



February 2007

Why Is Conductivity Important?

Electrical conductivity is a measure of how well a material can conduct electricity. It is the inverse of electrical resistance. The greater conductivity, the lower its resistance.

Historical February



3rd February 1959

Buddy Holly, Ritchie Valens & JP Richardson are killed in an air crash near Mason City, Iowa. Holly was 22 years old.



10th February 1996

Chess Grandmaster Garry Kasparov is defeated by IBM computer 'Deep Blue' in the first of 6 matches.



25th February 1964

Cassius Clay stuns the World to capture the Heavyweight Championship, knocking out Sonny Liston in the 7th round

Electrical current is moving charge. This may be in the form of electrons but also in the form of ions - charged particles. Wherever the facility exists for charges to move, current electricity can exist. In the case of solutions such as drinking water, river water or sea water these ion exist by dissociation of some well known ionic substances; Na^+ & Cl^- (from sodium chloride), Mg^{2+} & PO_3^{-4} (from Magnesium or Phosphate). There are countless sources of ions from a variety of chemical substances.

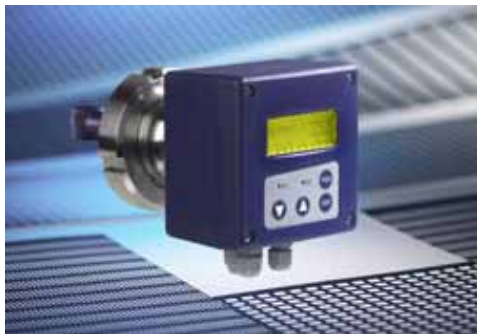


Bus Conductors: Not the same.

Conductivity is an extremely useful measurement in a variety of industries. Commonly we think of conductivity as a measure of water 'purity' although conductivity alone cannot determine this. It's also used as a safety measure in the fuel industry. Static electricity may be gained by fuel through movement or air friction (Aircraft) where the conductivity must be extremely low to avoid the potential of fuel ignition.



Jumo ecoTRANS



Jumo CTI Series: Superb Performers

Jumo GmbH produce a range of excellent analytical instrumentation for field use. Whether it is control or monitoring that you require, Jumo have excellent units.

The CTI-500/750 (left) is used in the pharmaceutical, beverage, dairy and wastewater industries.

The ecoTRANS Lf 01 (above right) is a DIN rail mount transmitter / switching unit used in fresh water, ion exchange and water treatment applications.

If you've a need to know the depth of a bore and use the data to control a VSD or some other device, there is no better unit the Jumo 4390 series transducer (below). Installed throughout NZ by a variety of private and public authorities it is an excellent performer.

The Jumo 4390 (right) is a proven unit in the field



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We need to monitor our natural resources carefully.



Make life easy: Contact Intech Instruments.

For almost 25 years Intech Instruments have been operating throughout New Zealand, servicing a variety of industries. Our product range is made up of both our own high quality manufactured products plus a range of first class imported items.

Our core business is concerned with supervisory, monitoring and control – utilising hardware and software facilities to provide a host of solutions.

Based in Christchurch, where we have both a sales and service operation, Intech Instruments also have offices in Auckland and Hawkes Bay.

With a combination of industrial experiences and technical skills, Intech provide customers with the best solutions possible.

Hand Held Water Quality Instrumentation

Very often spot water analysis is required in the field by operators. Personnel may be remote from power supplies and yet need to gain accurate data quickly and easily with little delay. Myron L have developed the impressive Ultrameter II™ unit (shown on right). Its IP67 (waterproof) and also buoyant so if dropped it will not sink out of sight!



The Ultrameter II

One single unit will measure all of the following: -

- Conductivity
- Resistivity
- Temperature
- TDS
- ORP
- pH

SMS (Text) Messages

- Alarms
- Requests
- Control

SMS Message (GSM Mobile Phone)

GSM Remote Monitor / Control / Alarm System

- 8 Analogue Inputs
- 8 Digital Inputs
- 8 Relay outputs
- Cool stores
- Pumping station
- Water supply system
- Agriculture

Need remote access to current data?

It's impossible to be in all places at one time. This is a common problem for farmers. Pump stations may fail and irrigators can be left stationary when they should be operational. The GSM 8000 controller (above) offers the facility to control, monitor and receive alarms. Up to 16 inputs and 8 relay outputs available. Be aware of pump station breakdowns or receive immediate data from analogue instruments operating in the field. This will allow you to maximize your efforts, whether on the farm or for environmental reasons.