

Intrinsically Safe EASZ-1 ONLINE WATER CUT METER

Unseen Water detection

Accurate Measurement of Total Water in Oil

- ✓ Measures moisture or water oil emulsions
- ✓ Loop powered
- ✓ Temperature compensation
- ✓ Suitable for most hazardous areas
- ✓ Flexible ranges

Accurate measurements of water content in hydrocarbons is possible with the IS-EASZ-1 which is a simple to install water monitor that uses the principles of changes in fluid dielectric. The use of new digital techniques has enabled us to manufacture a product that has electronics completely free from drift



Water Oil Emulsions

Response Time 1 Second

IP66 Stainless steel enclosure EMC Compliant

Units available in 150/300/600 ANSI RF

Adjustable Measurement Ranges Standard Units 0-25% High Range 0-60%

All stainless steel construction, sensors and housing

Loop Powered with analog output to remote monitoring system

Temperature Compensation

EESIFLO's BS&W analyzer uses the principle of dielectric strength. A cylindrical sensor and outer barrel are separated from each other and form the electrodes of a coaxial capacitor. The oil sample flows between the cells as a dielectric fluid, changing the capacitance of the assembly proportionally with the change in dielectric constant of the fluid. The measured capacitance is converted to water percentage. Capacitance technology has been used to measure water in oil for a long time and is an accepted principle. EESIFLO has enhanced its Loop Powered EASZ-1 BS&W with stable microprocessor based electronics which do not have the associated problems of the effect of temperature changes on the dielectric constant, since our built in temperature sensor and electronics compensate.

This in turn means higher accuracy and stability at an affordable price.

Mini 1 inch version ▶



◀ 2 inch version

Water In Oil Monitoring Base, Sediment and Water

EESI/FlO
HTTP://WWW.EESIFLD.COM



FPSO/Tanker



Tank Farms



Petrochemical
and Chemical
Plants



Liquid Sampling & Metering



LACT Units

Offshore Crude Oil Production



Jet Fuel
Monitoring

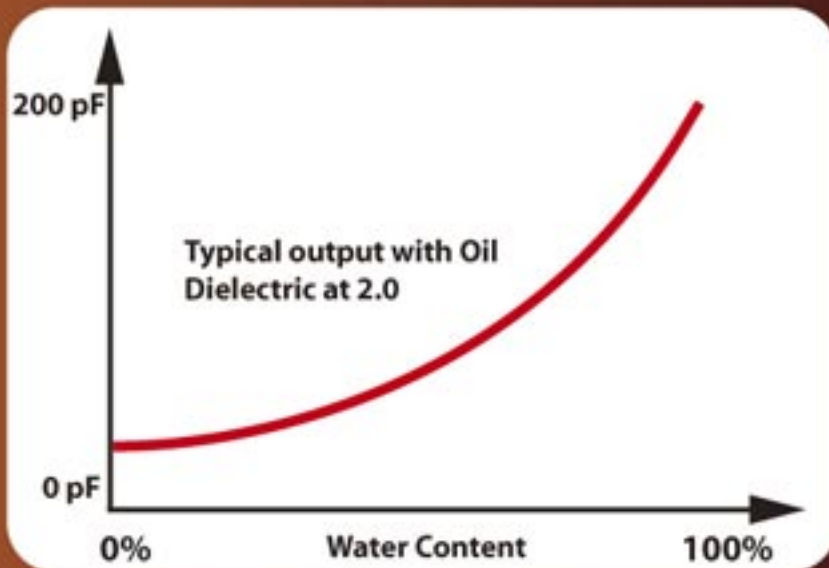
Some Applications

- ✓ Water in Condensate
- ✓ Emulsions
- ✓ Petroleum byproducts
- ✓ Crude
- ✓ Refined Oil
- ✓ Fuel


Oil and Water have dissimilar dielectric properties; the typical value for oil is between 1.7 and 2.3 depending on the API oil gravity and water has a typical value of 80. So, in the other words, water is capable of storing much more energy per volume unit than the average oil. It is important to understand that any changes to the oil that affects the dielectric properties of the oil will show up as a change in water content. The capacitance changes in pF can be correlated to changed in water content (temperature compensated) and output to a remote display, flow computer or data system.

The EASZ-1 has a built in default calibration table. Using the default table will give good readings for water content up to 60% with almost all oils. It is also possible to adjust ranges without new eproms or new electronics. The EASZ-1 card has a user selectable ranged 0-1%, 0-3%, 0-10%, 0-25% and 0-60%. This can be useful for fabricators who may not have all correct data on hand during skid fabrication or for users on site who may wish to improve accuracy along with oil sampling data or lab data

Another unique feature of the IS-EASZ-1 is the ability to either use our factory curve or a custom curve. This makes it possible for the IS-EASZ-1 to extend its application to hydrocarbons or other liquids which have dissimilar dielectric properties. Factory or onsite adjustments can be made if necessary for non typical applications. The IS-EASZ-1 can be configured through a simple terminal protocol along with a supplied RS-232 connector.



SPECIFICATIONS

Manufacturer	EESIFLO International Pte Ltd
Apparatus	EASZ-1 Water in Oil Monitor
Hazardous area marking code	EEx ia IIB T4 CE 0518  II 2 G
Maximum input voltage	Ui : ≤ 28 V
Maximum input current	Ii : ≤ 21 mA
Maximum input power	Pi : ≤ 0.5 w
Maximum internal capacitance	Ci : 265 μF
Maximum internal inductance	Li : 0 μH

PART NUMBERING INFORMATION

EASZ-1 PART NUMBERING

EASZ-1-XXXXX

EASZ-1-[Size][Connection][Output][Housing][Range]

Feature	Description	1 inch	BSW	Code
Size	1 inch	x	-	1----
	2 inch	-	x	2----
	3 inch	-	x	3----

Connection	Description	1 inch	BSW	Code
Connection	NPT	x	-	-1---
	ANSI 150	-	x	-2---
	ANSI 300	-	x	-3---
	ANSI 600	-	x	-4---

Output	Description	1 inch	BSW	Code
Output	4-20mA	x	x	--1--

Housing	Description	1 inch	BSW	Code
Housing	EASZ-1 Aluminium	x	-	---1-
	Stainless Steel IS	x	x	---2-

Range	Description	1 inch	BSW	Code
Range	25%	x	x	----1
	60%	-	x	----2

Example: All models are Stainless steel

EASZ-1 BS/W,150 ANSI RF, Intrinsic Safe , and 60% range : EASZ-1-22122

THE IS-EASZ-1 IS NORMALLY A QUICK SHIP ITEM. PLEASE CONTACT YOUR NEAREST LOCATION OR REPRESENTATIVE BY VISITING WWW.EESIFLO.COM

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LACT Units



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Intrinsically safe
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Online Water in
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Jet Fuel
Monitoring



Offshore Crude Oil Production



Reliable Online Water Content in Hydrocarbons

Loop Powered, Range Adjustable
Suitable For Most Types of Oil
Including Fuel and Hydrocarbons