ENGINEERING
TOMORROW

Energy metering | SonoSelect™ heat meter

Knowledge and innovation to win at every project stage **SonoSelect™ heat meter**

Best-in-class ultrasonic heat meter from the world's leading heating experts.

App

control for on-site verification of functionality, readouts and more.

www.heating.danfoss.co.uk

SonoSelect™

Precision energy metering **made simple**

From developed nations to emerging economies, energy and climate control is top of national agendas across the globe. Achieving sustainable energy consumption reductions in a world of ever-changing conditions is a common goal.

The key to achieving this is to know what we are using and when. With SonoSelect™, Danfoss is making a major contribution to solving a global challenge.

Based on precision ultrasonic technology, the new SonoSelect™ heat meter delivers the level of accuracy and reliability needed to help meet our most demanding energy management challenges.

The key to providing stable, reliable and consistent energy data.

Value in all project stages

PRODUCT SELECTION | **PLANNING** | **INSTALLATION & COMMISSIONING** | **OPERATIONS LIFE** | **AFTER SALES SERVICE**

Alongside its advanced functionality, SonoSelect™ has been designed to create value at every project stage – from product selection to aftersales service.

SonoSelect™

Ultrasonic heat meter

Next generation ultrasonic heat meter

A new level of installation and commissioning simplicity using SonoApp

Continuous high-performance measurement

Genuine diagnostics: Meter validation without dismantling the heat meter

Best-in-class battery life

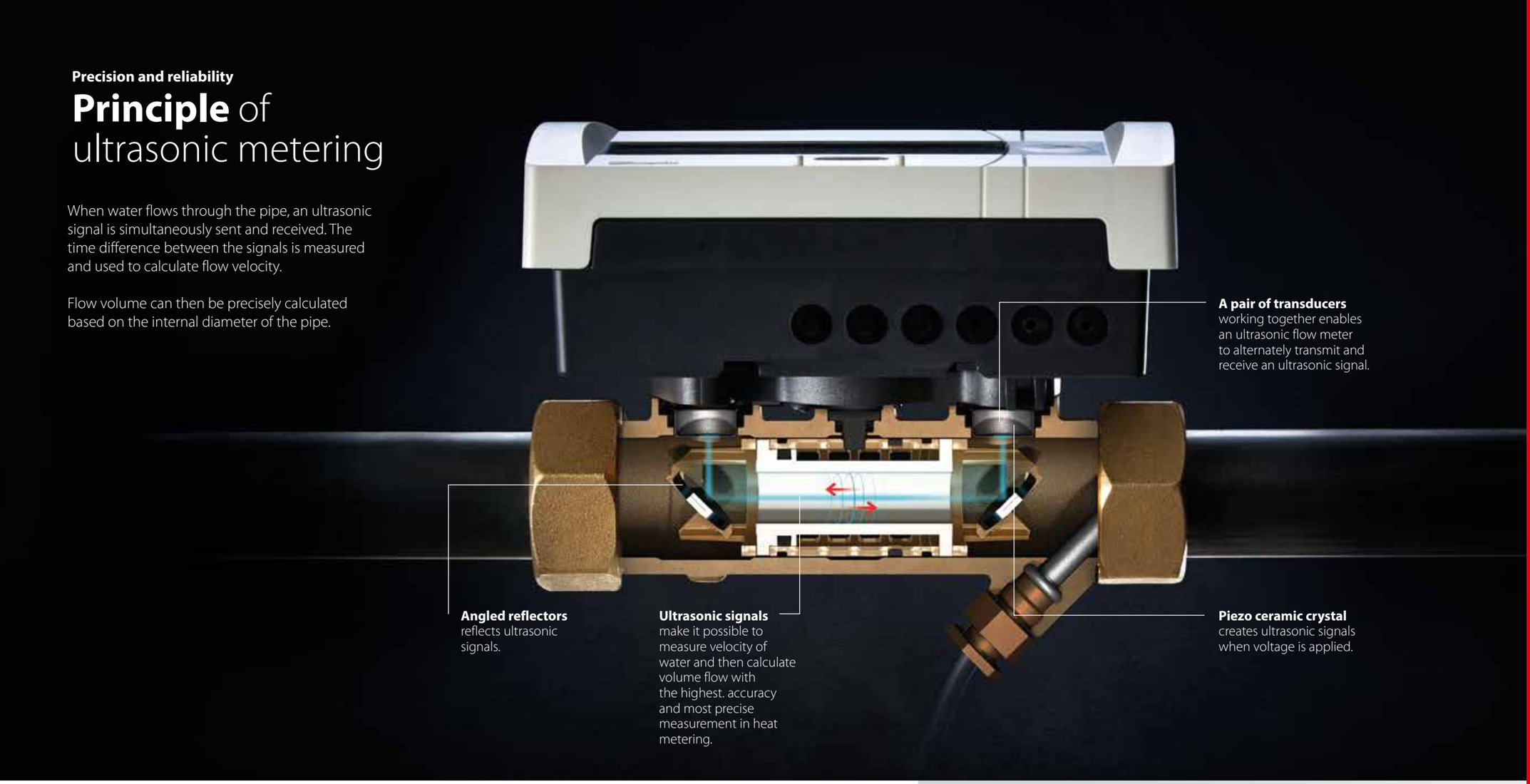
Upgradable communication platform

Precision and reliability

Principle of ultrasonic metering

When water flows through the pipe, an ultrasonic signal is simultaneously sent and received. The time difference between the signals is measured and used to calculate flow velocity.

Flow volume can then be precisely calculated based on the internal diameter of the pipe.



Ultrasonic vs. mechanical

Advantages of ultrasonic technology

Ultrasonic technology offers a number of distinct advantages compared with conventional mechanical heat metering solutions.

Longer lifetime
Ultrasonic heat meters have no moving parts meaning that there is nothing to wear out - result: ultrasonic heat meters maintain the same high level of accuracy with little to no maintenance during their lifetime.

Improved accuracy
Because of a higher measurement frequency, low pressure losses and a high dynamic range, ultrasonic meters provide more reliable data even with low flow rates or poor quality water.

Long battery life
Ultrasonic technology offers low power consumption. This enables ultrasonic heat meters to operate reliably for a longer period than mechanical heat meters.

Rapid payback
In recent years, the cost of ultrasonic heat meters has come down lowering the price difference between mechanical and ultrasonic meters and the payback time of your initial investment significantly.

Ultrasonic heat meters improve accuracy and reduce total cost of ownership.

SonoSelect™ Ultrasonic heat meter

The new SonoSelect™ heat meter from Danfoss sets a whole new standard in heat metering:

- Next generation ultrasonic heat meter
- Easy and flexible installation with no in-/outlet restrictions (MID supported)
- Continuous high-performance measurement
- Meter validation without dismantling the heat meter
- Best-in-class battery secures long operational life
- Can measure domestic hot water consumption
- Genuine diagnostics

Benefits for **everyone**

Ultrasonic technology gives value in all project stages from system designer to end user.

SYSTEM DESIGNER

- Best performing system
- Flexible installation
- Low pressure loss, high accuracy

BUILDING OWNER

- Longer lifetime
- Short payback time
- Reduced maintenance and ownership costs

END USER

- Reliable data
- Precise measurement
- Accurate billing

SonoSelect™

Precision energy metering **made simple**

Based on precision ultrasonic technology, the new SonoSelect**™** heat meter from Danfoss provides an outstanding level of long-term accuracy and reliability, contributing to meeting today's most demanding energy management challenges.

Alongside its advanced functionality, SonoSelect**™** has been designed to create measurable value at every project stage and beyond - from product selection, installation and after-sales service through to improved customer billing accuracy, minimal maintenance and low total cost of ownership.

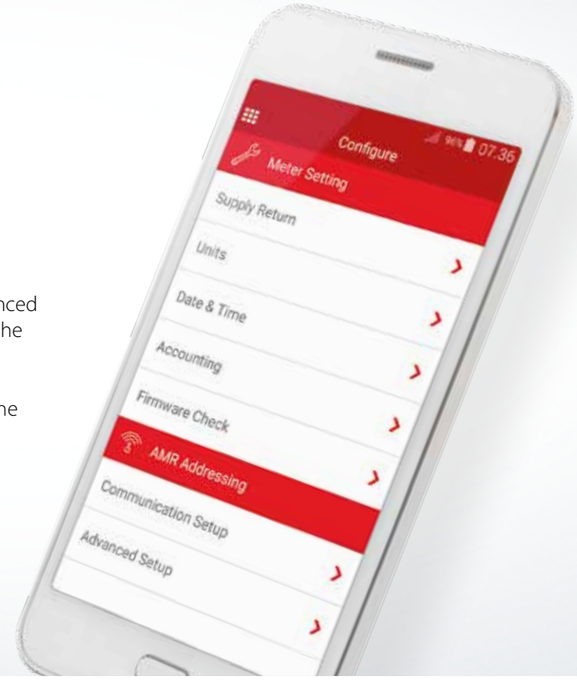
Advanced functionality, optimum ease of use

Work is easy with **SonoApp**

One of SonoSelect's most useful features is that all its advanced functionality can also be controlled via smartphone using the innovative SonoApp.

Advanced functions can easily be programmed and routine adjustments are quick to access and simple to carry out. Optimum ease of use reduces errors and minimises installation time while ensuring that you get maximum functional benefit from the meter.

Compatibile with Android (OS)



Keychain SonoDongle:

Your key to knowledge

SonoDongle is a simple Bluetooth™ connector that enables easy communication between phone and heat meter via SonoApp. It connects to SonoSelect™ magnetically, ensuring secure and stable connection.

Compatible with Android (OS), which automatically connects to SonoApp.

SonoApp

Reduces time spent on read-out, configuration and commissioning.

Knowledge is power

Genuine **diagnostics**

SonoApp Key Features

- Enables full configuration and reconfiguration control
- One-step verification of all system parameters
- Designed for simple and accurate installation
- Quick and easy to change meter settings
- Access to data log memory for fast and accurate diagnostics
- Quick and simple pairing, with no paperwork
- Continued re-configuration and data access ensures efficient meter handling

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SonoSelect™	SonoSafe™
SonoSelect offers next generation ultrasonic metering with continuous high performance measurement	SonoSafe is the solution for basic metering requirements offering a new level of installation and commissioning simplicity
Data cable – 1.5m	Data cable – 0.5m
qi:qp 1:250 on request	qi:qp 1:100
Flow and energy calculated every 0.5 seconds	Flow and energy calculated every 2 seconds
Temperature measured every 4 seconds	Temperature measured every 10 seconds
IP65	IP54
17 year battery life	11 year battery life
Sono App • Read out • Display • Guides • Pairing • Full configure: Supply/return configuration • Diagnostic and function test log • Remaining battery life	**Sono App** • Read out • Display • Guides • Configure • Log

DN		15	15	20	20	25	25
Connection		G¾A" 110 mm		G1A" 130 mm		G1¼A" 160 mm	G1¼A" 260 mm
Nominal flow qp	m^3/h	0.6	1.5	1.5	2.5	3.5	3.5
Pressure	PN [bar]	16					
Pressure drop (at qp 50° C)	[mbar]	30	150	150	160	130	135
IP	[EN60529]	65					
Temperature limits	[°C]	0 to 105					
Cable length		1.5 m (SonoSelect 10: PUR), 0.5 m (SonoSafe 10: PVC)					
Mounting		Any position, no inlet or outlet restrictions					

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