



## ANALIZERS

## Water-cut monitoring for the oil Industry



Watercut Monitor is a solid state electronic instrument that determines the percent watercut in an oil emulsion without requiring the physical separation of the fluids.

The capacitance probe technique employed by the Watercut Monitor allows the emulsion stream to be continuously surveyed.

The frequency generated by the capacitance probe is determined by the watercut of the emulsion stream in the probe. The Watercut Monitor calculates capacitance measurement by digital techniques: the result is a 4-20mA output signal which varies linearly with watercut.

The cut monitor is run on loop power and easy to install. The Watercut Monitor range is site or user selectable from 0 -1 %, 0-3%, 0-10%, 0-25% and optionally 0-65%

### More about water in oil online monitoring!

- Highly stable capacitance based technology to measure both minute and larger contents of water in oil
- Water in oil reduces lubricating film-strength which leaves critical surfaces vulnerable to wear and corrosion.
- Depletes some additives and reacts with others to form corrosive by-products that attack some metals
- Reduces filterability and clogs filters.
- Increases air entrainment ability.
- Increases the likelihood of cavitation.

Water contamination in oil has always been a problem for many people.

The ability of an instrument to accurately measure in lower range ppm values and higher percentages has been sought after for some time.

The problems that have faced previous attempts of capacitance devices stemmed from electronic drift and poor design. Extensive research and development has produced a loop powered mini PCB card that works with cylindrical tubes that act as capacitor plates to measure immediate changes in water content or over time. Since oil has a low dielectric and water the opposite, it is possible to detect any changes whether ppm or percentage using this well known principle.

The technology is not limited to a particular type of oil and can measure water contamination in any oil, whether mineral or synthetic based- low or high viscosity. It also applies to fuels, vegetable oils, hydraulic systems or hydrocarbon based liquids. As part of our commitment to providing quality products, each EASZ-1 water in oil transmitter is electronically calibrated and tested to perform within certain tolerances.

Much care is taken during assembly and testing to ensure that each EASZ-1 that leaves production will work to within its specifications.

Water contamination of hydraulic and lubricating oils can cause serious damage to bearings and other lubricated components - often without the equipment user being aware that damage is occurring.

Accountability and online monitoring are essential to the success of a well thought out water removal plan.

Left unchecked, these problems can rapidly lead to costly breakdowns.

The speed with which water-induced degradation can progress, means that in many applications, water contamination of the oil is a more serious threat to equipment reliability than wear metal contamination

EASZ-1 water in oil analyzer provides early warning of any increase in water content so that corrective action can be taken. Its response time is one second and has a resolution of 100ppm and a range from 0 -10,000 ppm, 0-1%, 0-3%, 0-10% and 0-25%. RS-485 and HART protocol options.

For more information on the EASZ-1 BS and W monitor, please contact us

