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ABB MEASUREMENT & ANALYTICS | DATA SHEET

# Sensyflow FMT700-P Compact

## Thermal Mass Flowmeter



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# Measurement made easy

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**Compact device without remote evaluation and supply unit**

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**Direct mass flow measurement of air**

- No additional pressure and temperature compensation required

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**High measuring accuracy over the entire measuring range**

- Measuring accuracy < 0.8 % of measured value

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**Wide measuring range of 1:60**

- Measurement up to 5000kg/h
- DN 25 to DN 200

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**Quick response time < 25 ms**

- Detection of rapid load changes on engine test benches

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**Complete system with inlet / outlet sections, flow conditioner and connection parts**

- Easy to use
- Ready for operation

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**Used in test bench applications, quality assurance, research and development**

## Overview



Figure 1: Sensor

<b>Design</b>	<b>Integral mount design</b>
<b>Model</b>	Sensyflow FMT700-P Compact
<b>Measuring media</b>	Air
<b>Measuring accuracy*</b>	$\leq \pm 0.8\%$ of measured value, repeatability $\leq \pm 0.25\%$ of measured value
<b>Permissible measuring medium temperature <math>T_{\text{medium}}</math></b>	-25 to 50 °C (-13 to 122 °F)
<b>Permissible operating pressure</b>	0.6 to 2.5 × 10 <sup>2</sup> kPa (2.5 bar abs.)
<b>Flow conditioner</b>	1.5 bar abs.
<b>Process connections</b>	DN 25: Quick-clamping pipe flange, aluminum with quick clamping chains / quick-clamping rings DN 50 to 100: Wafer type with raised face
<b>Wetted materials</b>	Anodized aluminum, glass sensor
<b>Power supply</b>	24 V DC, $\pm 10\%$
<b>IP rating</b>	in accordance with EN 60529: IP 54
<b>NEMA rating</b>	in accordance with NEMA 12
<b>Communication</b>	serial, V24 / RS232C
<b>Outputs in serial production</b>	
Analog outputs	0 to 5 V DC, 0 to 10 V DC, 0/4 to 20 mA, min. / max. alarm
Digital output	Yes
Pulse / frequency output	Yes
<b>Approvals and certificates</b>	Available on <a href="http://abb.com/flow">abb.com/flow</a> or on request

\* The stated measuring accuracy only applies under the calibration conditions in the stated measuring range.



Figure 2: Aluminum transport box

### Note

The sensor is delivered in a robust aluminum transport box. Always use the aluminum transport box to transport the sensor.

## ... Overview

### Device description

The Sensyflow FMT700-P Compact works in accordance with the measuring principle of a hot-film anemometer. This measurement method allows for direct measurement of the gas mass flow.

Taking into account the standard density of the air, the standard volume flow can be measured without the need for additional pressure and temperature compensation.

#### Sensor

The transmitter is integrated in the sensor.

The measuring system comprises two components, a sensor and a measuring section.

The sensor is designed as a meter tube and accommodates the measuring elements and an electronic transmitter circuit. The meter tube is available in six nominal diameters ranging from DN 25 to DN 200 and is installed in the measuring section by using quick-clamping connectors.

#### Measuring section

The sensor is installed in a measuring section with the help of quick-clamping connectors.

The measuring section itself is made up of sufficiently dimensioned inlet and outlet sections as well as an air filter or flow conditioner.

The flow conditioner can be connected to an air duct, for example, using the connection piece on the suction side. The power supply, output signals and serial interface for the sensor are connected via a connection cable.

The measuring rate is adjustable according to measuring velocity or signal damping requirements.

### Measuring principle

Thermal flow metering procedures use different ways to evaluate the flow dependent cooling of a heated resistor as measuring signal.

In a hotfilm anemometer with constant temperature difference control, the heated measurement resistor is maintained at a constant overtemperature in relation to an unheated measurement resistor inside the gas flow. The heating power required for maintaining the overtemperature depends directly on the flow rate and the material properties of the gas. With a known (and constant) gas composition the mass-flow can be determined by electronically evaluating the heater current / mass-flow curve without additional pressure and temperature compensation. Together with the standard density of the gas this results directly in the standard volume flow. Considering the high measuring range value dynamics up to 1:60, an accuracy smaller than 0.8 % of the measured value is achieved.

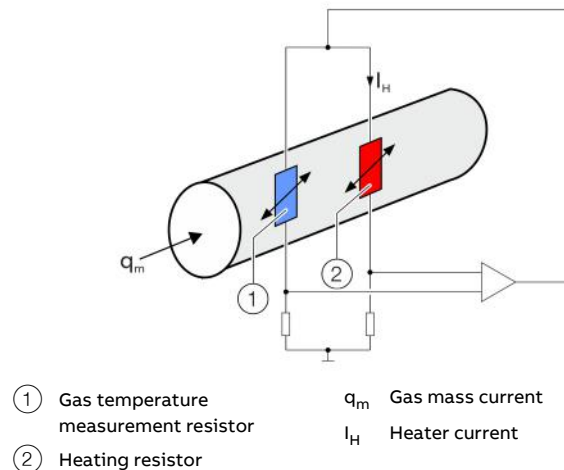


Figure 3: Measuring principle (simplified)

The gas flows past two temperature-sensitive resistors, measurement resistor and heating resistor, which are part of an electric bridge circuit. Due to the chosen resistance ratio, the heating resistor is heated by the heating current  $I_H$ . The measurement resistor adopts the same temperature as the gas. The heating current  $I_H$  is preset by the electronic control circuit to produce a constant temperature difference between the heated resistor and the temperature of the gas.

The electric power generated in the heating resistor precisely compensates its loss of heat to the gas flow. As this loss of heat is dependent on the number of particles which collide with the surface of the heating resistor, the heating current  $I_H$  represents a measure of the mass flow rate.

### Typical applications

Sensyflow FMT700-P Compact for air provide a unique combination of high measuring accuracy, wide measuring range and extremely fast response time. These features especially qualify them for the following application fields in typical load cycling:

- Intake air measurements in combustion engines and fuel cells,
- Test benches for turbo chargers,
- Serial testing of flow dependent components like throttle valves, exhaust fans, air filters, etc.
- Quality assurance: Reference device for flowmeters,
- Research and development at universities and institutes.

### Notes for ordering

The measuring system consists of the following components, which must be ordered separately:

1. Sensor,
2. Connection cable for the sensor,
3. Measuring section with air filter or flow conditioner,

### Note

When using the sensor with modified measuring sections or without measuring sections, influences on measuring accuracy cannot be ruled out.

## Flowmeter sensor



Figure 4: Sensyflow FMT700-P Compact sensor

## Measuring accuracy

### Note

The stated measuring accuracy only applies under the calibration conditions in the stated measuring range.

### Measured error

< ±0.8 % of the measured value

### Repeatability

< ±0.25 % of the measured value

### Effect of the measuring medium temperature

< 0.05 % of the measured value per Kelvin

### Effect of the measuring medium pressure

≤ 0.2 % / 100 kPa (/ bar) of the measured value

### Effect of the measuring medium humidity

A change in the relative humidity of the measuring medium to the relative humidity of the calibration medium has an influence on the measurement result. Technically, the change in humidity represents a change in the composition of the measuring medium. An increase in relative humidity compared to the calibration medium results in a positive deviation of the measured value, a decrease in relative humidity a negative. The size of the measurement error depends on the relative humidity in connection with the temperature of the measuring medium.

### Response time

$T_{63} = 25 \text{ ms}$ ,  $T_{98} = 90 \text{ ms}$

## Ambient conditions

### Storage temperature range

-30 to 85 °C (-22 to 185 °F)

### Ambient temperature

-25 to 50 °C (-13 to 122 °F)

### Measured medium temperature

-25 to 50 °C (-13 to 122 °F)

### IP rating

in accordance with EN 60529: IP 54

### NEMA IP rating

in accordance with NEMA 12

### EMC compatibility

In accordance with Table 3 DIN EN 61326,1: Use of a device only in a controlled electromagnetic environment.

## ... Flowmeter sensor

### Vibration

In accordance with IEC 60068-2-6

### Shock resistance

In accordance with IEC 60068-2-27

## Operating pressure

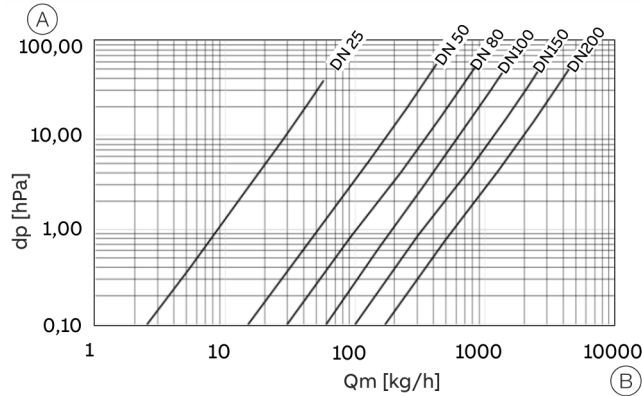
### Operating pressure $P_{medium}$

0.6 to  $2.5 \times 10^2$  kPa (2.5 bar abs)

### Flow conditioner

maximum 1.5 bar abs.

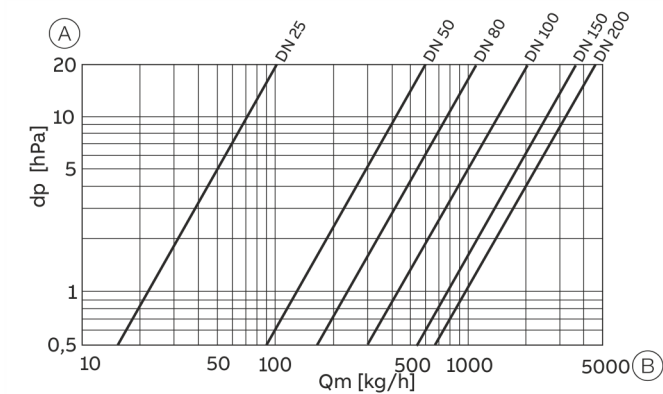
### Pressure loss sensor



(A) Pressure drop dp [hPa] (B) Mass flow Qm [kg/h]

Figure 5: Pressure loss sensor

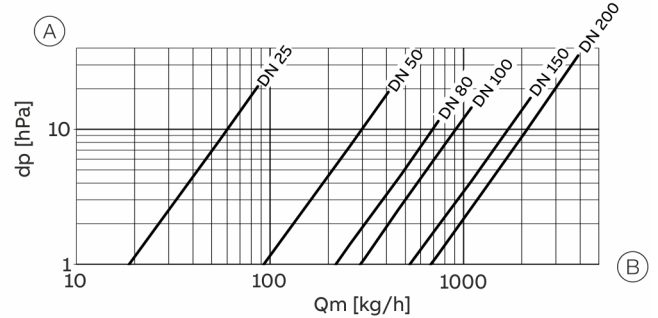
### Air filter pressure loss (open)



(A) Pressure drop dp [hPa] (B) Mass flow Qm [kg/h]

Figure 6: Air filter pressure loss (open)

### Flow conditioner / air filter pressure loss (closed)



(A) Pressure drop dp [hPa] (B) Mass flow Qm [kg/h]

Figure 7: Flow conditioner / air filter pressure loss (closed)

## Measuring range table

### Standard measuring ranges

Reference values are given for applications with air under atmospheric conditions.

The values in brackets indicate the low limit of the measuring range for which the measured value accuracy indicated is specified.

Nominal diameter	Measuring range
DN 25	0 (1) to 60 kg/h
DN 50	0 (8) to 500 kg/h
DN 80	0 (15) to 900 kg/h
DN 100	0 (25) to 1500 kg/h
DN 150	0 (50) to 3000 kg/h
DN 200	0 (80) to 5000 kg/h

### Upper range value

The upper range value can be adjusted.

The upper measuring range limit can be reduced at any nominal diameter by adjusting the upper range value. The outputs can be then be reevaluated accordingly.

## Process connections

Quick-clamping pipe flange, aluminum with quick clamping chains / quick-clamping rings.

## Materials

### Sensor

Aluminum, black anodized

### Measuring section

DN 25 to 100: Aluminum, black anodized

DN 150 to 200: stainless steel

## Installation conditions

To achieve the provided measuring accuracy, the sensor needs to be installed in the available ABB measuring sections.

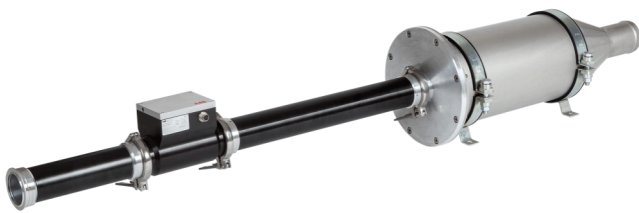


Figure 8: Standard measuring sections

The use of an ABB measuring section with an uninterrupted inlet section of  $10 \times D^*$  and an outlet section of  $5 \times D^*$  in connection with an air filter or flow conditioner complies with the calibration set and ensures measuring accuracy.

Separate components of the measuring sections are also available in the accessory product range.

\* D = Piping diameter

## Transmitter

### Features

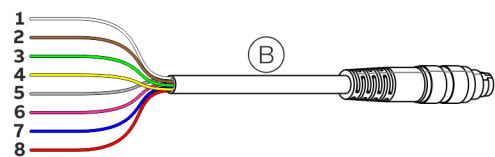
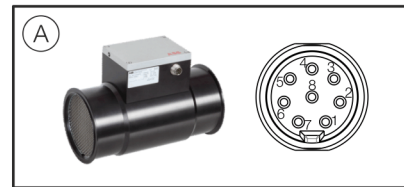
- 0 (4) to 20 mA current output or 0 to 10 (5) V analog output
- Digital output can be configured as a frequency / pulse or binary output.
- RS 232 serial interface
- Parameterization via PC software
- LED status messages and error signals

## Electrical connections

### Terminal layout

Please use the supplied cable for the electrical connection of the flowmeter sensor. It is connected to the measuring device using the plug.

Only 24 VDC supply voltage should be used.



(A) Sensor

(B) Connection cable

Figure 9: Electrical connection

Pin	Color	Function / comments
1	White	Analog output, signal (+)
2	Brown	RS 232C TxD – transmi data
3	Green	Pulse / frequency output, signal (+)
4	Yellow	Power supply +24 V DC
5	Gray	Power supply GND
6	Pink	RS 232C RxD – receive data
7	Blue	Analog output, GND
8	Red	Pulse / frequency output + RS 232C, GND
Shield	—	Functional earth

## ... Transmitter

### Electrical data for inputs and outputs

#### Power supply

Integral mount design	
Pin / color	4+ (yellow) / 5- (gray)
Operating voltage	24 V DC ( $\pm 10\%$ )
Input Current	Peak < 1 A; operation < 0.6 A
Fuse	At least 2 A slow-blow
Power consumption	< 15 W

#### Analog output

Can be optionally configured as current output (0 (4) to 20 mA) or voltage output (0 to 10 (5) V).

Current output	active*
Pin / color	1+ (white) / 7- (blue)
Output signal	0 (4) to 20 mA
Signal in the event of an error	< 3.5 mA or > 22 mA
Load $R_B$	< 500 $\Omega$

Voltage output	Active
Pin / color	1+ (white) / 7- (blue)
Output signal	0 to 10 (5) V
Signal in the event of an error	Min. or max.
Input Current	< 1 mA

\* When selecting the current output 0 (4) to 20 mA, the analog output supplies an active signal. The device delivers the current independently without external power supply.

#### Digital output

Can be configured as pulse / frequency outputs or binary outputs.

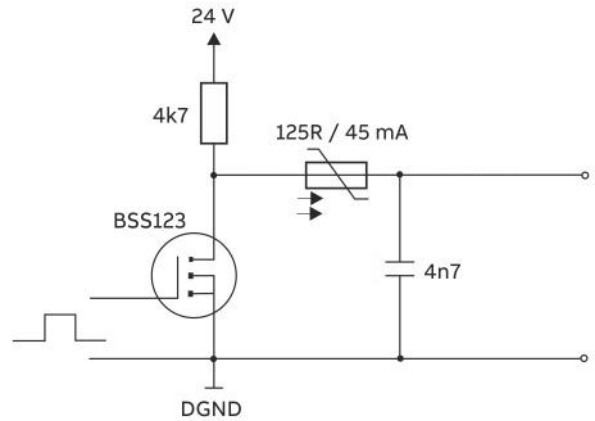


Figure 10: Connection example

The digital output offers a 24 V HIGH signal or a 0 V LOW signal. The output can be wired as active or passive.

Digital output (passive)	
Pin / color	3+ (green) / 8- (red)
$U_{max}$	24 V DC
$I_{max}$	-20 mA
$f_{max}$	2500 Hz
The output current must be limited to -20 mA in LOW state to guarantee an output voltage $U_a < 2.5$ V.	

Digital output (active)	
Pin / color	3+ (green) / 8- (red)
$I_{max}$	1 mA
$f_{max}$	2500 Hz
The output current must be limited to 1 mA in HIGH state to guarantee an output voltage $U_a > 15$ V.	

#### Communication

RS 232	
Pin / color	TxD: 2 (brown) / RxD: 6 (pink) / GND: 8- (red)
Baud rate	9600 bits/sec.
Stop bits	1
Parity	None
Data bits	8



### Parameterize

The Sensyflow FMT700-P Compact can simultaneously operate one analog output (current 0 / 4 to 20 mA or voltage 0 to 5 / 10 V), one digital output (frequency, pulse, alarm) and a serial RS 232 interface.

Parameterization of the measuring system can also take place via the serial interface. Using a PC or laptop, you can change the output signal used or the adjust the settings of the measuring ranges and signals.

The parameterization program is included in the standard scope of delivery.

For easier connection of the Sensyflow FMT700-P Compact in the test field, a D - SUB female connector and a USB 2.0, serial adapter including USB cable is supplied.

#### D - SUB female connector

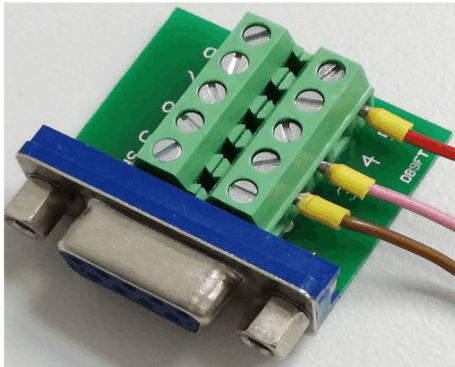


Figure 11: Female connector

#### Electrical connection D - SUB female connector

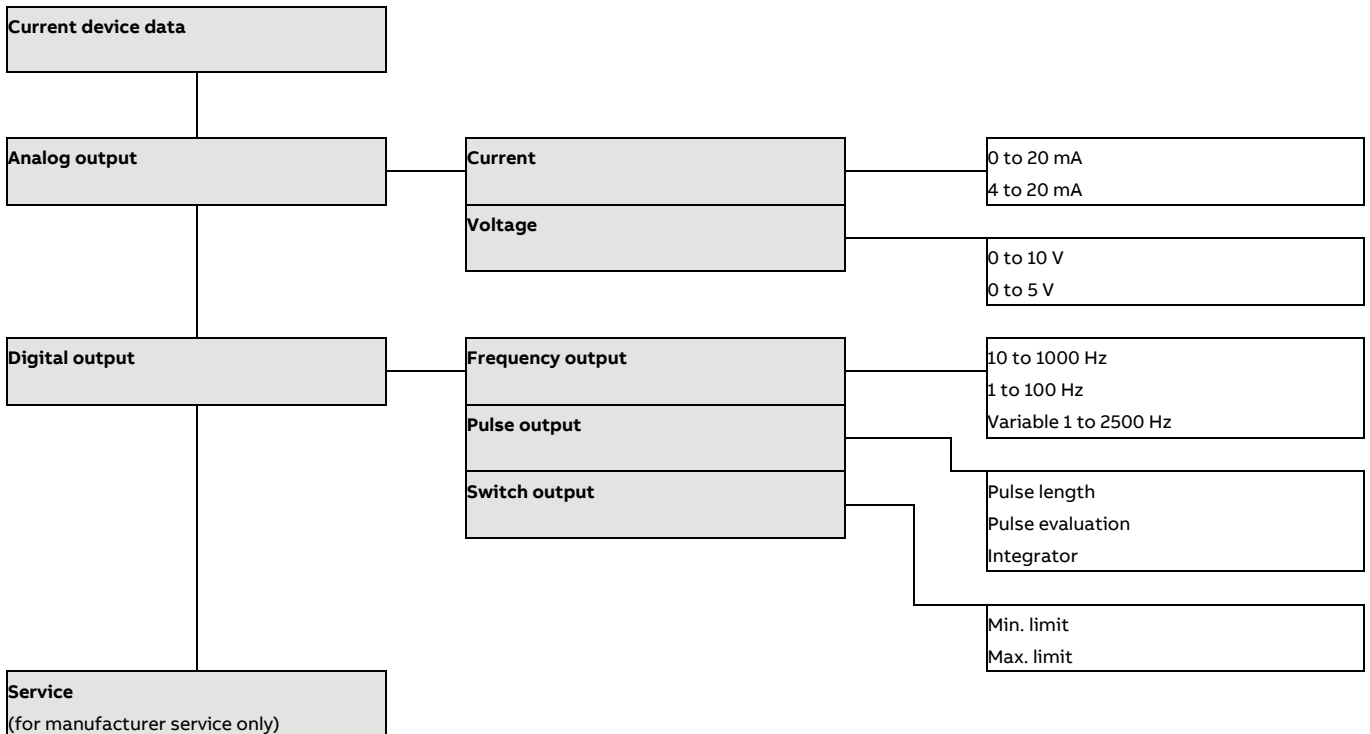
Wire color connection cable	Terminal no. on the female connector	Signal
Brown	2	RS 232 / TxD
Pink	3	RS 232 / RxD
Red	5	RS 232 / GND

#### USB 2.0, serial adapter



Figure 12: Adapter

#### Overview of parameterization program



## Dimensions

### Sensor

#### Sensyflow FMT700-P Compact, DN 25

All specified dimensions and weights are in mm (in) or kg (lb).

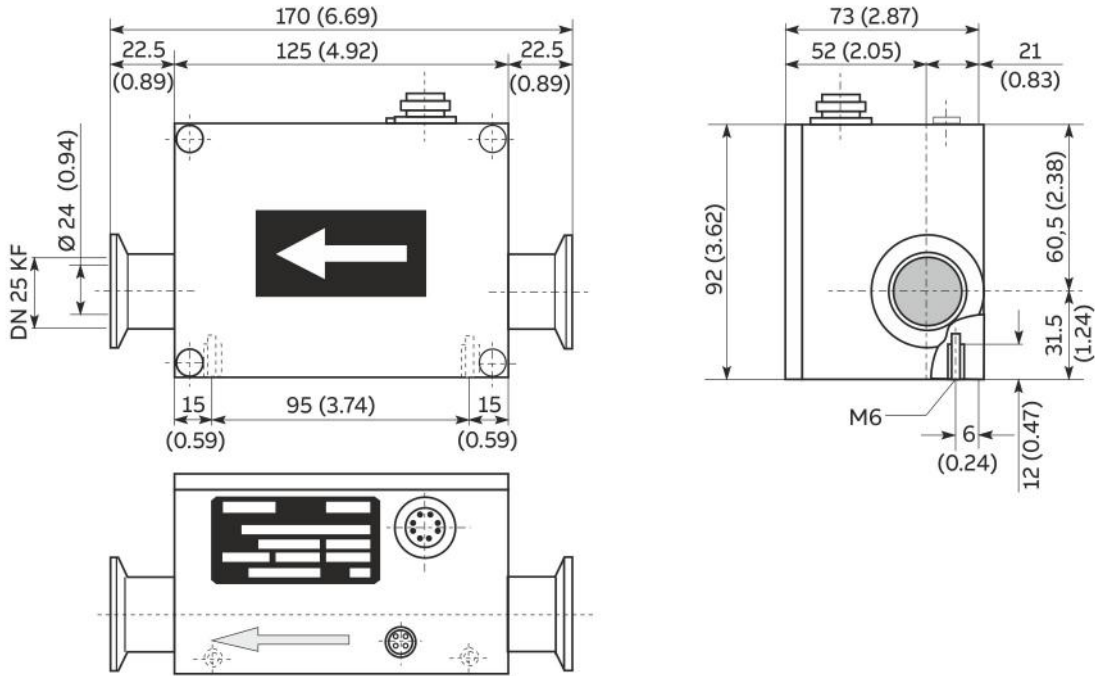


Figure 13: Dimensions

Nominal diameter	Weight
DN 25	1.1 (2.4)

**Sensyflow FMT700-P Compact, DN 50 to DN 200**  
 All specified dimensions and weights are in mm (in) or kg (lb).

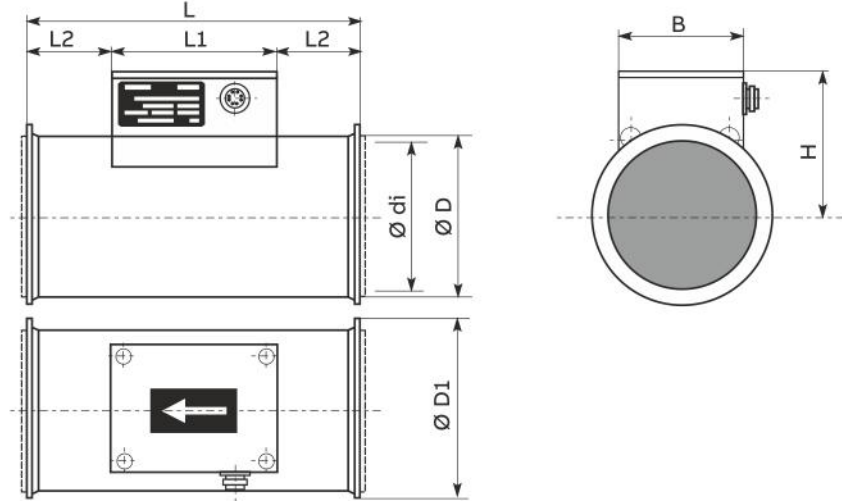


Figure 14: Sensor DN 50 to DN 200

DN	Ø D	Ø D1	Ø di	L	L1	L2	B	H	Weight
50	64 (2.52)	80.0 (3.15)	58 (2.28)	184 (7.24)	125 (4.92)	29.5 (1.16)	92 (3.62)	88.0 (3.46)	2 (4.1)
80	89 (3.50)	108.5 (4.27)	80 (3.15)	189 (7.44)		32.0 (1.26)		98.5 (3.88)	2.3 (5.1)
100	118 (4.65)	132.5 (5.22)	110 (4.33)	254 (10.00)		64.5 (2.54)		114.0 (4.49)	3.1 (6.8)
150	158 (6.22)	180.0 (7.09)	153 (6.02)	280 (11.02)		77.5 (3.05)		136.0 (5.35)	4.3 (9.5)
200	205.6 (8.09)	240.0 (9.45)	200 (8)	330 (12.99)		102.5 (4.04)		161.5 (6.36)	7.9 (17.42)

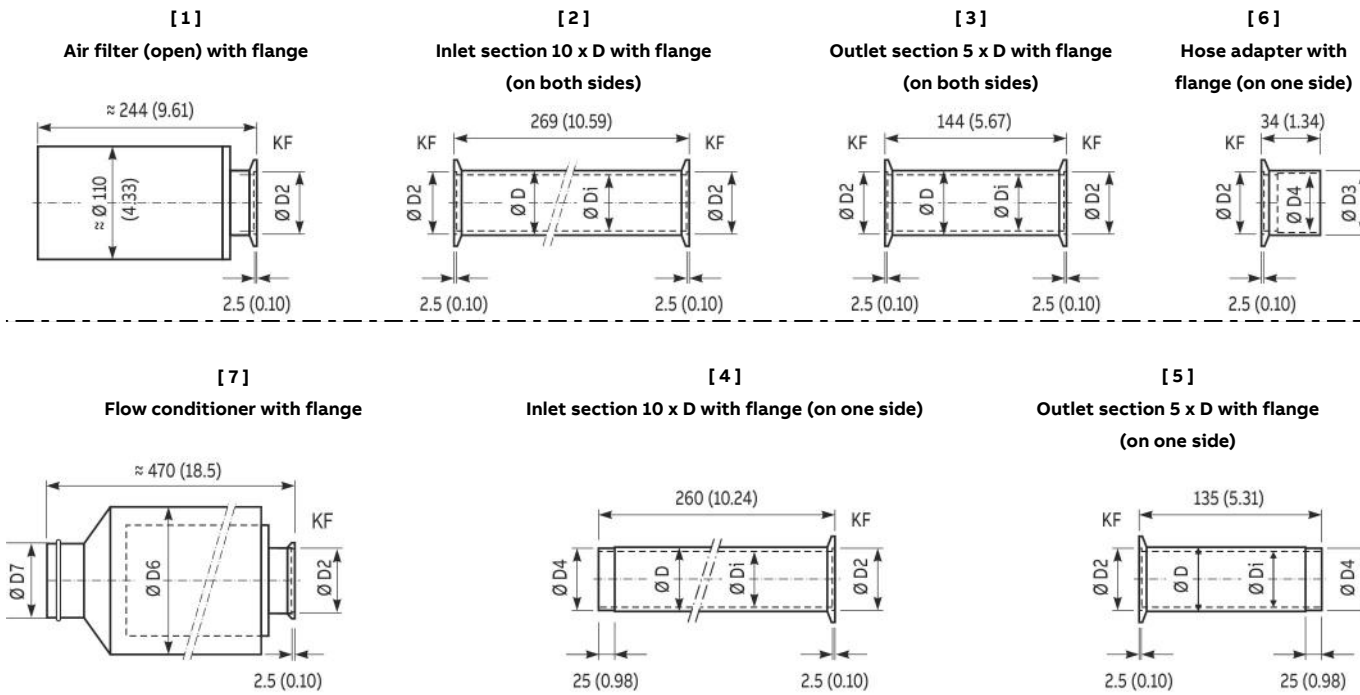
## ... Dimensions

### Accessories

#### DN 25 components

All dimensions specified in mm (in). The numbers (e.g. [ 1 ]) of the components correspond to the markings on the in the ordering information, see **Accessories** on page 19.

KF = ISO-KF flange (ISO small flange) / ZWF = wafer type (with raised face)



#### Standard measuring section

##### Measuring section 3

(including flow conditioner, closed filter)

##### Alternative measuring section 1

(concealed shown with a dashed line, including open filter, filter cartridge only)

Including the required flanges and clamping rings / clamping chains

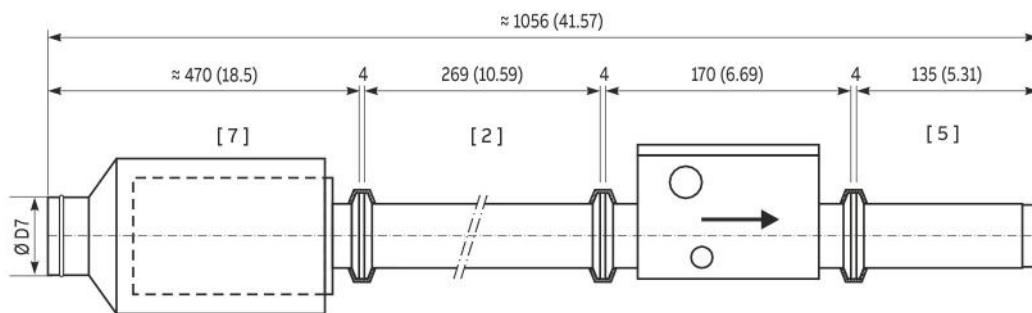


Figure 1: Component dimensions DN 25

DN	Ø D	Ø D2	Ø D3	Ø D4	Ø D6	Ø D7	Ø Di
25	32 (1.26)	26.1 (1.03)	30 (1.18)	27 (1.06)	Approx. 150 (5.91)	78 (3.07)	24 (0.94)

KF = ISO-KF flange (ISO small flange) / ZWF = wafer type (with raised face)

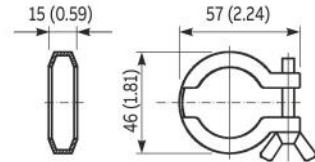
[ 12 ]

O-ring



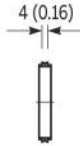
[ 13 ]

FL special clamping ring



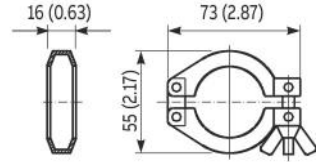
[ 11 ]

Inner centering ring



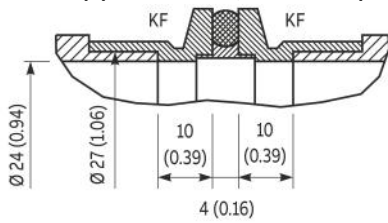
[ 14 ]

FL-Optimal AS clamping ring



[ 6 ][ 11 ] / [ 12 ][ 6 ]

Sectional detail pipe connection (without clamping ring)



Individual planning

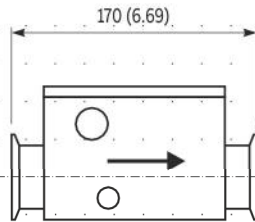


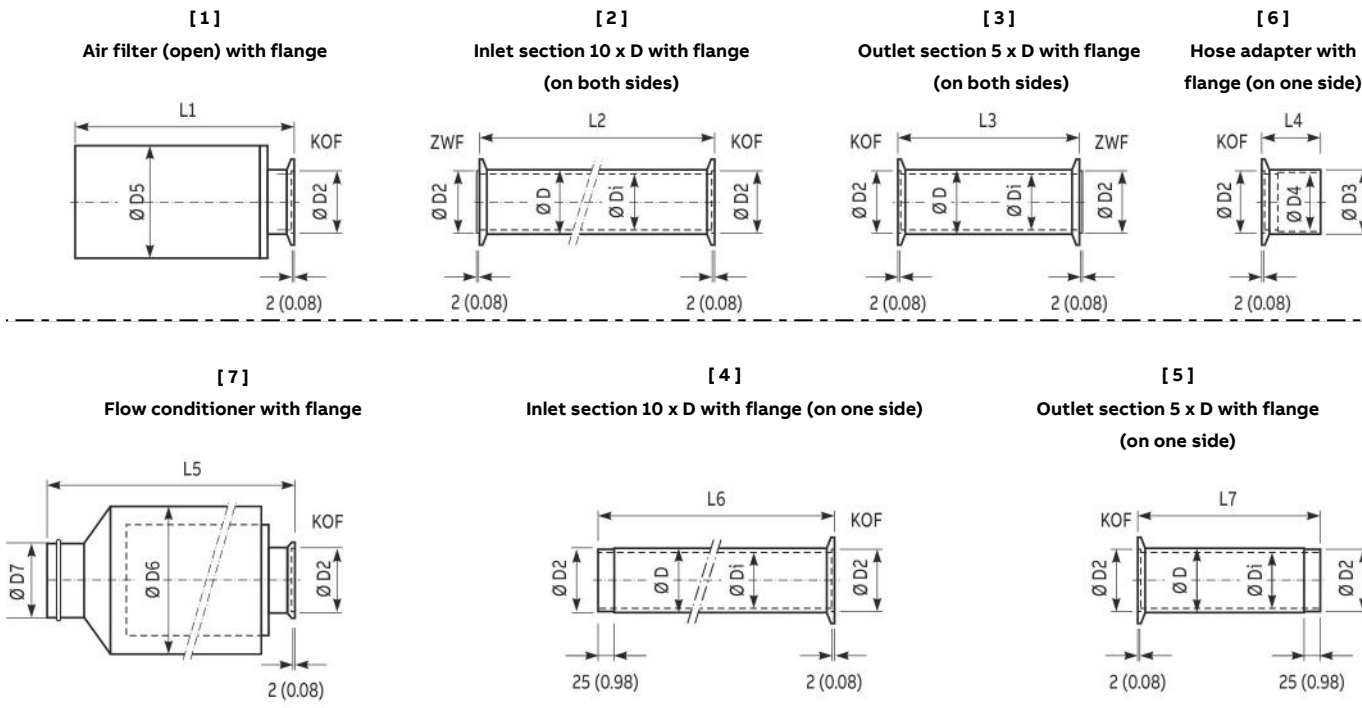
Figure 2: Accessory dimensions DN 25

## ... Dimensions

### Components DN 50 to DN 100

All dimensions specified in mm (in). The numbers (e.g. [ 1 ]) of the components correspond to the markings on the in the ordering information, see **Accessories** on page 19.

KOF = Tapered flange (with raised face and groove for O-ring) / ZWF = Wafer type (with recessed face)



### Standard measuring section

#### Measuring section 3

(including flow conditioner, closed filter)

#### Alternative measuring section 1

(concealed shown with a dashed line, including open filter, filter cartridge only)

Including the required flanges and clamping rings / clamping chains

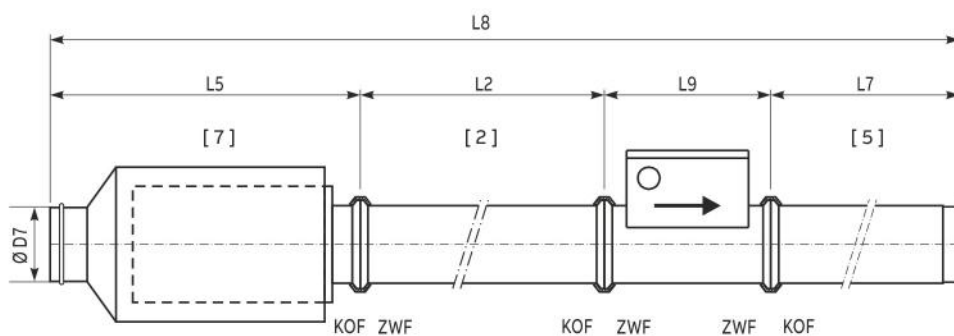


Figure 3: Component dimensions DN 50 to DN 100

DN	L1	L2	L3	L4	L5	L6	L7	L8	L9
50	Approx. 356 (14.02)	506 (19.92)	256 (10.08)	50 (1.97)	Approx. 660 (25.98)	504 (19.84)	254 (10.00)	Approx. 1600 (62.99)	184 (7.24)
80	Approx. 401 (15.79)	806 (31.73)	406 (15.98)	80 (3.15)	Approx. 740 (29.13)	804 (31.65)	404 (15.91)	Approx. 2140 (84.25)	189 (7.44)
100	Approx. 526 (20.71)	1006 (39.61)	506 (19.92)	100 (3.94)	Approx. 840 (33.07)	1004 (39.53)	504 (19.84)	Approx. 2610 (102.76)	254 (10.00)

DN	Ø D	Ø D2	Ø D3	Ø D4	Ø D5	Ø D6	Ø D7	Ø Di
50	66 (2.60)	64 (2.52)	70 (2.76)	60 (2.36)	Approx. 150 (5.91)	Approx. 200 (7.87)	78 (3.07)	58 (2.28)
80	91 (3.58)	89 (3.50)	95 (3.74)	85 (3.35)	Approx. 200 (7.87)	Approx. 250 (9.84)	98 (3.86)	80 (3.15)
100	119 (4.69)	118 (4.65)	122 (4.80)	114 (4.49)	Approx. 240 (9.45)	Approx. 300 (11.81)	148 (5.83)	110 (4.33)

KOF = Tapered flange (with raised face and groove for O-ring) / ZWF = Wafer type (with recessed face)

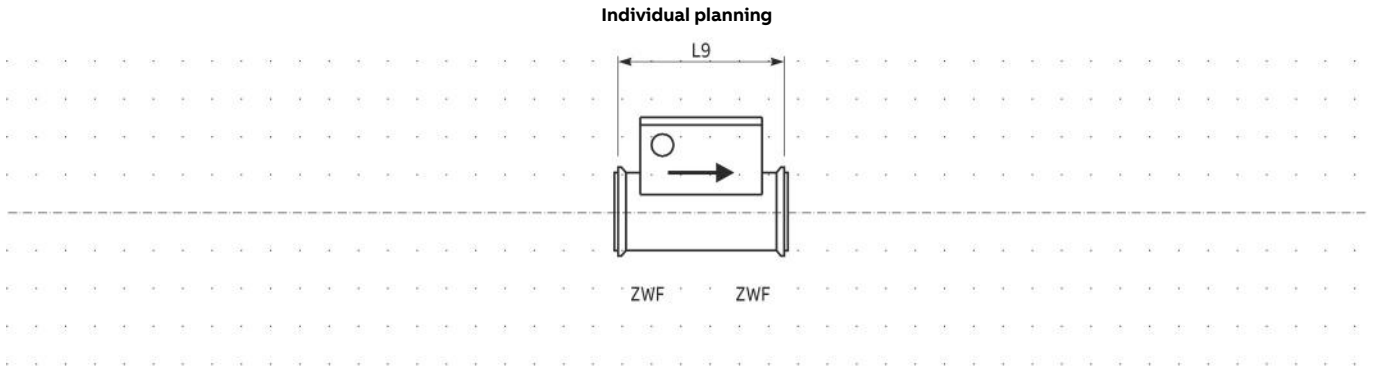
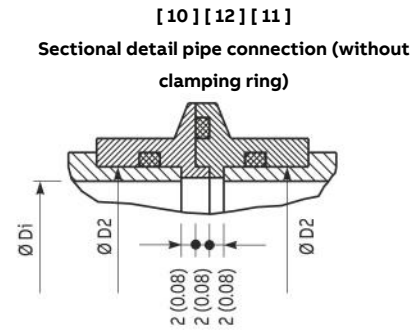
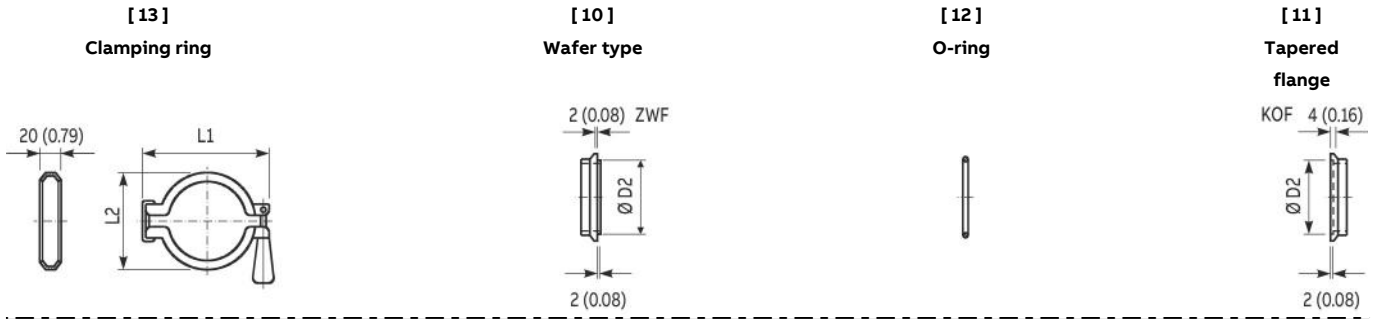


Figure 4: Accessory dimensions DN 50 to DN 100

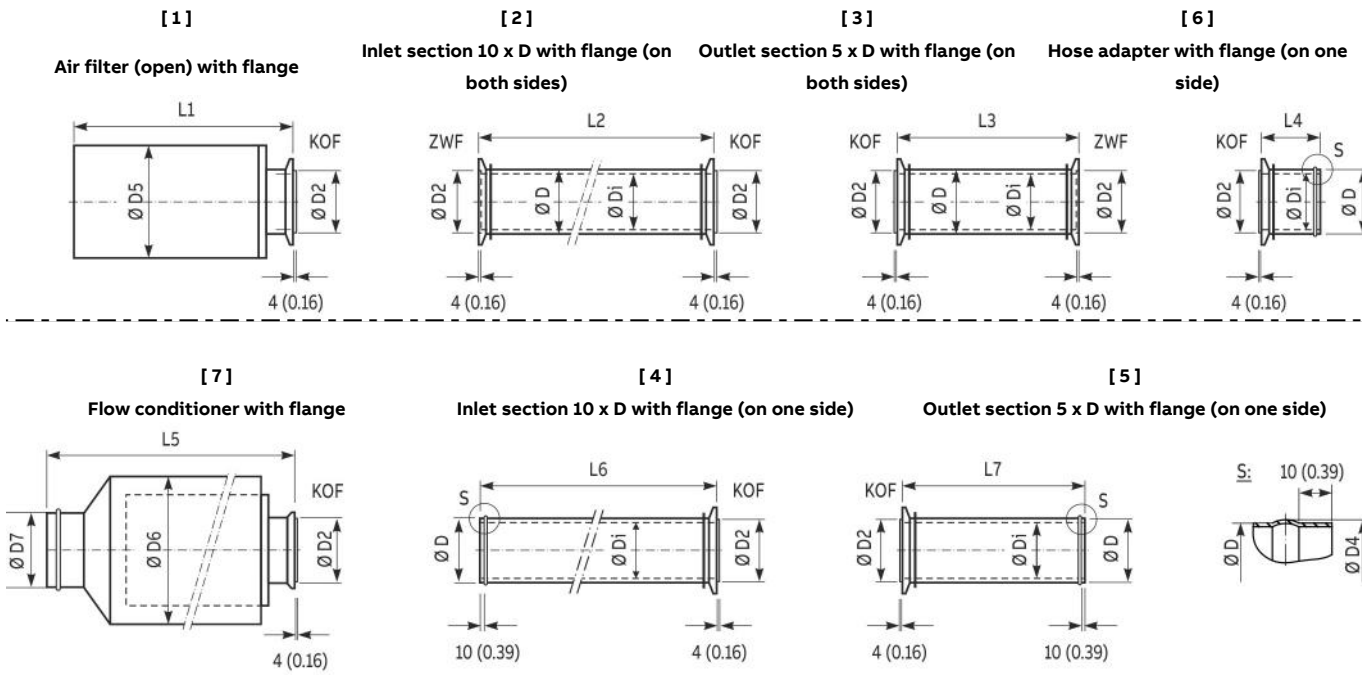
DN	L1	L2	L9	Ø D2	Ø Di
50	102 (4.02)	72 (2.83)	184 (7.24)	64 (2.52)	58 (2.28)
80	145 (5.71)	114 (4.49)	189 (7.44)	89 (3.50)	80 (3.15)
100	158 (6.22)	127 (5.00)	254 (10.00)	118 (4.65)	110 (4.33)

## ... Dimensions

### Components DN 150 to DN 200

All dimensions specified in mm (in). The numbers (e.g. [ 1 ]) of the components correspond to the markings on the in the ordering information, see **Accessories** on page 19.

KF = Tapered flange (with raised face and groove for O-ring) / ZWF = Wafer type (with recessed face)



### Standard measuring section

#### Measuring section 3

(including flow conditioner, closed filter)

#### Alternative measuring section 1

(concealed shown with a dashed line, including open filter, filter cartridge only)

Including the required flanges and clamping rings / clamping chains

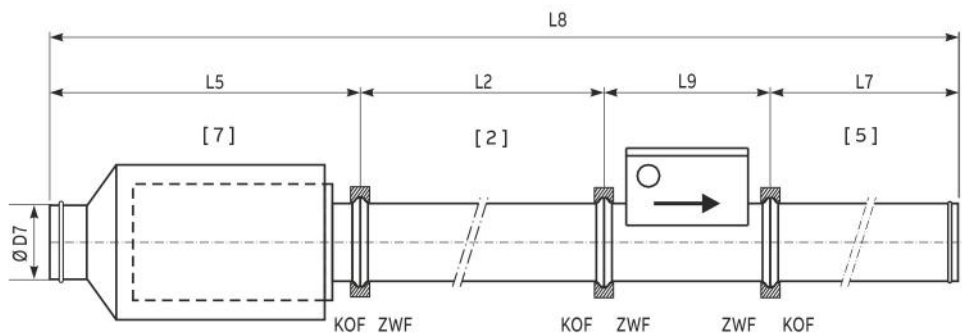


Figure 5: Component dimensions DN 150 to DN 200

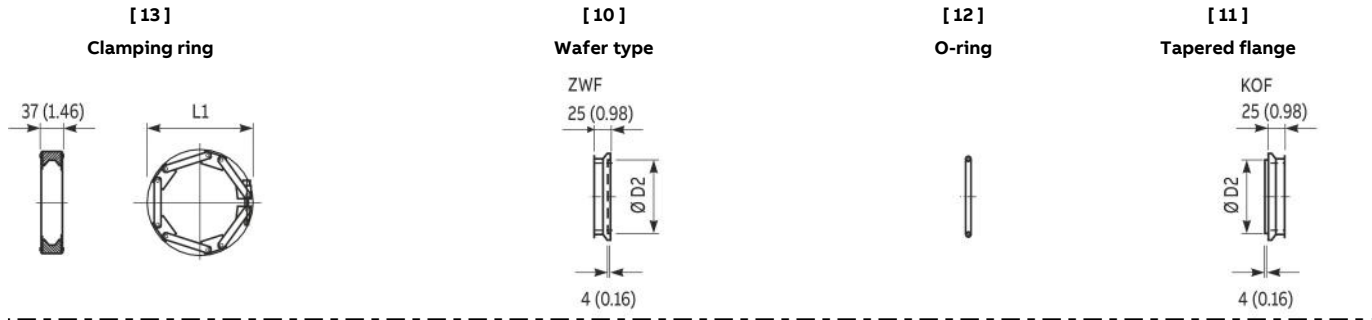
DN	L1	L2	L3	L4	L5	L6	L7	L8	L9
150	Approx. 513 (20.20)	1518 (59.76)	768 (30.24)	159 (6.26)	Approx. 900 (35.43)	1509 (59.41)	759 (29.88)	Approx. 3460 (136.22)	280 (11.02)
200	Approx. 513 (20.20)	2018 (79.49)	1018 (40.08)	159 (6.26)	Approx. 850 (33.46)	2009 (79.09)	1018 (40.08)	Approx. 4220 (166.14)	330 (12.99)

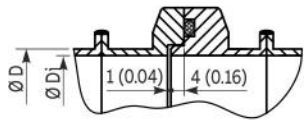
DN	Ø D	Ø D2	Ø D4	Ø D5	Ø D6	Ø D7	Ø Di
150	151 (5.94)	158 (6.22)	153 (6.02)	Approx. 300 (11.81)	Approx. 355 (13.98)	198 (7.80)	149 (5.87)
200	201,5 (7.93)	205 (8.07)	204 (8.03)	Approx. 300 (11.81)	Approx. 355 (13.98)	248 (9.76)	199 (7.83)



KOF = Tapered flange (with raised face and groove for O-ring) / ZWF = Wafer type (with recessed face)



**[10][12][11]**  
**Sectional detail pipe connection (without clamping ring)**



**Individual planning**

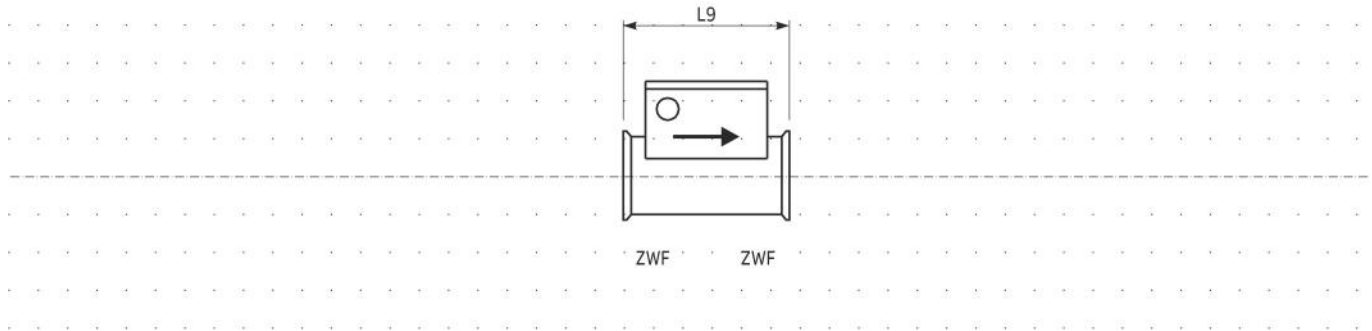


Figure 6: Accessory dimensions DN 150 to DN 200

DN	L1	L2	L9	Ø D2	Ø Di
150	Approx. 220 (8.66)	280 (11.02)	151 (5.94)	149 (5.87)	Approx. 220 (8.66)
200	Approx. 280 (11.02)	330 (12.99)	202 (7.95)	200 (7.87)	Approx. 280 (11.02)

## Ordering Information

### Sensyflow FMT700-P Compact

Sensor in a compact design

Base model					
Sensyflow FMT700-P Thermal Mass Flowmeter DN 25	3KXF421701V	XX	XXX	XXX	XXXX
Sensyflow FMT700-P Thermal Mass Flowmeter DN 50	3KXF421702V	XX	XXX	XXX	XXXX
Sensyflow FMT700-P Thermal Mass Flowmeter DN 80	3KXF421703V	XX	XXX	XXX	XXXX
Sensyflow FMT700-P Thermal Mass Flowmeter DN 100	3KXF421704V	XX	XXX	XXX	XXXX
Sensyflow FMT700-P Thermal Mass Flowmeter DN 150	3KXF421705V	XX	XXX	XXX	XXXX
Sensyflow FMT700-P Thermal Mass Flowmeter DN 200	3KXF421706V	XX	XXX	XXX	XXXX
<b>Design</b>					
Compact, 24V Supply voltage, Analog Output 0 to 5 V		V1			
Compact, 24V Supply voltage, Analog Output 0 to 10 V		V2			
Compact, 24V Supply voltage, Analog Output 0 to 20 mA, Alarm > 22 mA		A1			
Compact, 24V Supply voltage, Analog Output 4 to 20 mA, Alarm < 3,5 mA		A2			
Compact, 24V Supply voltage, Analog Output 4 to 20 mA, Alarm > 22 mA		A3			
<b>Operating temperature range</b>					
-25 to 50 °C			TFA		
<b>Operating pressure range</b>					
0,6 to 2,5 bar (abs)				PSA	
<b>Measuring range mass measurement</b>					
0(1) to 60, Adjustable measuring range end value (only with nominal diameter DN 25)					QZA
0(8) to 500, Adjustable measuring range end value (only with nominal diameter DN 50)					QZB
0(15) to 900, Adjustable measuring range end value (only with nominal diameter DN 80)					QZC
0(25) to 1500, Adjustable measuring range end value (only with nominal diameter DN 100)					QZD
0(50) to 3000, Adjustable measuring range end value (only with nominal diameter DN 150)					QZE
0(80) to 5000, Adjustable measuring range end value (only with nominal diameter DN 200)					QZF
<b>Measuring range unit mass measurement</b>					
kg/h					QM00

### Additional ordering information

<b>Sensyflow FMT700-P Compact</b>	XXX	XX
Sensyflow FMT700-P Thermal Mass Flowmeter		
<b>Certificates: Calibration</b>		
Standard factory calibration	CMA	
DAkkS certificate of calibration	CMD	
DAkkS certificate of calibration and US EPA CFR Part 1065 sensor-check certificate	CMU	
<b>Documentation Language</b>		
German		M1
English		M5

## Accessories

The numbers (eg [I]) of the components correspond to the marking of the components, see **Dimensions** on page 10.

Description	Order number
<b>FMT700-P Compact cabel</b>	
FMT700-P Compact transducer-cable, lenght 5 m	3KXF003450U0100
FMT700-P Compact transducer-cable, lenght 10 m	3KXF003451U0100
FMT700-P Compact transducer-cable, lenght 15 m	3KXF003452U0100
FMT700-P Compact transducer-cable, lenght 30 m	3KXF003453U0100
<b>Preferred versions FMT700-P Measuring section</b>	
FMT700-P measuring section 1, nominal diameter DN 25	7962645
FMT700-P measuring section 1, nominal diameter DN 50	7962646
FMT700-P measuring section 1, nominal diameter DN 80	7962647
FMT700-P measuring section 1, nominal diameter DN 100	7962648
FMT700-P measuring section 1, nominal diameter DN 150	7962649
FMT700-P measuring section 1, nominal diameter DN 200	7962650
FMT700-P measuring section 3, nominal diameter DN 25, suction side DN 60	7964107
FMT700-P measuring section 3, nominal diameter DN 50, suction side DN 80	7964108
FMT700-P measuring section 3, nominal diameter DN 80, suction side DN 100	7964109
FMT700-P measuring section 3, nominal diameter DN 100, suction side DN 150	7964110
FMT700-P measuring section 3, nominal diameter DN 150, suction side DN 200	7964111
FMT700-P measuring section 3, nominal diameter DN 200, suction side DN 250	7964112
<b>FMT700-P Sensor cable [ I ]</b>	
FMT700-P air filter (open) with flange, nominal diameter DN 25, 1 clamping ring	7962657
FMT700-P air filter (open) with flange, nominal diameter DN 50, 1 clamping ring	7962658
FMT700-P air filter (open) with flange, nominal diameter DN 80, 1 clamping ring	7962659
FMT700-P air filter (open) with flange, nominal diameter DN 100, 1 clamping ring	7962660
FMT700-P air filter (open) with flange, nominal diameter DN 150, 1 clamping chain	7962661
FMT700-P air filter (open) with flange, nominal diameter DN 200, 1 clamping chain	7962662
<b>FMT700-P Flow conditioner [ 7 ]</b>	
FMT700-P flow conditioner with flange, nominal diameter DN 25, suction side DN 60, leak-proof, 1 clamping ring	7964101
FMT700-P flow conditioner with flange, nominal diameter DN 50, suction side DN 80, leak-proof, 1 clamping ring	7964102
FMT700-P flow conditioner with flange, nominal diameter DN 80, suction side DN 100, leak-proof, 1 clamping ring	7964103
FMT700-P flow conditioner with flange, nominal diameter DN 100, suction side DN 150, leak-proof, 1 clamping ring	7964104
FMT700-P flow conditioner with flange, nominal diameter DN 150, suction side DN 200, leak-proof, 1 clamping chain	7964105
FMT700-P flow conditioner with flange, nominal diameter DN 200, suction side DN 250, leak-proof, 1 clamping chain	7964106
<b>FMT700-P Inlet section [ 2 ]</b>	
FMT700-P inlet section 10 x D, nominal diameter DN 25, 2 ISO KF flanges, 1 clamping ring	7962663
FMT700-P inlet section 10 x D, nominal diameter DN 50, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962664
FMT700-P inlet section 10 x D, nominal diameter DN 80, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962665
FMT700-P inlet section 10 x D, nominal diameter DN 100, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962666
FMT700-P inlet section 10 x D, nominal diameter DN 150, 1 tapered flange, 1 intermediate flange, 1 clamping chain	7962667
FMT700-P inlet section 10 x D, nominal diameter DN 200, 1 tapered flange, 1 intermediate flange, 1 clamping chain	7962668

## ... Ordering Information

Description	Order number
<b>FMT700-P Inlet section [ 4 ]</b>	
FMT700-P inlet section 10 x D, nominal diameter DN 25, 1 ISO KF flange, 1 clamping ring	7962669
FMT700-P inlet section 10 x D, nominal diameter DN 50, 1 tapered flange, 1 clamping ring	7962670
FMT700-P inlet section 10 x D, nominal diameter DN 80, 1 tapered flange, 1 clamping ring	7962671
FMT700-P inlet section 10 x D, nominal diameter DN 100, 1 tapered flange, 1 clamping ring	7962672
FMT700-P inlet section 10 x D, nominal diameter DN 150, 1 tapered flange, 1 clamping chain	7962673
FMT700-P inlet section 10 x D, nominal diameter DN 200, 1 tapered flange, 1 clamping chain	7962674
<b>FMT700-P Outlet section [ 3 ]</b>	
FMT700-P outlet section 5 x D, nominal diameter DN 25, 2 ISO KF flanges, 1 clamping ring	7962675
FMT700-P outlet section 5 x D, nominal diameter DN 50, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962676
FMT700-P outlet section 5 x D, nominal diameter DN 80, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962677
FMT700-P outlet section 5 x D, nominal diameter DN 100, 1 tapered flange, 1 intermediate flange, 1 clamping ring	7962678
FMT700-P outlet section 5 x D, nominal diameter DN 150, 1 tapered flange, 1 intermediate flange, 1 clamping chain	7962679
FMT700-P outlet section 5 x D, nominal diameter DN 200, 1 tapered flange, 1 intermediate flange, 1 clamping chain	7962680
<b>FMT700-P Outlet section [ 5 ]</b>	
FMT700-P outlet section 5 x D, nominal diameter DN 25, 1 ISO KF flange, 1 clamping ring	7962681
FMT700-P outlet section 5 x D, nominal diameter DN 50, 1 tapered flange, 1 clamping ring	7962682
FMT700-P outlet section 5 x D, nominal diameter DN 80, 1 tapered flange, 1 clamping ring	7962683
FMT700-P outlet section 5 x D, nominal diameter DN 100, 1 tapered flange, 1 clamping ring	7962684
FMT700-P outlet section 5 x D, nominal diameter DN 150, 1 tapered flange, 1 clamping chain	7962685
FMT700-P outlet section 5 x D, nominal diameter DN 200, 1 tapered flange, 1 clamping chain	7962686
<b>FMT700-P Hose adapter [ 6 ]</b>	
FMT700-P hose adapter, nominal diameter DN 25, 1 clamping ring	7962687
FMT700-P hose adapter, nominal diameter DN 50, 1 clamping ring	7962688
FMT700-P hose adapter, nominal diameter DN 80, 1 clamping ring	7962689
FMT700-P hose adapter, nominal diameter DN 100, 1 clamping ring	7962690
FMT700-P hose adapter, nominal diameter DN 150, 1 clamping chain	7962691
FMT700-P hose adapter, nominal diameter DN 200, 1 clamping chain	7962692
<b>FMT700-P Tapered flange [ 11 ]</b>	
FMT700-P tapered flange, nominal diameter DN 25	7962700
FMT700-P tapered flange, nominal diameter DN 50	7962701
FMT700-P tapered flange, nominal diameter DN 80	7962702
FMT700-P tapered flange, nominal diameter DN 100	7962703
FMT700-P tapered flange, nominal diameter DN 150	7962704
FMT700-P tapered flange, nominal diameter DN 200	7962705
<b>FMT700-P O-Ring [ 12 ]</b>	
FMT700-P o-ring, nominal diameter DN 25, including centering rings	7962706
FMT700-P o-ring, nominal diameter DN 50	7962707
FMT700-P o-ring, 94 x 3, nominal diameter DN 80	7962708
FMT700-P o-ring, 122 x 3, nominal diameter DN 100	7962709
FMT700-P o-ring, 165 x 4, nominal diameter DN 150	7962710
FMT700-P o-ring, 217 x 5, nominal diameter DN 200	7962711

Description	Order number
<b>FMT700-P Intermediate flange [ 10 ]</b>	
FMT700-P intermediate flange, nominal diameter DN 25	7962712
FMT700-P intermediate flange, nominal diameter DN 50	7962713
FMT700-P intermediate flange, nominal diameter DN 80	7962714
FMT700-P intermediate flange, nominal diameter DN 100	7962715
FMT700-P intermediate flange, nominal diameter DN 150	7962716
FMT700-P intermediate flange, nominal diameter DN 200	7962717
<b>FMT700-P Clamping ring [ 13 ]</b>	
FMT700-P clamping ring, nominal diameter DN 25	7962718
FMT700-P clamping ring, nominal diameter DN 50	7962719
FMT700-P clamping ring, nominal diameter DN 80	7962720
FMT700-P clamping ring, nominal diameter DN 100	7962721
<b>FMT700-P Clamping chain [ 13 ]</b>	
FMT700-P clamping chain, nominal diameter DN 150	7962722
FMT700-P clamping chain, nominal diameter DN 200	7962723
<b>FMT700-P Complete flange coupling</b>	
FMT700-P complete flange coupling, nominal diameter DN 25	7962724
FMT700-P complete flange coupling, nominal diameter DN 50	7962725
FMT700-P complete flange coupling, nominal diameter DN 80	7962726
FMT700-P complete flange coupling, nominal diameter DN 100	7962727
FMT700-P complete flange coupling, nominal diameter DN 150	7962728
FMT700-P complete flange coupling, nominal diameter DN 200	7962729
<b>FMT700-P Filter cartridge</b>	
FMT700-P filter cartridge, nominal diameter DN 25	7962730
FMT700-P filter cartridge, nominal diameter DN 50	7962731
FMT700-P filter cartridge, nominal diameter DN 80	7962732
FMT700-P filter cartridge, nominal diameter DN 100	7962733
FMT700-P filter cartridge, nominal diameter DN 150	7962734
FMT700-P filter cartridge, nominal diameter DN 200	7962735
<b>FMT700-P Filter coupling flange</b>	
FMT700-P filter coupling flange, nominal diameter DN 25	7962736
FMT700-P filter coupling flange, nominal diameter DN 50	7962737
FMT700-P filter coupling flange, nominal diameter DN 80	7962738
FMT700-P filter coupling flange, nominal diameter DN 100	7962739
FMT700-P filter coupling flange, nominal diameter DN 150	7962740
FMT700-P filter coupling flange, nominal diameter DN 200	7962741

Sales



Service





## Notes



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