

# Specifications

## FLUXUS® ADM 6725



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.

Here as well as in all instruments of the FLUXUS® ADM series, the digital signal processor (DSP) and the high number of measuring cycles guarantee stable and reliable measuring results even under difficult conditions.

The operation of the flowmeter is especially easy thanks to the user-friendly and clearly structured user dialogue.

All transducer pairs delivered with the instrument have been calibrated. The calibration data and the transducer parameters are saved in a transducer internal non-volatile memory and are automatically sent to the transmitter upon connection to facilitate the operation of the flowmeter. A zero adjustment is not necessary.

The transducers and their conduit are made of stainless steel and are suitable for use in harsh industrial environment. Watertight sensors and integrated robust transducer cables make it possible to obtain good measurement results over a long period of extensive usage.

### Features

- Minimal installation effort and costs
- Measurement is independent of fluid conductivity and pressure
- No pressure loss, no risk of leakage
- No dismantling of the pipework or interruption of process necessary for the mounting
- No additional fittings required for maintenance work
- Hygienic measurement, suitable for ultra clean liquids
- No contact with the medium, no risk of corrosion when used with aggressive media
- Advantageous price when used with pipes of large diameter or in high pressure systems
- Low stocking costs since only 2 types of transducers are needed to cover all pipe sizes



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### Technical Data

#### Measuring

Measuring principle:	transit time difference correlation principle
Flow velocity:	(0.01 to 25) m/s
Resolution:	0.025 cm/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
- Path velocity:	$\pm$ 0.5% of reading $\pm$ 0.01 m/s with process calibration
Measurable fluids:	all acoustically conductive fluids with < 10% gaseous or solid content in volume

#### Transmitter

Enclosure	
- Weight:	approx. 3.9 kg
- Deg. of protection:	IP54 acc. to EN60529
- Material:	Aluminum, powder coated
- Dimensions: (WxHxD)	(270 x 100 x 180) mm (without handle)
Flow channels:	2
Power supply:	rechargeable battery (6 V/4 Ah) or external power supply (100-240) VAC
Operation with battery:	> 10 h

## Transmitter (cont.)

Display:	2 x 16 characters, dot matrix, backlit
Operating temperature:	-10°C to 60°C
Power consumption:	< 15 W
Signal damping:	(0 to 100) s, adjustable
Measuring cycle:	(100 to 1000) Hz (1 channel)
Response time:	1 s (1 channel), 70 ms opt.

## Measuring functions

Quantities of measurement:	Volume and mass flow rate, flow velocity, heat flow rate
Totalizers:	Volume, mass, heat
Calculation functions:	Average/difference/sum
Operating languages:	Czech, Danish, Dutch, English, French, German, Norwegian, Polish, Spanish

## Data logger

Loggable values:	all measuring quantities and totaled values
Capacity:	> 100 000 meas. values

## Communication

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

## Software FluxData

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

## Process inputs

- The inputs are galvanically isolated from the main device.	
- A maximum of 4 inputs can be installed.	
Temperature	PT100 four-wire circuit
- Measuring range:	-50°C to 400°C
- Resolution:	0.1 K
- Accuracy:	± (0.2 K + 0.1% of reading)
Current	$R_i = 50 \Omega$
- Measuring range:	active: (0 to 20) mA passive: (-20 to 20) mA
- Accuracy:	0.1% of reading ± 10 µA
Voltage	$R_i = 1 M\Omega$
- Measuring range:	(0 to 1) V or (0 to 10) V
- Accuracy:	0 to 1 V: 0.1% of read. ± 1 mV 0 to 10 V: 0.1% of read ± 10mV

## Process outputs

- 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.	

## Process outputs (cont.)

Current	active: $R_{ext} < 500 \Omega$ passive: $U_{ext} < 24 V$ , $R_{ext} < 1 k\Omega$
- Measuring range:	(0/4 to 20) mA
- Accuracy:	0.1% of reading ± 15 µA
Voltage	$R_i = 500 \Omega$
- Measuring range:	(0 to 1) V or (0 to 10) V
- Accuracy:	0 to 1 V: 0.1% of read. ± 1 mV 0 to 10 V: 0.1% of read ± 10mV
Frequency	open collector: 24 V/4 mA totem pool: 5 V/4 mA
- Measuring range:	0 to 1 kHz or 0 to 10 kHz
Binary	open collector: 24 V/4 mA reed contact: 48 V/0.1 A totem pool: 5 V/4 mA
as state output:	limit, sign change or error
as pulse output:	Value: (0.01 to 1000) units Width: (80 to 1000) ms

## Flow transducers (clamp-on)

<b>Type M2N, M2E, M3N</b>	
Rated (possible) diameter range:	M2N,M2E: (50)100...2500 mm M3N: (50)100...6500 mm
Dimensions:	(60 x 30 x 33.5) mm
Material:	Enclosure: stainless steel Contact surface: PEEK (M2N) or Polyimid (M2E)
Operating temperature:	M2N,M3N: -30°C to 130°C M2E: -30°C to 200°C, for short periods up to 300°C
Degree of protection:	IP65 acc. to EN60529 M2N, M3N: contact Flexim for special IP68 versions

<b>Type Q3N, Q3E</b>	
Rated (possible) diameter range:	(10)25 ... 400 mm
Dimensions:	(42.5 x 18 x 21.5) mm
Material:	Enclosure: stainless steel Contact surface: PEEK (Q3N) or Polyimid (Q3E)
Operating temperature:	Q3N: -30°C to 130°C Q3E: -30°C to 200°C, for short periods up to 300°C
Degree of protection:	IP65 acc. to EN60529 Q3N: contact Flexim for special IP68 versions

## Wall thickness gauge

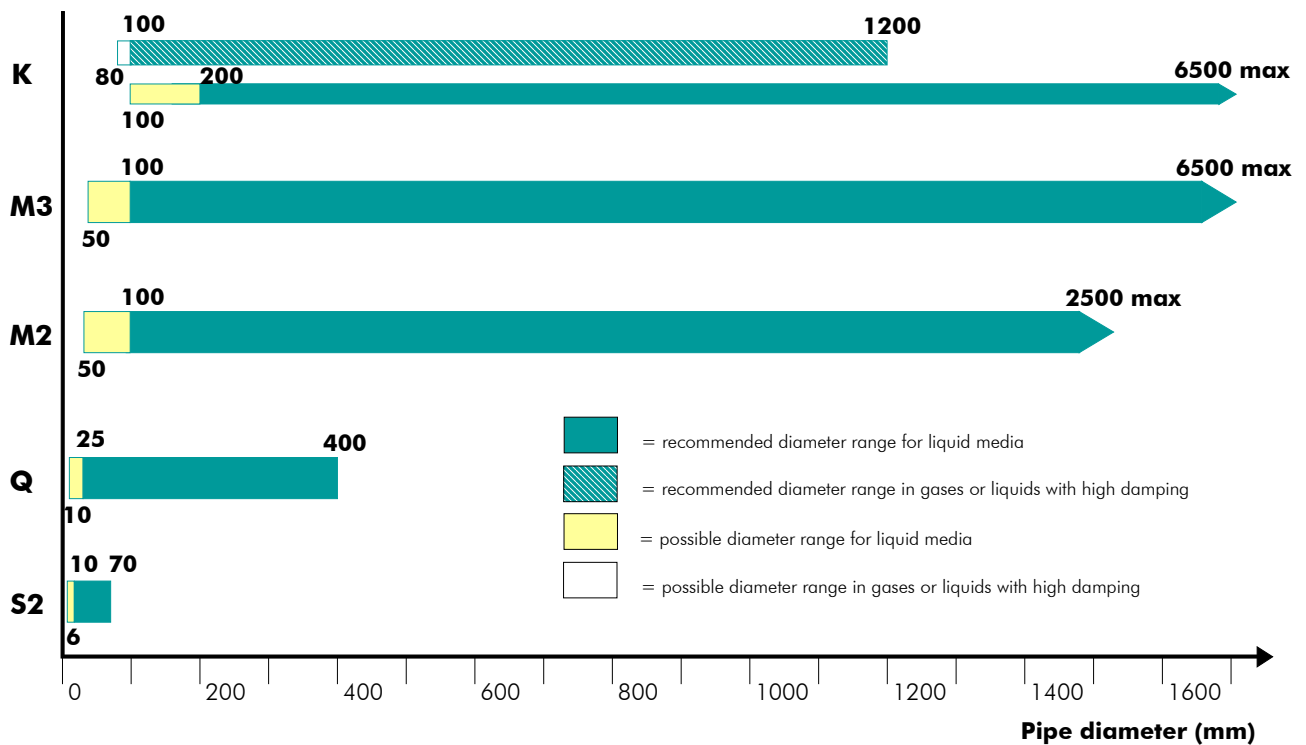
Measuring range:	(1.0 to 200) mm
Resolution:	0.01 mm
Linearity:	0.1 mm
Operating temperature:	- Standard: -20°C to +60°C - High temperature: 0°C to +200°C, for short periods up to +540°C

**Important: The technical specification of all other clamp-on transducers is given in the corresponding data sheet.**

## Transducer Selection

### Diameter range

Sensor type



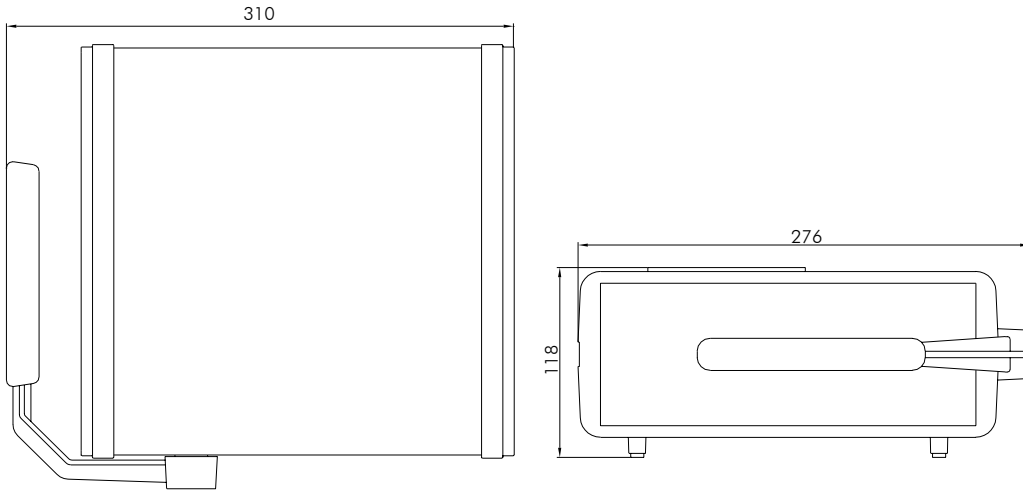
The **recommended diameter range** is the diameter range covered by a transducer under normal measuring conditions (signal damping mainly through fluid, no gas or solid in the fluid).

The **possible diameter range** is the diameter range covered by a transducer under good measuring conditions.

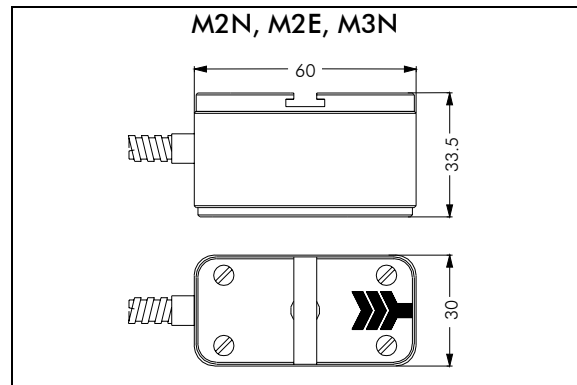
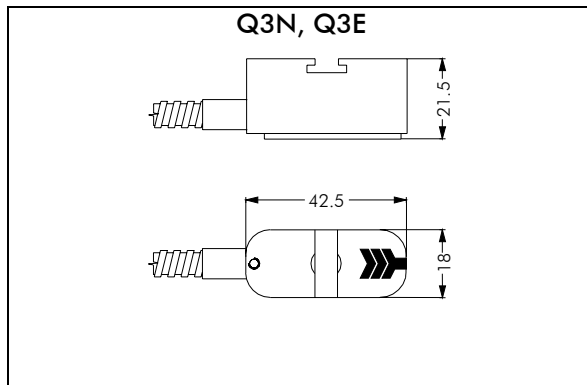
### Recommended Minimum and Maximum Measuring Range

Nominal diameter (mm)	Min. meas. range (m <sup>3</sup> /h)	Max. meas. range (m <sup>3</sup> /h)
15	0 to 0.19	0 to 15.90
25	0 to 0.53	0 to 44.18
50	0 to 2.12	0 to 177
75	0 to 4.77	0 to 398
100	0 to 8.48	0 to 707
125	0 to 13.25	0 to 1 104
150	0 to 19.09	0 to 1 590
200	0 to 33.93	0 to 2 827
250	0 to 53.01	0 to 4 418
300	0 to 76.34	0 to 6 362
400	0 to 136	0 to 11 310
500	0 to 212	0 to 17 670
1000	0 to 848	0 to 28 300
1500	0 to 1 909	0 to 63 500
2000	0 to 3 400	0 to 110 000

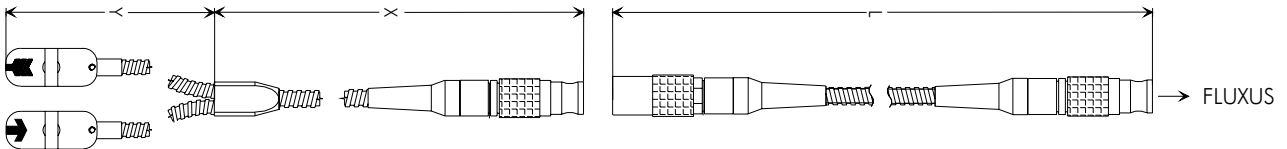
## Dimensions of the Housing (in mm)



## Dimensions of the Transducers (in mm)



## Connection of the Transducers



## Lengths X and Y of the Transducer Cable

Type of Connection	
NL	
Q3	X= 2 m, Y= 1 m
Q4	--
M2	X= 2 m, Y= 2.5 m
M3	X= 5 m, Y= 7 m
M4	--
S2	X= 1 m, Y= 1 m

## Length of the extension cable

Length L = [XX] in m, the maximal length being **50 m** for plastic cables and **15 m** for stainless steel cables (optional, art. no. 1024 or 1028).

# FLEXIM

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