

# Ultrasonic Flowmeter

Flowmax® 242i



Flowmax 242i is a flow meter calculating the volume flow of liquids. Based on the ultrasonic technology Flowmax 242i is able to measure conductive and non-conductive liquids contactfree. Flowmax has no moving parts and is absolutely free of wear. The design of the pipe minimizes dead space over the whole geometry.

All parts having contact to the medium are PP. It has the USP Class VI approval and is resistant to gamma irradiation and is suitable for single-use –applications.

Thanks to its technical properties Flowmax is able to measure all kinds of liquids like: DI-Water, Bio-processing liquids, Cosmetics, liquid food, and also aggressive media. Flowmax is characterized by its high measurement accuracy and repeatability. Empty pipe detection is integrated. The calculated flow is provided with a response rate of a few milliseconds on the outputs.

Flowmax 242i is suitable for operation with piston diaphragm and peristaltic pumps. Thus even lower flow rates can be measured for pulsating flow.

The measuring system Flowmax 242i consists of measuring tube (Flowmax 242iM), dongle (Flowmax 242iD) and evaluation (Flowmax 242iE).

The calibration data of the measuring tube are deposited in the dongle. This is plugged into the electronics, so that the evaluation can be accessed on the measuring tube associated calibration. This ensures that the evaluation is always working with the correct measuring tube data.

## Housing Measuring Pipe (Flowmax 242iM)

Material	PP (Polypropylene)			
approvals	USP Class VI, FDA, BSE/TSE free, resistant to gamma irradiation			
Protection class	IP65			
Medium temperature [°C]	0°...50°C			
Measuring range [l/min]				
with continuous flow [l/min]	0.015-1	0.024-3	0.09-6	0.3-24
pulsating flow measurement is possible from 0.5 l/h (=0.008l/min)				
Nominal diameter [DN]	3	5	7	10
Nominal pressure max. [bar]	7	7	7	7
Process connection 11864 BKS-A Clamp	DN10	DN10	DN10	DN10
Dimensions L/W/H [mm]	144/96/42	144/96/42	144/96/42	148/100/42
Weight [g]	400	400	400	430

## Dongle (Flowmax 242iD)

Connection Plug 5 pins

## Electronics (Flowmax 242iE)

Material Housing PPSU  
 Power supply 18...30VDC, ca. 3.6W  
 Electrical connection 5 or 8-pin plug  
 Display (option) Simultaneous display of volume flow, quantity, bar graph, lighted  
 Input 1 digital input, usable for dosing start or counter reset  
 Outputs 2 digital output, configurable as pulse output or empty pipe alarm, Current output configurable 0/4-20mA, RS485-data interface.

Max. error of measurement  $\pm 2\%$  o.r.  $\pm 3\text{mm/s}$  (o.r. = of reading), option  $\pm 1\%$  o.r.  $\pm 3\text{mm/s}$   
 Reference conditions (VDI/VDE 2642)

Repeatability  $\leq 0.5\%$

All flow meter parameters are freely configurable by using the display

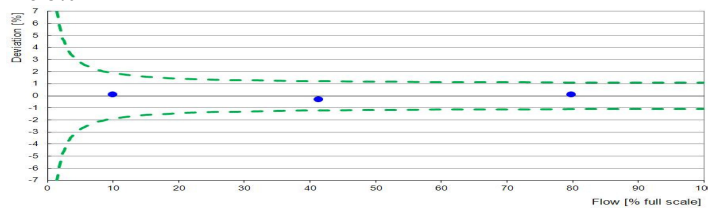
The variety of outputs / input depends on the plug selection.

## Further information:

### MIB GmbH

Bahnhofstr. 35, D-79206 Breisach  
 Tel. 0049 / (0) 7667 – 20 777 90  
 Fax: 0049 / (0) 7667 – 20 777 99  
 Mail: info@mib-gmbh.com  
 Web: www.flowmax.de

Technical subjects to be changed!



Example: Measuring points of a calibrated Flowmax in error graph according definitions