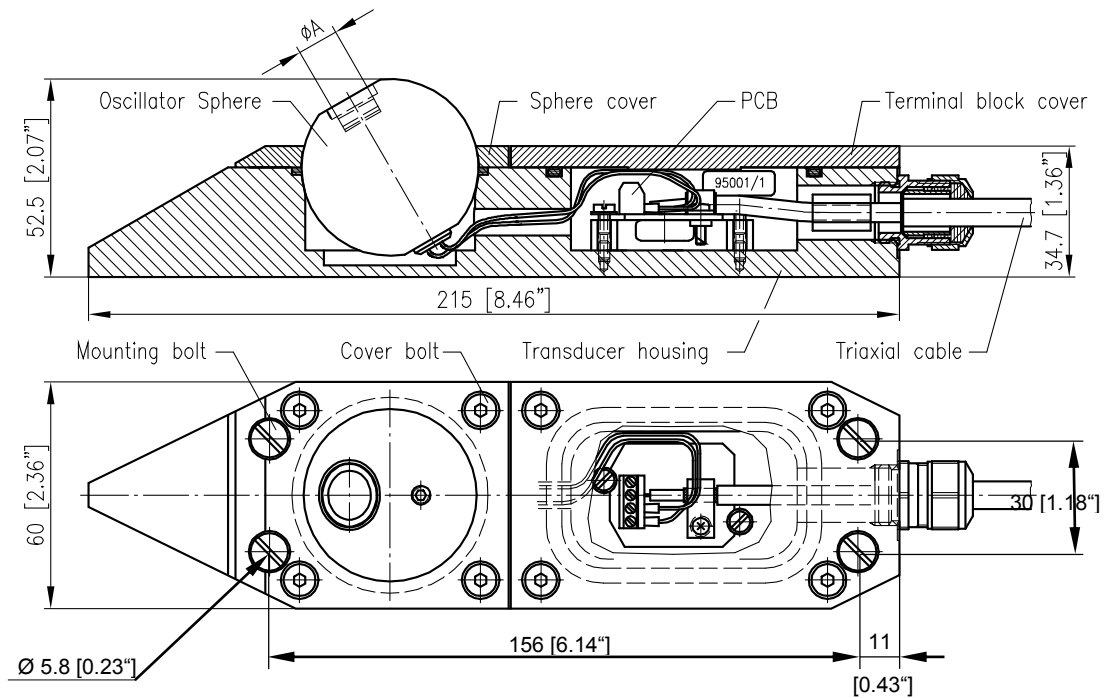


Dimensions



Dimensions in mm [inch]

Short description

The RISONIC modular transducers MFATKx serve alternately as transmitter or receiver. A voltage surge excites the piezoceramic oscillator. The ultrasonic sound pulses propagate through the transducer insert and into the medium to be measured. On the opposite side of the pipe, the sound pulses are received, converted into an electrical signal and further processed by the RISONIC Ultrasonic Transit Time and Controller modules.

Given by the operating frequency, the RISONIC modular transducers can be placed away at a maximum distance from the RISONIC Ultrasonic Transit Time module of 300 m / 984 ft. To prevent cables from damages, protection tubes and/or flexible conduits are to be used.

Types / ordering information

The amount of transducers under Order Number is delivered as one path set including mounting material.

Type	Order-No.	Channel width ¹	Oscillator \varnothing A	Way of mounting	Frequency
MFATK1	00 66 800.001	0.5...2 m / 1.6...6.6 ft.	10 mm / 0.39"	Surface / Flush mounting	1 MHz
MFATK2	00 66 805.001	0.7...10 m / 2.3...33 ft.	16 mm / 0.63"	Surface / Flush mounting	1 MHz

¹ In practice suitable corresponding channel width at 45° path angle

Application

Drawings of path orientations for the example 2E20P in a trapezoidal channel:

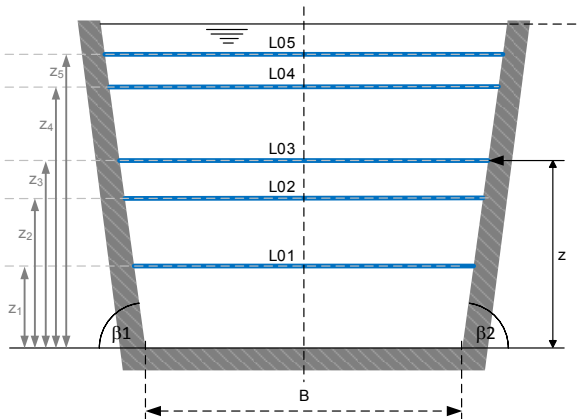


Figure 1: View in channel direction

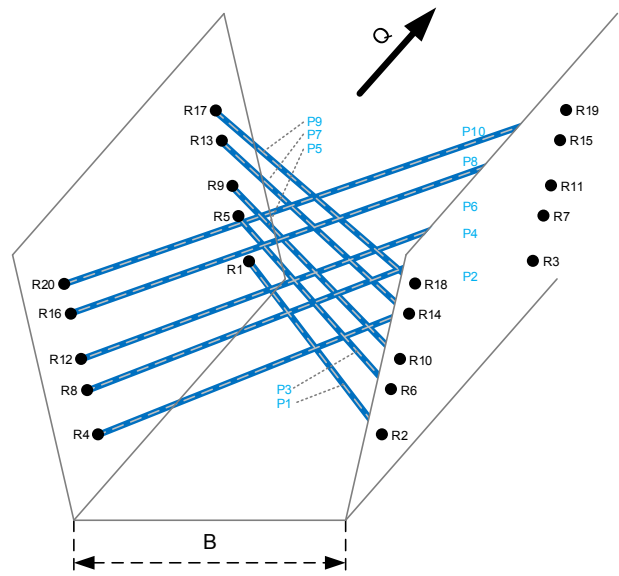


Figure 2: Bird's eye / skewed view

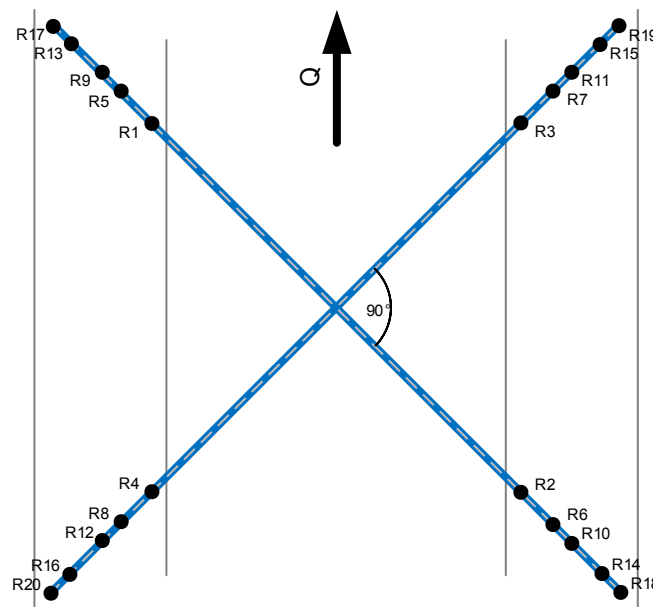


Figure 3: Bird's eye / vertical view

Technical data

- Protection Class of transducer housing:.....IP 68 (NEMA 6) submersible
- Oscillator frequency:1 MHz
- Minimum Path Length MFATK1:.....0.25 m / 0.82 ft. (in-wall mounting required)
- Maximum Path Length MFATK1:.....3 m / 9.84 ft.
- Minimum Path Length MFATK2:.....1 m / 3.28 ft.
- Maximum Path Length MFATK2:.....15 m / 49.2 ft.
- Material of Sphere:PVC-C grey
- Material of Sensor Housing:Stainless steel 316L
- Max. Pressure allowed:10 bar / 145 psi
- Operating Temperature:-30 °C ... +70 °C / -22 °F ... +158 °F
- Humidity:100 % r.F.
- Weight.....approx. 4.5 kg / 9.9 lb. per couple of 2 units

Notes on the correct use of ultrasonic flow measurement in open channels

- The RISONIC modular channel transducers MFATK1/2 should be installed in accordance with the specifications from Rittmeyer. The position of the measurement is dependent on current and contamination. Depending on the application and accuracy, the customer can install the transducers himself or installation has to be carried out by Rittmeyer or their representative. The guidelines in the Assembly and Commissioning instructions are to be observed for measuring, installation and commissioning of the RISONIC modular channel transducers.
- For all channel dimensions, an alignment accuracy of greater than $\pm 1^\circ$ is necessary for the transducers. Determining the transducer positions is preferably to be carried out with a theodolite system or similar.
- The fresh / potable water must not contain too high concentration of air bubbles or entrained particles and sediments.
- The surface of the embankments must be suitable for fixing the transducers and if necessary adapted.
- Suitable measures must be taken in order to protect the transducers from heavy objects carried with the current.

Accessories (options)

Description	Type	Order No.
Coaxial cable 75 ohm (Refer to data sheet 22.210.04649xx.001)	RIMOZKKxx	04 64 90x
Alignment laser for channel measurement	MFUZKL	00 65 830.001
Adaptor plate for MFUKAN.002	-	0066799.001