



TELEDYNE
ANALYTICAL INSTRUMENTS
A Teledyne Technologies Company

Model **5650** Water Cut Meter

FEATURES:

- Reliable capacitance detection technology
- Sizes from 1 to 48 inch, ranges 0-25% or 0-100%
- Intrinsically safe and explosion-proof configurations
- Direct in-situ or bypass configurations
- Integral temperature compensation

APPLICATIONS:

- Pipelines
- Dehydration Equipment
- Storage and Treating Facilities
- LACT (Lease Automatic Custody Transfer) Units



Model 5650 - Water Cut Meter

The Teledyne Model 5650 Water Cut Monitor is designed to produce superior results in operating environments from the North Sea to the Sahara Desert. Delivering unmatched flexibility in material, size, features, and configurations, the Model 5650 can be integrated into almost any oil carrying system. Applications include monitoring pipeline transfers, enhancing dehydration equipment efficiencies by monitoring water content before and after desalinization, early detection of undesirable conditions in petroleum storage facilities, and detecting and rerouting oil with excess water content.

The Model 5650 is designed with reliability and flexibility in mind. Incorporating decades of experience with capacitance probe engineering, the Model 5650 is one of the most reliable water cut monitors on the

market. Built-in logic compensates for vast temperature effects in the dielectric constant of the water while remaining sensitive to the much smaller dielectric constant effects of oil. The 5650 is also built to the strictest standards with the ability to accommodate many different piping specifications. Dedication to precision allows the Model 5650 to become an integral part of the piping system, rather than the weakest link in the chain like many other external monitoring systems.

Proper steam flow conditioning is the key to high accuracy water cut metering. The Model 5650 can be supplied with a built-in static mixer to provide a well-conditioned steam for highly accurate readings for both in-line measurement and sampling, reaching unparalleled accuracy over many ranges of water content.

SPECIFICATIONS:

Response Time:	< 1 second
Sensitivity:	0.01%
Accuracy:	Up to 5% water cut: $\pm 0.05\%$ 5% to 10% water cut: $\pm 0.1\%$ 10% to 25% water cut: $\pm 0.2\%$
Repeatability:	0.1%
Output:	4-20 mA with HART Protocol
Power Supply:	24 VDC (Loop Powered)
Power Consumption:	0.66 W
Maximum Temperature (Media):	150°C (300°F)
Maximum Temperature (Ambient):	60°C (140 °F)
Ingress Protection:	IP 66
Range:	0-25% or 0-100%
Flange Rating:	Up to 1500#
Sizes:	From 1" to 48"
Material (Standard Sizes 1" - 4"):	316L stainless steel
Options:	EEx d, sample ports, built-in mixer
Protection:	Intrinsically safe, Ex ia IIB T4 (-20°C to 60°C) (IECEx, ATEX, US/CAN), IP-66 316LSS. Optional dual chamber with explosion-proof housing

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Warranty

Instrument is warranted for one year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

