

The Portable Flowmeter

FLUXUS[®] ADM 6725 is a portable ultrasonic flowmeter. With its clamp-on transducers and its rechargeable battery, it is an ideal tool for service work.

Since the transducers are mounted on the pipe, they can be installed rapidly, without cutting into the pipe and without process interruption. The measurement causes no pressure loss and is ideal for chemically aggressive, corrosive or ultra-pure media.

All transducer pairs delivered with the instrument have been wet-flow calibrated at the factory. The calibration, zero offset and other transducer parameters are stored in a transducer-resident non-volatile memory. These intelligent transducers automatically send their data to the instrument upon connection to optimize operation.

The whole menu structure is thus adapted to the installed transducers. Only the pipe and fluid parameters need to be entered by the user. An extensive internal database contains the properties of many common pipe materials and fluids. A status display allows the user to assess application conditions while measuring flow.

Watertight sensors and integrated robust transducer cables guarantee good measurement results over long periods of extensive use. The transducers and cable armor are made of stainless steel and are suitable for use in harsh industrial environments.

Thanks to its exceptional dual-uP technology, high number of measuring cycles per second and adaptive signal processing, FLUXUS ADM 6725 produces stable and reliable measuring results even under difficult conditions.



FLUXUS[®] ADM 6725



Automatic transducer detection

Features

- portable flow measurement with 2 flow channels
- automatic transducer detection
- easy installation without cutting into the pipe and without process interruption
- use-friendly operation thanks to the clearly structured user dialogue
- two transducer pairs cover the main diameter range
- transducers for explosive atmosphere available
- wet-flow calibrated transducers
- highly flexible measuring system with amongst others: energy measurement, data logger, inputs, logging of external pressure data, etc...

Technical Data

Measurement

Measuring principle:	transit time difference correlation principle
Flow velocity:	(0.01 to 25)m/s
Resolution:	0.025cm/s
Repeatability:	0.15% of reading \pm 0.01 m/s
Accuracy	(for fully developed, rotationally symmetrical flow profile)
- Volume flow:	\pm 1% to 3% of read. \pm 0.01 m/s depending on application \pm 0.5% of reading \pm 0.01 m/s with process calibration
- Path velocity:	\pm 0.5% of reading \pm 0.01 m/s
Measurable fluids:	all acoustically conductive fluids with < 10% gaseous or solid content in volume

Transmitter

Housing	
- Weight:	approx. 3.9kg
- Deg. of protection:	IP54 acc. to EN60529
- Material:	Aluminium, powder coated
- Dimensions:	(270x100x180)mm (WxHxD) (without handle)
Flow channels:	2
Explosion protection in:	zone 2
Power supply:	rechargeable battery (6V/4Ah) or ext. supply (100-240)VAC
Operation time with battery:	>10h
Display:	2 x 16 characters, dot matrix, backlit
Operating temp.:	-10°C to 60°C
Power consumption:	< 15W
Signal damping:	(0 to 100)s, adjustable
Measuring cycle:	(100 to 1000)Hz (1 channel)
Response time:	1s (1 channel), 70ms opt.

Measuring functions

Quantities of measurement:	Volume and mass flow rate, flow velocity, heat flow rate (only if temperature inputs are installed)
Totalizers:	Volume, mass, heat (opt.)
Calculation functions:	Average, difference, sum
Operating languages:	Czech, Danish, Dutch, English, French, German, Norwegian, Polish, Spanish

Data logger

Loggable values:	All measured quantities and totalized values
Capacity:	>100000 meas. values

Communication

Interface:	RS232, RS485 optional
Data:	actual meas. value, logged data, parameter records

Software FluxData (optional)

Function:	Downloading meas. data/parameter records, graphical presentation, conversion to other formats
Operating systems:	All Windows™ versions

Process outputs (optional)

- The outputs are galvanically isolated from the main device.
- The number of outputs that can be installed depends on the output type. Consult FLEXIM for more information.

Current

- Range:	(0/4 to 20)mA
- Accuracy:	0.1% of reading \pm 15 μ A
- Active output:	$R_{ext} < 500\Omega$
- Passive output:	$U_{ext} < 24V, R_{ext} < 1k\Omega$

Voltage

- Range:	(0 to 1) V or (0 to 10) V
- Accuracy:	0 to 1V: 0.1% of reading \pm 1mV 0 to 10V: 0.1% of reading \pm 10mV
- Intr. resistance:	$R_i = 500\Omega$

Frequency

- Range:	0 to 1kHz or 0 to 10kHz
- Open collector:	24 V/4 mA

Binary

- Open collector:	24 V/4 mA
- Reed relay:	48 V/0.1A
- Function as state output:	limit, sign change or error
- Properties of the pulse output:	Value: (0.01 to 1000)units Width: (80 to 1000)ms

Process inputs (optional)

- The inputs are galvanically isolated from the main device.
- A maximum of 4 inputs can be installed.

Temperature

- Type:	Pt100 four-wire circuit
- Range:	-50°C to 400°C
- Resolution:	0.1 K
- Accuracy:	\pm (0.02K + 0.1% of reading)

Current

- Range:	active:(0 to 20)mA passive: (-20 to 20)mA
- Accuracy:	0.1% of reading \pm 10 μ A
- Active input:	$R_i = 50\Omega$
- Passive input:	$U_{ext} < 24V, R_{ext} < 1k\Omega$

Voltage

- Range:	(0 to 1) V or (0 to 10) V
- Accuracy:	0 to 1V: 0.1% of reading \pm 1mV 0 to 10V: 0.1% of reading \pm 10mV
- Intr. resistance:	$R_i = 1M\Omega$

Clamp-on flow transducers

Clamp-on flow transducers are available for a wide diameter range (DN 6 to DN 6500) and for temperatures ranging from -30°C to 400°C (also in explosive atmosphere). See figure below. You will find more information about the transducers in the corresponding specification sheets.

Wall thickness gauge (optional)

Measuring range:	(1.0 to 200) mm
Resolution:	0.01 mm
Linearity:	0.1 mm
Operating temperature	
- Standard version:	-20°C to +60°C
- High temp. version:	0°C to +200°C, for short periods up to +540°C

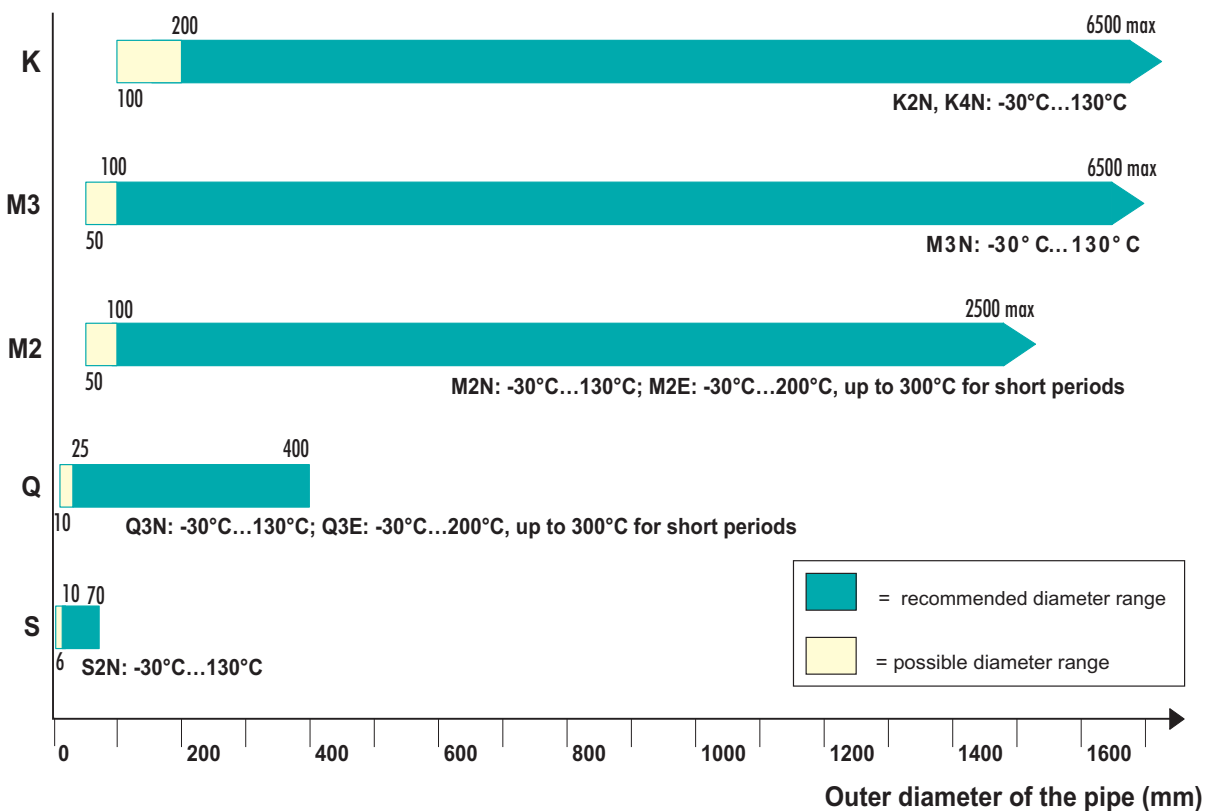
Transducer Overview

The **recommended diameter range** is the diameter range covered by a transducer under normal measuring conditions (signal damping mainly through fluid, no gas or solid in the fluid). The **possible diameter range** is the diameter range covered by a transducer under good measuring conditions.

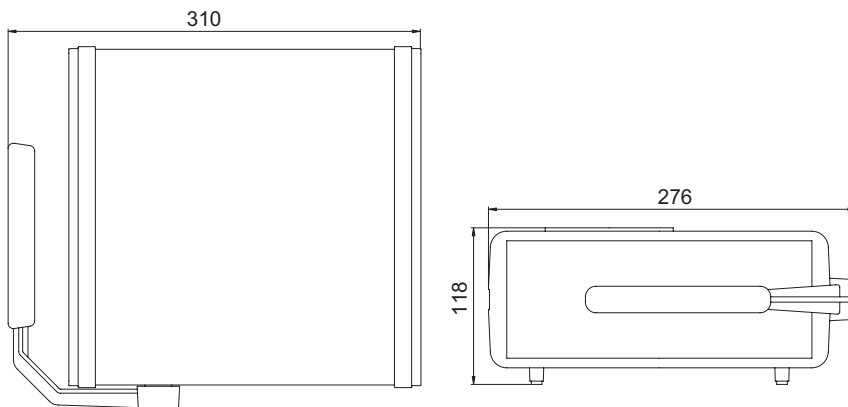
The specified temperature range is the **range of possible process temperatures** at which the transducers can be operated. The range of possible ambient temperatures is identical.

Note: With the Wavelnjector®, the temperature range of nearly every transducer can be extended up to 400°C. You will find more information about the Wavelnjector in the corresponding specification sheet.

Transducer type

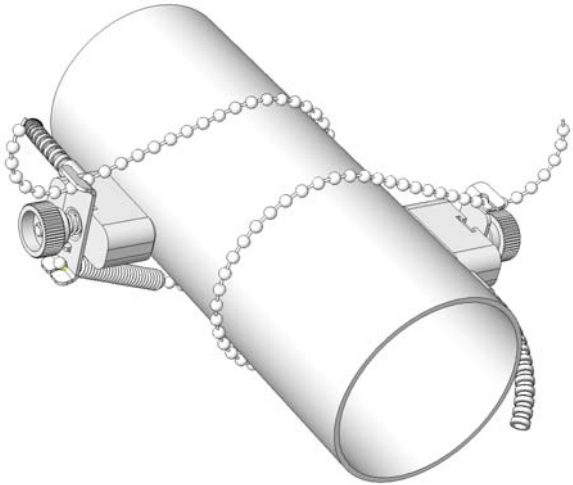


Dimensions of the Transmitter (in mm)

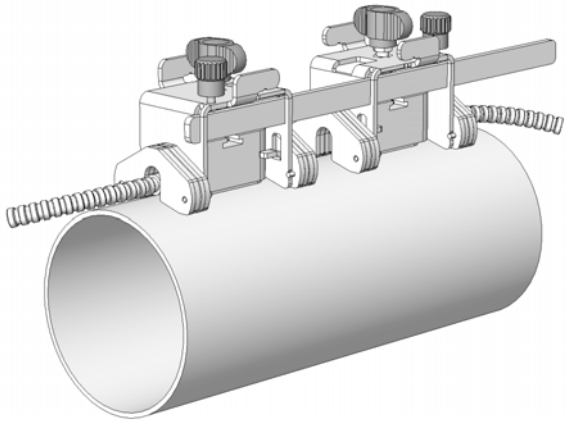


Fixation of the Transducers

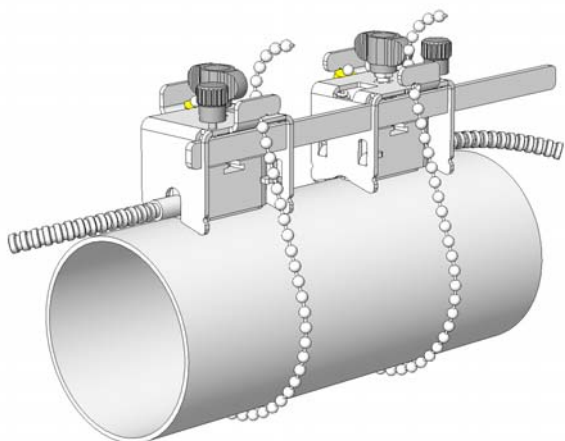
With chains:



With magnetic runners:



With runners and chains:



Many other mounting fixtures are available. Consult FLEXIM for more information.