE RMS converter before displaying on the screen.

Data Collection

With the handheld model, the probe can be "walked" across the ultrasonic cleaning tank to collect meaningful data for analysis. The panel mount version offer a fixed position data collection and trigger high and low alarm setting on the voltage signal. There is an optional 4~20mA transmitter available for PLC signal manipulation.

Easy Installation and User Friendliness

It is available in both handheld and panel mounted unit to suit different requirements of data collection. The controller also provide a dual brightly lit LED display that can be visible up to several meters away. NO maintenance is required for the probe or the controller at any



Cost Effectiveness

The low cost yet reliable instrument that offer a total process control of an ultrasonic cleaning system that has never done before. With the reliable data collected, one can made a good judgment of performance of the ultrasonic tank over a period of time. An essential tools for all engineers to understand ultrasonic.

### Ultrasonic Online SP Series-H (Handheld) General Specifications

Frequency Range	: Either LF ( 0.01 TO 60.00Khz) or MF (60.01 to 250.00) Available also CF (0.01 to 250khz)
Frequency accuracy	: display in khz , +/-0.5% khz
Voltage signal accuracy	: display in mV ,full scale at 1Vrms
Display	: 2 Line Character LCD display
Electrical supply	: +15VDC Rechargeable Battery (Fully Charge >3 hrs usage)
Factory Calibration	: Recommended once every 2 years
Electronic Controller Warranty	: 1 year warranty against manufacturer's defect.

#### Mechanical Specifications :

Body Dimension (without protection cover)	: 142 mm " x 92 mm"
Casing / Protection Cover	: ABS UL 94 HB Std (RoHS Compliance)
Weight	: 410g
Probe type	: Handheld Probe type <b>**LIFE TIME Warranty</b> for probe (** Subject to conditions of used and exclude wire defects)
Probe Working temperature	: 0 to 70 °C
Probe material & length	: S.S. 316 L , standard length 500mm
Chemical compatibility	: Incompatibility with highly corrosive acidic or corrosive products.
Cable length	: 1.5 meters

### Ultrasonic Online SP Series-LF or MF mode (Panel Mount) General Specifications

Frequency range	: Either LF ( 0.01 TO 60.00Khz) OR MF (60.01 to 250.00)
Frequency accuracy	: display in khz , +/-0.5% khz
Voltage signal accuracy	: display in mV ,full scale at 1Vrms
Display	: 16 x 2 Backlight LCD display
Electrical supply	: +24VDC
Voltage signal alarm	: Upper limits / Lower limits setting point
Alarm trigger	: normally open, dry contact relay

#### Optional

Signal processing	: 4~20mV against 1Vrms full scale
Data logging	: 9600, 8, N ,1
Factory Calibration	: Recommended once per year
Warranty	: 1 year warranty on controller against manufacturer's defect.

#### Mechanical Specifications :

Body Dimension	: 96 X 48 X 120 mm
Case material	: ABS , DIN 43700
Weight	: 150 g
Probe type	: Side mount online probe (see below) <b>3 years warranty</b> for online probe (** Subject to conditions of used and exclude wire defects).
Probe Working temperature	: 0 to 70 °C

Authorised Distributor :

**[www.spatechindustries.com](http://www.spatechindustries.com)**  
**[Info@spatechindustries.com](mailto:Info@spatechindustries.com)**