



# UTF015

## Ultrasonic transducer for level measurement and control

ELECTRONIC EQUIPMENT

ACOUSTIC

WEIGHING

ANTI-TILTING

VALVES

TEMPERATURE

DETECT A FIRE®

FLOW/RATE

DENSITY

INTERFACE

PRESSURE

LEVEL



- UTF15 ultrasonic transducer for measuring ranges from 0.3 to 15m
- UTF Transducers with measuring ranges up to 50m and reduced dead zone from 0.2m up to a maximum of 2m depending on the transducer used
- Connection with standard 3 x 1mm<sup>2</sup> shielded three-core cables up to 3000m
- They do not require dedicated grounded metal conduits
- No need for coaxial cables
- UTF transducers for safe zone or on request ATEX II 2GD execution for zone 2 or ATEX II 1GD execution for zone 0
- PVDF (KYNAR) or PTFE radiating face transducers with flange connections on request

Terry Ferraris' UTF ultrasonic transducers are designed to meet the precision and reliability requirements needed for all solid and liquid level measurement and control processes. The decision to use a low voltage in the connections to the control electronic equipment and the non-frequency dependency allows for high performance and low installation costs as the connection is made via a three-core shielded cable. Since the connection to the electronics is not frequency-dependent, transducers can be replaced without having to recalibrate the electronics, and the transducer can be placed up to 3000m away from the electronics without compromising measurement reliability. The use of low voltage also enables intrinsic safety certification for use in flammable atmospheres. The UTF transducer is based on a ceramic PTZ element, compensated in temperature and is suitable for level measurement of solids and liquids with measuring ranges between 0.2 and 50m, and operates in environments with temperatures between -30/-40 and 90°C.

The standard cable length is 5m. UTF transducers can be installed using the 1", 1 1/2" or 2" Gas threaded connection or using a flange.

With the flange, the use of a gasket is recommended in order to prevent any vibrations in the system from causing interference. For applications where threaded or flanged connections cannot be used, it is recommended to use a safety chain to prevent the transducer cable from being damaged.

For applications in silos or tanks for solid materials, an orientation joint is available, which is used to orient the ultrasonic beam at the bottom of the tank or at the discharge point so that there is no interference with the loaded materials.

For liquid applications, a protective shield is available on request, enabling the transducer to function even if it is submerged.

For use on solids, the transducers have a protective soft foam membrane and use an orientation joint.

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

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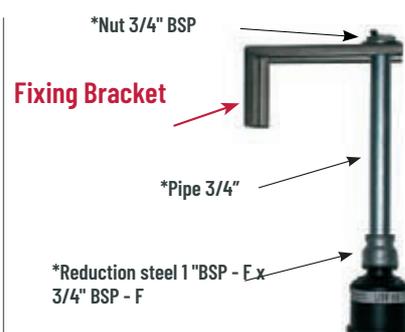
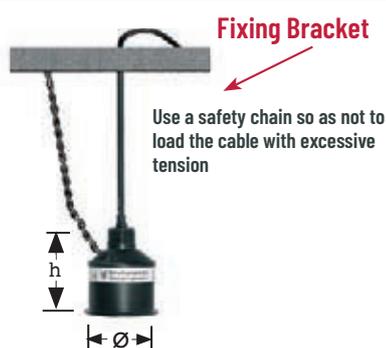
The **standard enclosure** is made of Valox 357. A series of UTF transducers 03, 06, 6S, 10, 15, 25, 40, 50 with the ultrasonic radiating part made of synthetic foam (not suitable for products with solvents and/or chemical aggressive media) or PVDF, or in flange design with PTFE face is available on request.

A sun shield and protection for submersible applications is available for model UTF03HR (high resolution).

### Installations in hazardous areas

All ultrasonic transducers, upon request, can be Atex certified for use

in hazardous areas and are divided into two groups: those certified Atex IGD for use in zone 1 with safety barrier and those certified Atex 2GD EEx m II T6 suitable for use in zone 2 (without safety barrier). Since the enclosure is made of plastic, it is possible that electrostatic discharges may occur, so the EEx ia version must not be installed in places where electrostatic charges can accumulate. The EEx m version must be powered by a device offering short-circuit protection up to 4000A.



## Technical specifications

The UTF transducer range includes several models with measuring ranges up to 40 metres and can be supplied with threaded or flanged connections or in sanitary execution.

They can be Atex zone 2 or intrinsically safe Atex zone 1.

The radiating face can be PTFE, PVDF or foamed. UTF03 series transducers used for flow measurements can be supplied with a sun shield (on request).

### CONNECTION AND RADIATING SIDE

TRANSDUCER	COUPLING	1"Gas	1"Gas	Flange	1"Gas	1"Gas	Thread. 1 1/2	Thread. 2"	Thread. 1 1/2	Thread. 2"
	Front	STD	PVDF	PTFE	Skimming	Submerg.	STD	STD	PVDF	PVDF
UTF15		•		•	•	•				
dBXM15	EEx m	•		•	•	•				
dB15IS	EEx ia	•		•	•	•				

### DIN

DN(mm)	De(mm)	Centreline (mm)	Th.(mm)	Holes (no./Ø mm)
80	200	160	19	8 / 18
100	220	180	19	8 / 18

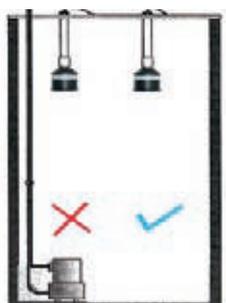
### ANSI

DN(mm)	De(mm)	Centreline (mm)	Th.(mm)	Holes (no./Ø mm)
3"	200	152	19	4 / 18
4"	220	190	19	8 / 18

# Technical specifications and assembly

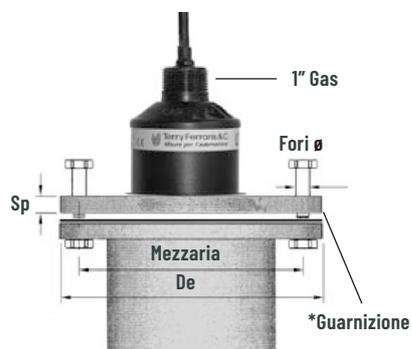
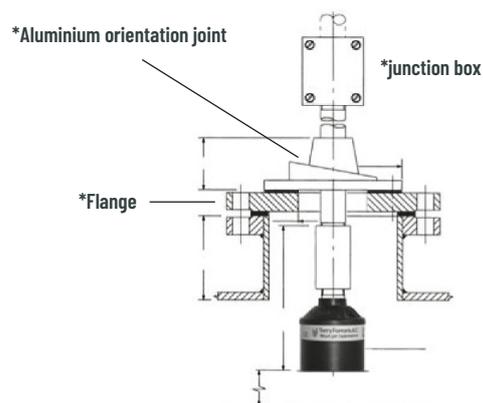
TRANSDUCER	Approval	Dead zone	Measuring range	Frequency	Face $\varnothing$	Opening angle	Time field	Footprint
UTF15	CE (STD)	500mm from cable end	15m	41kHz	60mm	8° a -3db	-40 a +90°C	86x120mm
dBXM15	ATEX EEx m	500mm from cable end	15m	41kHz	60mm	8° a -3db	-40 a +90°C	86x120mm
dB15IS	ATEX EEx ia	500mm from cable end	15m	41kHz	60mm	8° a -3db	-40 a +90°C	86x120mm

## Assembly and accessories on request



Never place the transducer over internal tank protrusions

## \*Accessories available on request



UTF in flanged execution



Steel orientation joint

