



UTFHR03

High-frequency transducer for open channels

ELECTRONIC
EQUIPMENT

ACOUSTIC

WEIGHING

ANTI-TILTING

VALVES

TEMPERATURE

DETECT
A FIRE®

**FLOW/
RATE**

DENSITY

INTERFACE

PRESSURE

LEVEL

TF
11



TF's new UTF03HR transducer works in combination with TF control units, in their 'flow measurement' configuration, to provide flow measurement of open channels using non-contact ultrasound when using a suitable primary measuring device such as a channel or weir.

The UTF03HR operates at 125kHz. The higher the frequency of the transducer, the better its resolution and the higher the accuracy of the resulting measurement. According to the terms of the UTF03HR, a system must achieve an overall accuracy of at least $\pm 8\%$ in a 24-hour period. An important factor in improving accuracy is the location of the transducer. The accuracy of the flow measurement is fundamentally related to the distance over which the measurement is taken, so it is vital that the transducer face is positioned as close to the liquid as possible. The unique design of the UTF03HR allows it to be positioned only a few mm above the maximum liquid level. The UTF03HR is the first ultrasonic transducer without an upper dead zone beyond its length. Add to this the reflective canopy that reduces the effect of heat radiated by the sun. UTF03HR is therefore the most advanced, most effective and most accurate ultrasonic transducer for open channel flow measurement. UTF03HR can be positioned up to 1000m from its control unit, minimising installation costs through the use of a simple shielded interconnecting cable. TF controllers are configured to calculate the flow rate when used with a suitable primary metering device.

TECHNICAL SPECIFICATIONS

TRANSDUCER	Approval	Dead zone	Size range	Frequency	Face Ø	Opening angle	Temperature range	Temperature range
UTF03HR	CE (STD)	0mm from cable end	2.4m	125kHz	75mm	12° a -3db	-40 a +90°C	180x205mm
dB Mach3	ATEX EEx m	0mm from cable end	2.4m	125kHz	75mm	12° a -3db	-40 a +90°C	180x205mm
dB Mach3IS	ATEX EEx ia	0mm from cable end	2.4m	125kHz	75mm	12° a -3db	-40 a +75°C	180x205mm

Continuous product development may lead to changes in the data displayed.

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Technical specifications

Sensor Body Material	Valox 357 U and syntactic foam face / Degree of Protection IP68
Cable Lengths	Standard L = 5 m, other lengths on request
Maximum Separation	500 m
Frequency	125kHz
Angle	< 10°
Measuring range	0÷2.4m
Accuracy	± 1 mm
Resolution	± 0.5 mmv
Dead Zone	75 mm from the transducer face (0mm from the end of the cone)
Operating Temperature	-30°C÷+90°C
Connection	1" BSP / su richiesta M20x1.5
Approvals	In STD execution only for safe zone. On request: ATEX EEx m II T6 ATEX II 2GD for Zone 1 ATEX EEx ia IIC T6 ATEX II 1GD for Zone 0

