

Datasheet T-Sonic1 (FU.TSO1.001)

Description:

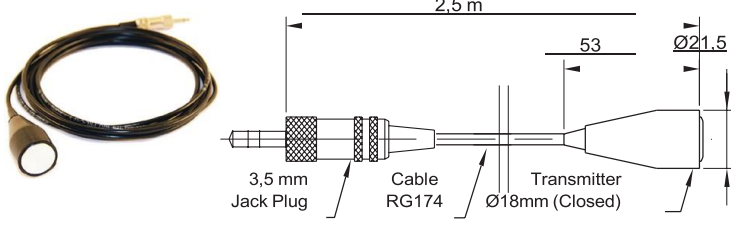
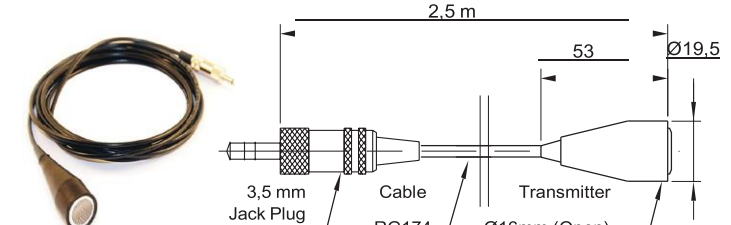
T-Sonic1 is a directional Ultrasound Transmitter including a single transducer. Designed for tightness inspection of constructions or industrial products, T-Sonic1 should be used in combination to SDT Ultrasound Receivers



Specifications:

General		
Transmitter frequencies	kHz	39.6 and 39.9
Wobulation period	ms	80
Transmitted Sound Pressure Level at 100 cm, Ref. 0 dB=20 µPa	Boost off	85
	Boost on	105
Beam angle with -6 dB of attenuation	°	60
Power supply		2 AA batteries
Autonomy with Alkaline batteries	hours	30
Environmental		
Operating temperature range	°C (°F)	-10 to +50 (14 to 122)
IP rating		30
Approvals		EMC (2014/30/EU)
		ROHS (2011/65/EU)
Mechanical		
Housing material		Acrylonitrile Butadiene Styrene (ABS)
Weight including batteries	g (oz)	122 (4.3)
Connector for external transducer		Jack 3.5
Dimensions		

Optional accessories:

Reference	Designation
FUSEUSTC18/J3M	External Closed Transducer 18mm, cable 2.5m, jack 3.5 
FUSEUSTO16/J3M	External Open Transducer 16mm, cable 2.5m, jack 3.5 

Safety recommendations:

Ultrasound at sufficient sound pressure levels can cause hearing damage even if it cannot be heard. Safety standards and guidelines have been developed with the goal of protecting against hearing damage in humans. Safety procedures for the protection of personnel are similar to those used for audible noise. The objective is to ensure that sound pressure levels do not exceed the recommended maximum permissible exposure level. SPL (Sound pressure Level) exposure limits differ somewhat for ultrasound and audio frequencies where $0 \text{ dB}_{\text{spl}} = 20 \text{ } \mu\text{Pa}$.

In short:

- Reference 1 : Heath Canada :
Max $110 \text{ dB}_{\text{spl}}$ for frequencies from 25 kHz to 50 kHz.
This exposure limit is independent of time.
- Reference 2 : International standard EN 61010-1:
max $110 \text{ dB}_{\text{spl}}$ from 20 kHz to 100 kHz.

Laboratory measurements on several calibrated devices emitting in open air show that, in order to keep the level below $110 \text{ dB}_{\text{spl}}$

When using a T-Sonic 1 at its highest emission level, the operator shall either stay at a distance larger than 1.2 m (4 feet) from the transmitter, or wear ear protection. Earmuffs or headphones will fit, e.g. the provided headset used with SDT devices will also fit. If the transmitter is placed inside a closed volume and the operator stays outside checking for tightness, ultrasound outside the volume is so strongly attenuated that an operator outside the closed volume does not incur any risk.

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2	CMA 2021/07/15	Revised version	CGR
1	AKP 2017/08/29	Original version	JPE
Ver.	Editor	Nature of modification	Verified

*The information herein is believed to be accurate to the best of our knowledge.
Due to continuous research and development, specifications are subject to change without prior notice.*