

Индивидуальные ультразвуковые датчики и преобразователи для медицинских применений

Техническое описание

По вопросам продаж и поддержки обращайтесь:

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Customized Ultrasonic Sensors and Transducers for Critical Medical Applications

Our scope of supply includes fully packaged sensor and transducer assemblies. The sensors can either be selected from our standardised design range, or more frequently customised to suit specific OEM needs.

Our dedicated design team is able to develop custom solutions for a wide range of applications that fully meet the customer's requirements, and these designs can be manufactured in our ISO13485 certified factory based in Southampton, England.

Typical applications for our sensors and transducers range from dialysis equipment, infusion and insulin pumps to contrast injectors, nebulisers to chamber empty detection, liquid dispensing.

Sensors



Level Sensors

Our R&D team can help to optimise housing geometry, materials and performance to suit the specific application. This includes integrating a combination of sensors in one module for reduced overall cost and complexity.

Key benefits include:

- Dry couple to rigid or flexible, disposable or reusable chambers
- Multiple levels can be detected on chambers of any size with the minimum and maximum levels as close as 4mm apart
- Pulse echo or through-beam (transmit and receive) technology, depending on the complexity of the chamber

- Multiple levels can be monitored using a single sensor block
- Detects foam as air, unlike capacitive sensors which detect foam as liquid
- Not affected by liquid or chamber colour
- Highly temperature stable

Typical applications include:

- Infusion Pumps.
- Haemodialysis.
- Transfusions
- Liquid Dispensing



Bubble and Occlusion Sensors

Bubble and Occlusion Sensors

Our custom ultrasonic air-in-line sensors can be designed to suit a variety of plastic tubing, commonly used in medical equipment. The quality of our designs and the high performance of our piezo materials mean that bubble sizes down to four microlitres in volume or just two millimetres in diameter, can be detected.

Key benefits include:

- Dry coupled (no acoustic gel required)
- Suitable for pulse wave or continuous wave sensing
- Customised to suite the exact requirements of our customers
- Driven by customer electronics (reducing overall costs) or CeramTec can develop drive electronics for the application.

Typical applications include:

- Volumetric infusion pumps
- Hemodialysis machines
- Blood collection and component separation instruments
- Cardio-pulmonary bypass systems

Transducers**Therapy Transducers**

Our ultrasonic therapy transducers deliver ultrasound waves at 1MHz and 3.3MHz. The material in contact with the skin can be certified as biocompatible, meaning they are suitable for a variety of applications.

Transducers can be configured to a range of frequencies depending on application, drawing from a broad range of housing materials for a variety of treatment modalities. We can work with your engineers and designers to produce a package that achieves your technical aesthetic, ergonomic and regulatory requirements.

Key benefits include:

- Dual frequency modes of operation
- High level of customisation available
- Transducer design using FE Modelling
- Acoustic power and beam profile testing
- Wide range of piezo materials to support different requirements
- Custom housing design

Typical applications include:

- Bone healing
- Blood brain barrier therapies
- Cosmetic therapies



Tonpilz Transducers

We offer standard and bespoke Tonpilz transducers in a range of frequencies, power handling capabilities and configurations for mounting.

Key benefits include:

- Standard 27kHz and 40kHz operating frequencies
- Dual mode operation based on harmonics
- Customisation including double ended operation and specific frequencies
- Tight electrical and mechanical tolerances
- High power and low loss design

Typical applications include:

- Ultrasonic cleaning tanks
- Degassing
- Mixing liquids
- Sonar applications

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