

### Ultrasonic Water Flow Measurement

Stationary ultrasonic clamp-on system for flow measurement of water

#### Features

- Non-invasive flow measurement with high measuring accuracy for stationary use
- Precise bi-directional, highly dynamic flow measurement
- Water-tight transducers (IP 67) are characterised by their high robustness
- Simple retrofitting of measurements in existing networks and systems without interrupting the supply or the need for pipe work
- User-friendly menu navigation - the firmware is specifically adapted to the needs of the water industry
- For nominal diameters of 10...2500 mm
- Installation and commissioning can be carried out during operation
- Digital signal processor (DSP) and signal processing ensure stable and reliable results even under difficult measurement conditions
- High measuring accuracy, even at low flow velocities
- Cost-efficient for large rated diameters

#### Applications

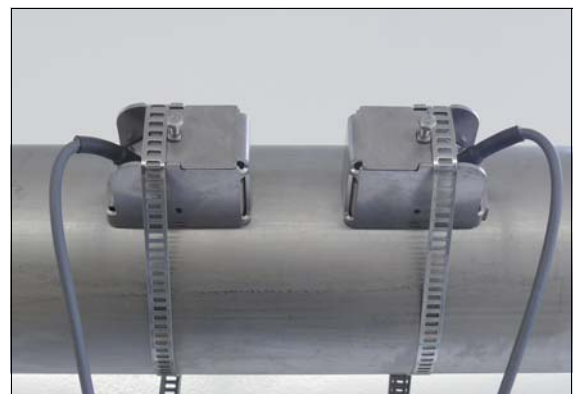
- Water and waste water industry
- Clean measurement process for drinking water system
- Leakage detection
- Hydroelectric power plants (reservoirs)
- Reservoirs



FLUXUS ADM 5107



FLUXUS ADM 5207



Flow transducers in transducer shoe, mounted with tension strap

## Flowmeter

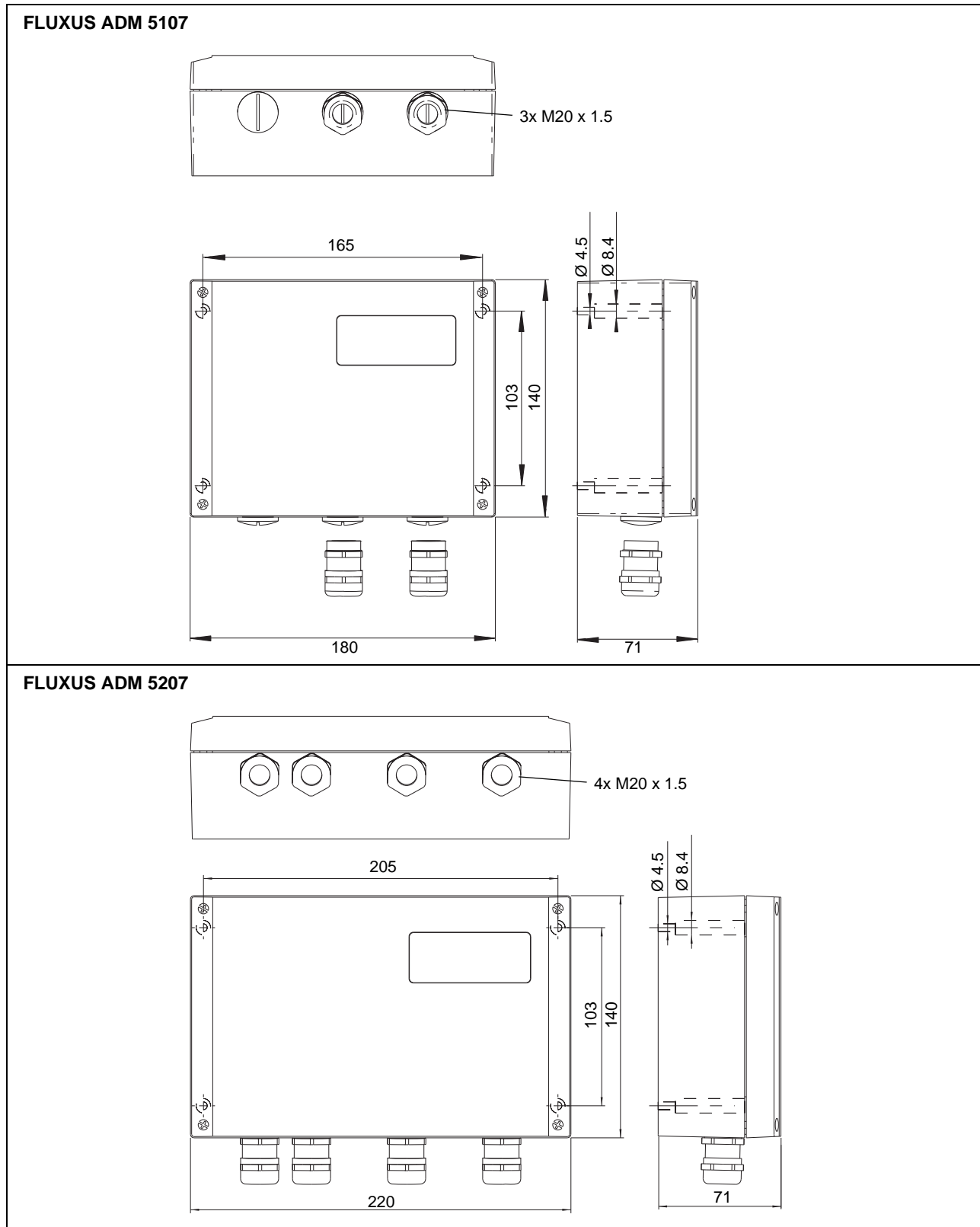
### Technical Data

FLUXUS	ADM 5107	ADM 5207
design	water measurement with 1 measuring channel	water measurement with 2 measuring channels
<b>measurement</b>		
measuring principle	transit time difference correlation principle	
flow velocity	0.01...25 m/s	
resolution	0.025 cm/s	
repeatability	0.25 % of reading $\pm 0.01$ m/s	
accuracy <sup>1</sup> - volume flow	$\pm 2$ % of reading $\pm 0.01$ m/s	
medium	all acoustically conductive liquids with < 10 % gaseous or solid content in volume	
<b>flowmeter</b>		
power supply	100...240 V/50...60 Hz or 20...32 V DC	
power consumption	< 10 W	
number of flow measuring channels <sup>2</sup>	1	2 (for transducers of the same type)
signal damping	0...100 s, adjustable	
measuring cycle (1 channel)	10 Hz	
response time	1 s (1 channel)	
housing material	aluminum, powder coated	
degree of protection according to EN 60529	IP 66	
dimensions	see dimensional drawing	
weight	1.5 kg	1.7 kg
fixation	wall mounting, option: 2 " pipe mounting	
operating temperature	-10...+60 °C	
display	2 x 16 characters, dot matrix, backlit	
menu language	English, German, French, Dutch, Spanish	
<b>measuring functions</b>		
physical quantities	volume flow, mass flow, flow velocity	
totalizers	volume, mass	
calculation functions	-	average, difference, sum
<b>outputs</b>		
	The outputs are galvanically isolated from the flowmeter.	
<b>current output</b>		
number	1	2
range	0/4...20 mA	0/4...20 mA
accuracy	0.1 % of reading $\pm 15$ $\mu$ A	0.1 % of reading $\pm 15$ $\mu$ A
active output	$R_{ext} < 500 \Omega$	$R_{ext} < 500 \Omega$
<b>binary output</b>		
number	2	
Reed relay	48 V/0.25 A	
binary output as alarm output - functions	limit, change of flow direction or error	
binary output as pulse output - pulse value - pulse width	0.01...1000 units 80...1000 ms	

<sup>1</sup> for reference conditions and  $v > 0.25$  m/s

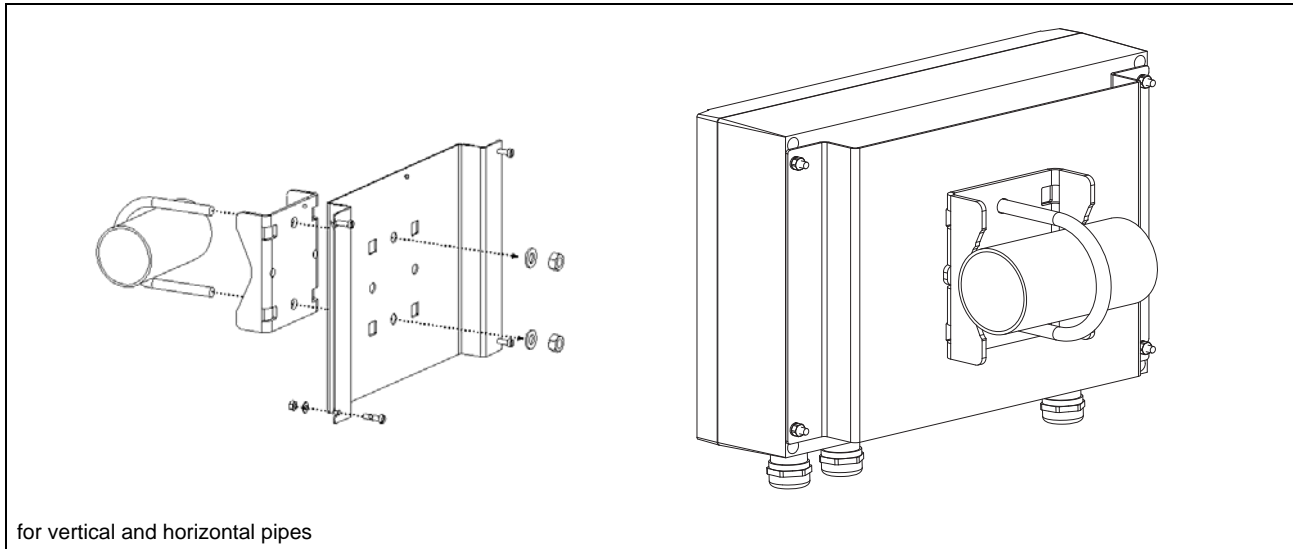
<sup>2</sup> only connection of the supplied transducer type possible

**Dimensions**



in mm

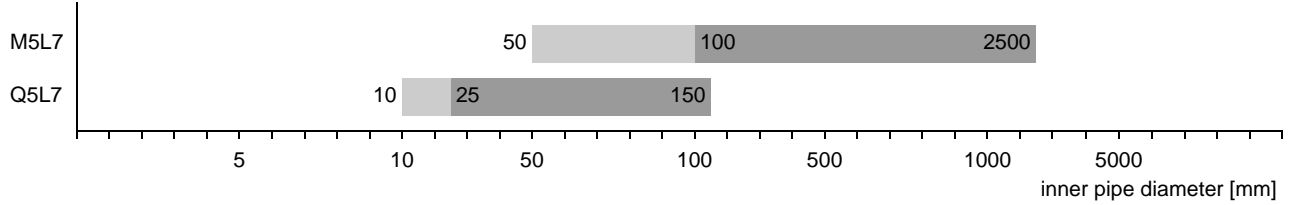
### 2 " Pipe Mounting Kit (option)



## Transducers

### Transducer Selection

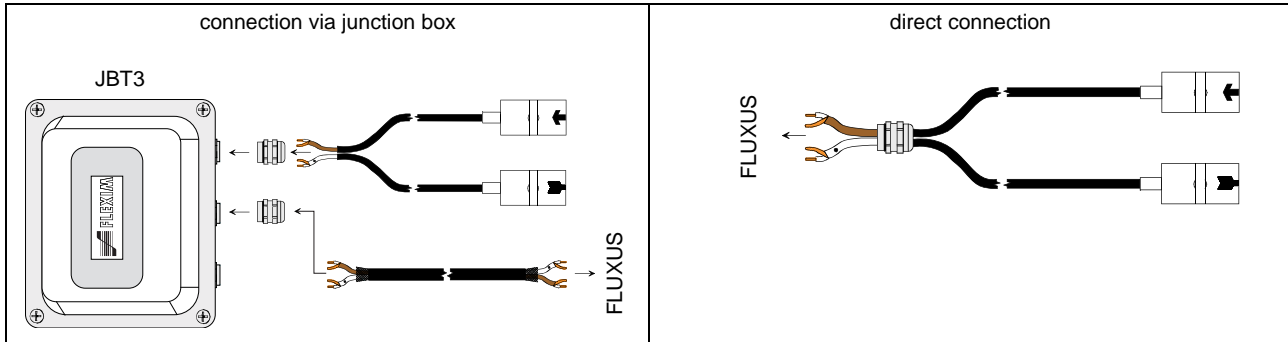
technical type



### Technical Data

technical type		M5L7	Q5L7
transducer frequency	MHz	1	4
<b>inner pipe diameter d</b>			
min. extended	mm	50	10
min. recommended	mm	100	25
max.	mm	2500	150
<b>material</b>			
housing		PEEK with stainless steel cap 304 (1.4301)	PEEK with stainless steel cap 304 (1.4301)
contact surface		PEEK	PEEK
degree of protection according to EN 60529		IP 67	IP 67
<b>transducer cable</b>			
type		2606	2606
length	m	4	3
<b>dimensions</b>			
length l	mm	59	35
width b	mm	28	18
height h	mm	29.5	21
dimensional drawing			
<b>operating temperature</b>			
min.	°C	-40	-40
max.	°C	+100	+100

### Connection Systems



### Transducer Cables

#### Technical Data

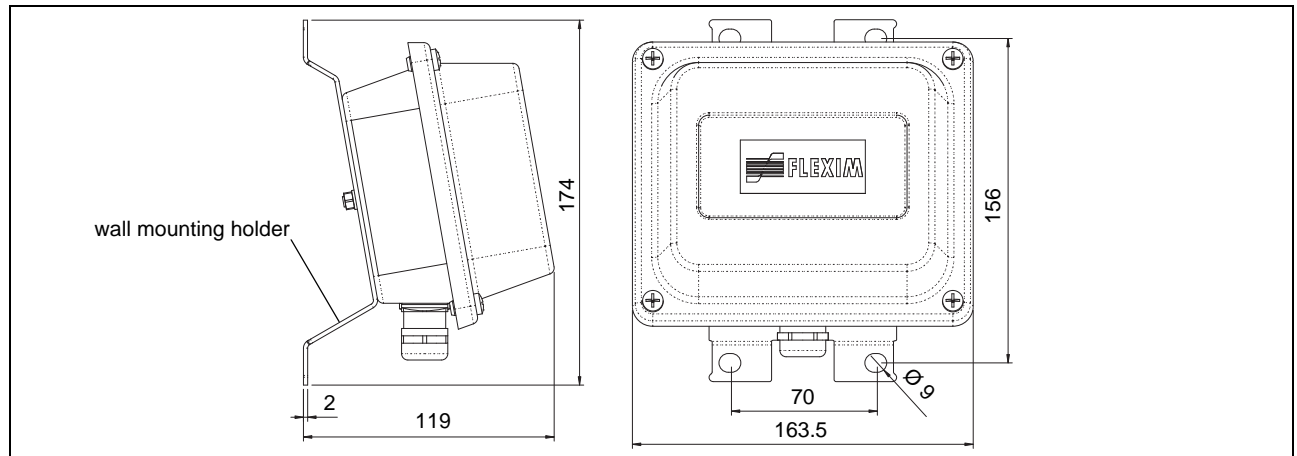
		transducer cable		extension cable	
item number		2606	2552	2615	
standard length	m	10	-	-	
max. length	m	-	M5L7: 300 Q5L7: 90	M5L7: 300 Q5L7: 90	
temperature	°C	-30...+100	< 80	-40...+70	
properties				halogen free fire propagation test according to IEC 60332-1 combustion test according to IEC 60754-2	
cable jacket					
material		PUR	TPV	PUR	
outer diameter	mm	5	12	12	
thickness	mm			2	
color		gray	black	black	
shield		x	x	x	

## Junction Box

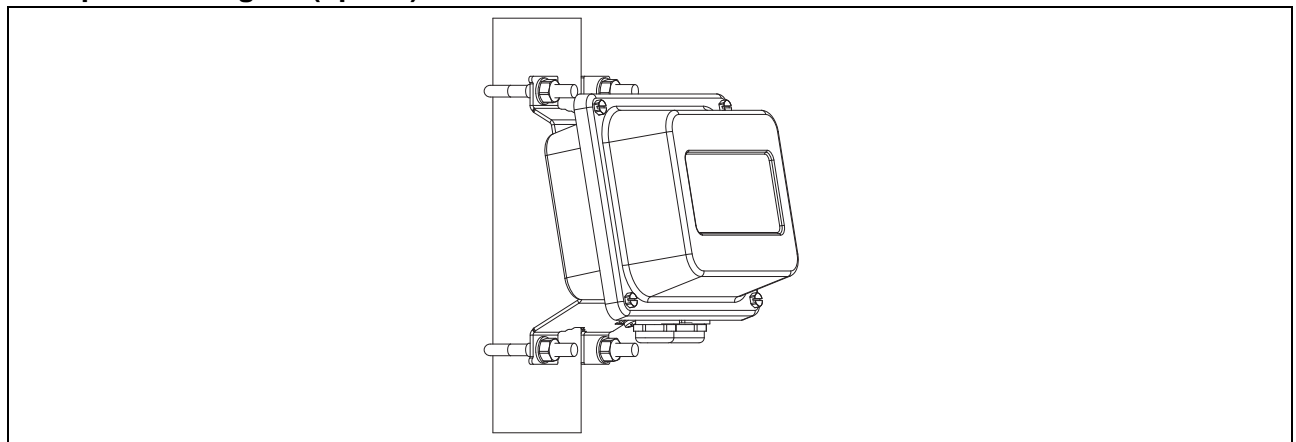
### Technical Data

technical type	<b>JBT3</b>	
dimensions	see dimensional drawing	
fixation	wall mounting option: 2 " pipe mounting	
<b>material</b>		
housing	stainless steel 304 (1.4301)	
gasket	silicone	
degree of protection according to EN 60529	IP 67	
cable gland	M20	
<b>operating temperature</b>		
min.	°C	-40
max.	°C	+80
<b>explosion protection</b>		

### Dimensions



### 2 " Pipe Mounting Kit (option)



## Terminal Assignment

**JBT3**

**Transducers**  
terminal strip KL1

terminal	connection
TV	signal
TVS	shield
TRS	shield
TR	signal

**Extension Cable (Flowmeter)**  
terminal strip KL2

terminal	connection
TV	signal
TVS	shield
TRS	shield
TR	signal



FLEXIM GmbH  
Wolfener Str. 36  
12681 Berlin  
Germany  
Tel.: +49 (30) 93 66 76 60  
Fax: +49 (30) 93 66 76 80

internet: [www.flexim.com](http://www.flexim.com)  
e-mail: [info@flexim.com](mailto:info@flexim.com)

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