

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 the process necessary for 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
- Only 2 types of transducers are needed to cover the most common 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 \pm 0.5% of read. \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

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 ext. supply (100-240) VAC
Operating time 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 (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:	>100 000 meas. values

Communication

Interface:	RS232
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 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
- Measuring range: -50°C to 400°C
- Resolution: 0.1 K
- Accuracy: $\pm (0.2 \text{ K} + 0.1\% \text{ of reading})$

Current

- Measuring range: active: (0 to 20) mA
passive: (-20 to 20) mA
- Accuracy: 0.1% of reading $\pm 10 \mu\text{A}$
- Intr. resistance: $R_i = 50 \Omega$

Voltage

- Measuring range: (0 to 1) V or (0 to 10) V
- Accuracy: 0 to 1 V: 0.1% of read. $\pm 1 \text{ mV}$
0 to 10 V: 0.1% of read $\pm 10 \text{ mV}$
- Intr. resistance: $R_i = 1 \text{ M}\Omega$

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

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

Voltage

- Measuring range: (0 to 1) V or (0 to 10) V
- Accuracy: 0 to 1 V: 0.1% of read. $\pm 1 \text{ mV}$
0 to 10 V: 0.1% of read $\pm 10 \text{ mV}$
- Intr. resistance: $R_i = 500 \Omega$

Frequency

- Measuring range: 0 to 1 kHz or 0 to 10 kHz
- Open collector: 24 V/4 mA
- Totem pool: 5 V/4 mA

Binary

- Open collector: 24 V/4 mA
- Reed contact: 48 V/0.1 A
- Totem pool: 5 V/4 mA
- Function as state output: limit, sign change or error
- Properties of the pulse output: Value: (0.01...1 000) units
Width: (80...1 000) ms

Flow transducers (clamp-on)

The transducers must be ordered separately. The transducer type to be used depends on your application.

Type M2N, M2E, M3N

Rated (possible) diameter range:	M2N,M2E: (50)100...2500 mm M3N: (50)100...6500 mm
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Operating temperature:	M2N,M3N: -30°C to 130°C M2E: -30°C to 200°C, for short periods up to 300°C
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Type Q3N, Q3E

Rated (possible) diameter range:	(10)25 ... 400 mm
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Operating temperature:	Q3N: -30°C to 130°C Q3E: -30°C to 200°C, for short periods up to 300°C
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Type S2N

Rated (possible) diameter range:	(6)10 ... 70 mm
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Operating temperature:	-30°C to 130°C
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Type K2N

Rated (possible) diameter range:	
in liquids:	(100)200 ... 6500 mm
in gases:	(80)100 ... 1200 mm

Operating temperature:	-30°C to 130°C
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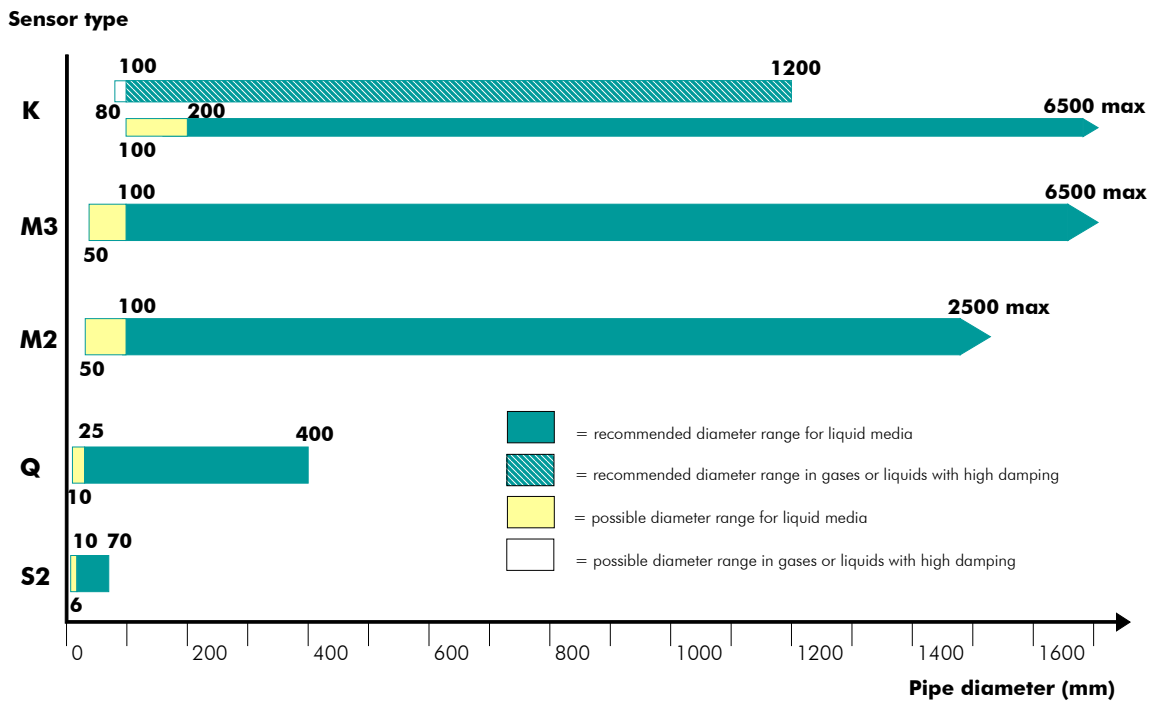
Measurable gases:	Ratio of the characteristic acoustic impedances of the pipe wall to that of gas < 3000
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Wall thickness gauge (optional)

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 full technical specifications of the Flexim clamp-on flow transducers are given in the corresponding data sheet.

Diameter Range of the Flow Transducers



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).

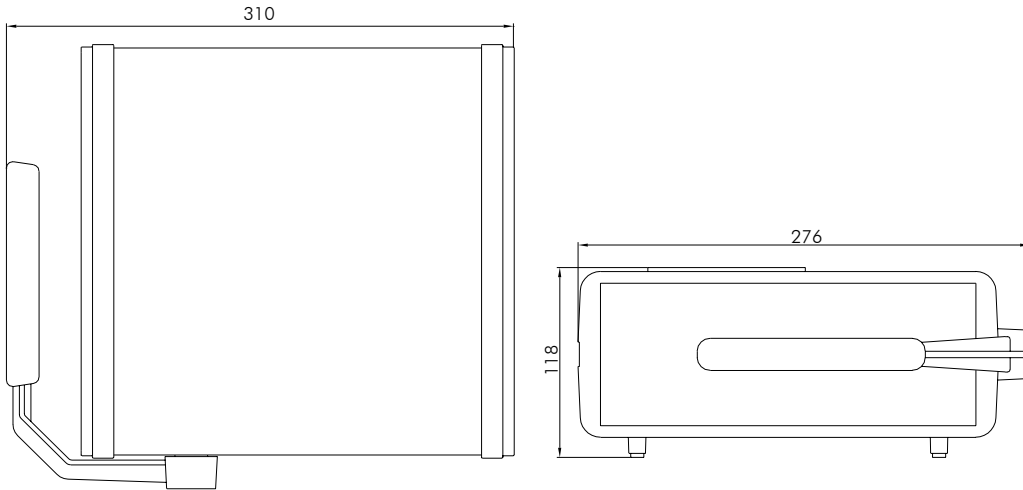
The **possible diameter range** is the diameter range covered by a transducer under good measuring conditions.

Recommended Minimum and Maximum Measuring Range

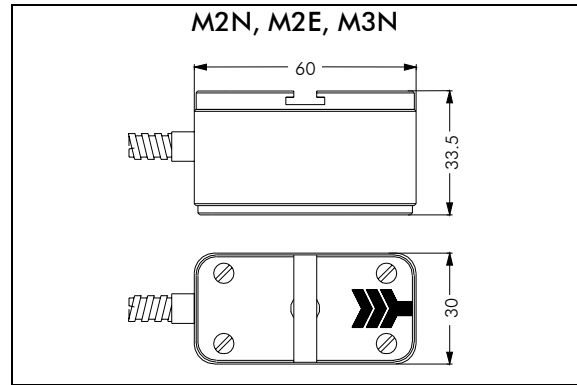
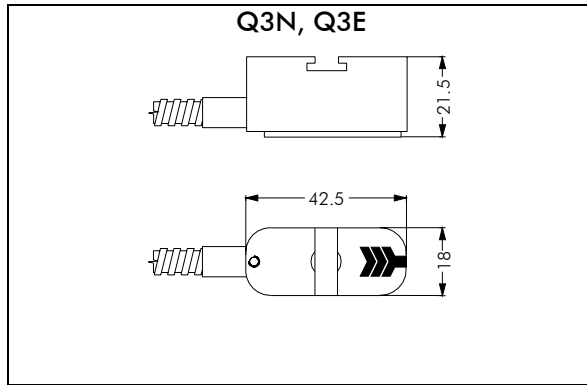
Nominal diameter (mm)	Min. meas. range (m³/h)	Max. meas. range (m³/h)
15	0 to 0.19	0 to 15.90
25	0 to 0.53	0 to 44.18
50	0 to 2.12	0 to 177
75	0 to 4.77	0 to 398
100	0 to 8.48	0 to 707
125	0 to 13.25	0 to 1 104
150	0 to 19.09	0 to 1 590
200	0 to 33.93	0 to 2 827

Nominal diameter (mm)	Min. meas. range (m³/h)	Max. meas. range (m³/h)
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

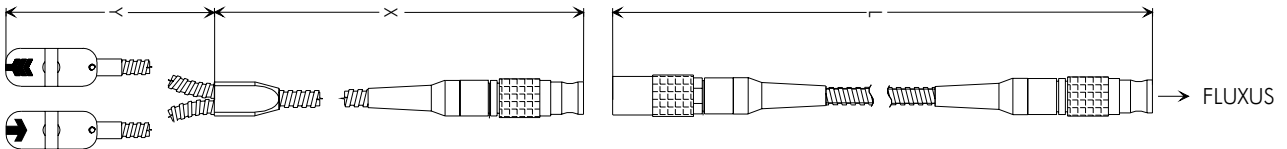
Dimensions of the Housing (in mm)



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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