

## Conductivity of Liquid Hydrocarbons by Precision Meter

ASTM D 4308

**Product group(s):** Fuel

**User group(s):** Fuel, Jet

**Scope:** This method applies to the determination of the "rest" electrical conductivity of aviation fuels and other similar low-conductivity hydrocarbon liquids in the range from 0.1 to 2000 pS/m (1 picoSiemens per meter equals 1 Conductivity Unit cu).

"Rest" conductivity is the reciprocal of the resistance of unchanged fluid in the absence of ionic depletion or polarization (electrical conductivity at the initial instant of current measurement after a DC voltage is impressed between electrodes). Limited by the viscosity of the fluid and the conductivity level to be measured.

A specific sample volume is introduced between the two concentric electrodes in the conductivity cell. The resultant peak current will be transformed and digitally displayed as picoSiemens/meter.

### Precision Conductivity Meter Test Equipment

More details are mentioned in the "Order Number" section

### Technical Data

<u>Range (pS / m)</u>	<u>Resolution (pS / m)</u>
0 - 20	0.01
20 - 200	0.1
200 - 2000	1
2000 - 20.000	10

<u>Instrument Range:</u>	0-20.000 pS / m
<u>Accuracy:</u>	± ½ % of reading, ± 1 least significant digit (± 10% on 0 - 20.000 scale).
<u>Controls:</u>	Six pushbuttons and AUTO / MANUAL toggle switch (The AUTO mode automatically samples and holds the reading)
<u>Display:</u>	Liquid crystal, 5 digit, ½ inch high
<u>Calibration:</u>	Effected by depressing the pushbuttons designated ZERO and CAL, the letter activates an internal standard.
<u>Power Requirements:</u>	Six 9 volt batteries
<u>Battery Life:</u>	Approximately 1000 tests
<u>Physical Description:</u>	<u>Console:</u> Dimension: 8 x 10 x 5 Weight: 4.25 lbs.
<u>Finish:</u>	Solvent resistant paint
<u>KSLA Cell:</u>	3 dia. x 5 high, Weight 1.5 lbs. Finish: Aluminium
<u>Sample Volume:</u>	100 ml

## Main Unit

13-1410

### Precision Conductivity Meter

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System provides direct measurement of electrical conductivity of fluids from 0 to 20,000 picoSiemens per meter.

Four standard ranges provide high resolution and accuracy.

Capable of being modified to accommodate higher conductivity ranges.

Mechanical design of the Conductivity Cell allows for accurate self measuring of the test sample volume.

Electronic circuitry automatically samples and holds the reading Digital five digit display.

Optional capability to measure the temperature of the test sample.

Ease of disassembly and cleaning of the Conductivity Cell.

Internal self check calibration of all electronic circuits.

Completely self contained with power derived from 6 standard 9 volt batteries, monitored a low power display.

### Order Guideline

Minimum equipment:  
Additional requirements:

1x 13-1410