

Ultrasonic Flowmeter



Flowmax[®] 400i according to IECEx and directive 2014/34/EU Ex-Zone 1 and Ex-Zone 2



Flowmax 400i  is a flow meter calculating the volume flow of liquids. Based on the ultrasonic technology Flowmax 400i is able to measure conductive and non-conductive liquids contact free. 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 PFA. Flowmax can be used from DI water to alkaline, toxic, aggressive media and/or solvents in hazardous areas. Flowmax is characterized by its high measurement accuracy and repeatability. Empty pipe detection is integrated. Optionally the Flowmax have the output of the sound velocity. The calculated flow is provided with a response rate of a few milliseconds on the outputs. Flowmax has by default a preset quantity counter. The start signal can optionally be fed from the outside. A control signal for activation of the pump or valve control is also standard. Flowmax 400i is suitable for operation with piston diaphragm and peristaltic pumps.

SI 001 E/FM400Ex/05.22

Housing

Material	pipe	PFA (Perfluoralkoxy)
	electronics	PP (Polypropylene)
	nut	PVDF (Polyvinylidene fluoride) or PFA

Protection class	IP65			
Medium temperature [°C]	0...50			
Measuring range [l/min]	0.03/0.09-6	0.3-24	0.9-60	1.2-120
Nominal diameter [DN]	7	10	15	20
Pressure [bar at 20°C]	PN6	PN6	PN6	PN6
Process connection: Flare	3/8"	1/2"	3/4"	1"
Dimensions L/W/H [mm]	209/170/73	211/173/73	215/187/76	238/108/86
Weight [kg]	1.1	1.1	1.1	1.3

Electronics

Power supply	24VDC, approx. 3.6W
Electrical connection	8-wire cable
Display	without display, electronics encapsulated, without cover
Input	1 digital input, usable for dosing start
Outputs	2 digital outputs, configurable as pulse output or as empty pipe alarm, Current output configurable as 0/4-20mA, RS485-data interface.
Max. error of measurement	± 2% o.r. ± 0.15% f.s. (o.r. = of reading, f.s. = full scale) option ± 1% o.r. ± 0.15% f.s.
Repeatability	Reference conditions (VDI/VDE 2642) ≤ 0.5%

The EX-labelling is:
IECEx Ex mb IIC T6 Gb
ATEX II 2G Ex mb IIC T6 Gb and ATEX II 3G Ex mc IIC T6 Gc

Flowmax 400i  is a device within the scope of IECEx and directive 2014/34/EU. When used as equipment of group II, category 2G for zone 1, explosive gas atmospheres, as well as under consideration of the intended use, this flowmeter does not pose any ignition hazard of its own. The ignition hazard analysis was carried out in accordance with the IECEx and ATEX-Directive 2014/34/EU.

All flow meter parameters are freely configurable by using FlowCon. FlowCon can be ordered separately and does not have an Ex approval and may only be used outside a hazardous area. The selection of the outputs/inputs depends on the possible variants.

Further information:

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