Fusion™

Dual Technology - Level Measurement System

2 technologies
1 dependable solution

Features:

* 2 x independent integrated technologies for redundancy
* Difference in readings between Magnetic Level Indicator and Guided Wave Radar offer feedback of system performance
* No calibration required on either measuring technology
* 2-wire, intrinsically safe or explosion proof, loop powered level transmitter
* HART®, Foundation Fieldbus or Profibus communication protocol
* Additional outputs available
* SIL 2 Ratings

Applications:

* Clean liquids; hydrocarbons to water-based media
* Most process or storage vessels

Options:

* ATEX II 1 G, 1/2 G, 2G, EEx ia II C T6, intrinsically safe
* ATEX II 1/2 G, 2 G, EEx d[ia] II C T6, explosion proof
* FM/CSA Non-incendive I.S.and XP

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Fusion™

Dual Technology - Level Measurement System

The ABLE Fusion™ level measurement system combines the operation of a float operated magnetic level indicator with a guided wave radar to offer two independent proven level technologies in one system.

The magnetic level indicator offers a clear visual level display and can be supplied with a reed chain transmitter, magneto-strictive transmitter or switches for high and low level alarm requirements, operating in conjunction with the level indicator float.

The guided wave radar offers an independent level measurement based on high frequency microwave pulses that are transmitted along a guide rod. The pulses are reflected back by the liquid surface to a receiver, providing a level measurement accuracy of +/-3mm.

The visual indication or transmitter output from the magnetic level indicator can be compared to the guided wave radar to provide the confidence of accurate liquid level measurement, either locally or in a control room.

The combination of technologies provide the operator with a fault tolerant, reliable level system suitable for applications where critical level measurement and redundancy is required, particularly in the offshore, petrochemical, power and pharmaceutical industries.

Additionally, the instrument is ideally suited for replacement of existing side mounted level instrumentation such as displacer level instruments and sight glasses, providing clarity of local indication as well as independent, alternative level measurement outputs.

ABLE Fusion™ can be offered in a single or dual chamber design with transmitter and switch options to suit requirements. The Fusion™ is a self-contained system which can be side mounted to a tank or vessel with threaded, flanged or welded pipe connections to suit individual customer specifications.

HART®, Profibus & Fieldbus communications protocols are available.

Technical Specification	
Magnetic Level Indicator	
Chamber Body / Flanges:	316 / 316L Stainless Steel, Hastelloy C (Other materials available on request)
Float:	Stainless Steel, Titanium, Glass or Corrosion Resistant Plastic
Ratings:	Process Pressures up to 200 bar (2900 PSI) Saturated Steam pressure up to 130 bar Temperatures up to 400°C, higher temperatures available on request
Length:	To suit customer requirements. Maximum single section length 6m
Approvals:	Pressure Equipment Directive 97/23/EC Up to Category IV
Reed Chain Transmitter	
Intrinsically Safe Version:	II 2 GD T135°C EEx ia IIC T4 ZELM 03 ATEX 0168
Flameproof Exd Version:	II 2 GD T85°C EEx d IIC T6 ZELM 03 ATEX 0191X
Resolution:	5mm and 10mm versions available
Measuring Length:	Minimum 200mm to Maximum 4000mm
Signal Output:	4-20mA current loop
Enclosure:	IP68 - 10 bar
Housing Material:	316 / 316L Stainless Steel
Operating Temperature (IS Version):	
Media Temperature:	-50°C ... +150°C (for Tm > 135°C, T3 applies)
Ambient Temperature:	-20°C ... +50°C
Surface Temperature:	T4 (max. 135°C)
Operating Temperature (Exd Version):	
Media Temperature:	-50°C ... +150°C
Ambient Temperature:	-20°C ... +50°C
Surface Temperature:	T6 (max. 85°C)
Magnetostrictive Transmitter	
Measurement Accuracy:	Accuracy up to ±0.4 mm (0.015") Repeatability of ±0.13 mm (0.005")
Approval:	ATEX II 1/2G EEx d IIC T6, explosion proof ATEX II 1G EEx ia IIC T4, intrinsically safe
SIL Classification:	SIL 2
Housing:	Cast Aluminium or Stainless Steel
Material:	316 / 316 Stainless Steel, Hastelloy C, Monel (Others on request)
Output:	HART®, Foundation Fieldbus, SIL enhanced HART®
Guided Wave Radar	
Display Housing:	Aluminium Alloy Epoxy Painted or Stainless Steel
Process Temperature:	-200…400°C (-110 ATEX)
Pressure:	-1…400 Bar
Accuracy:	+/- 3 mm
Approvals:	ATEX II 1 G, 1/2 G, 2G, EEx ia II C T6, intrinsically safe ATEX II 1/2 G, 2 G, EEx d[ia] II C T6, explosion proof

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