

Magnetic Inductive Flow Meter

**PIT
UMF2**

INSERTION TYPE



- Insertion Type for Pipe Sizes up to DN 2000
- simple design
- wear free
- nearly no pressure drop
- Built-in or -out under process conditions

Function

An electrically conductive medium induces a voltage while flowing through an arranged magnetic field in accordance to the Faraday's induction law.

The induced voltage is proportional to the average flow velocity. Knowing the pipe size the volume flow can be calculated.

The PIT-flow meter series is available with integral or remote mount transmitter.

A retracting device for mounting and dismounting under process conditions is available.

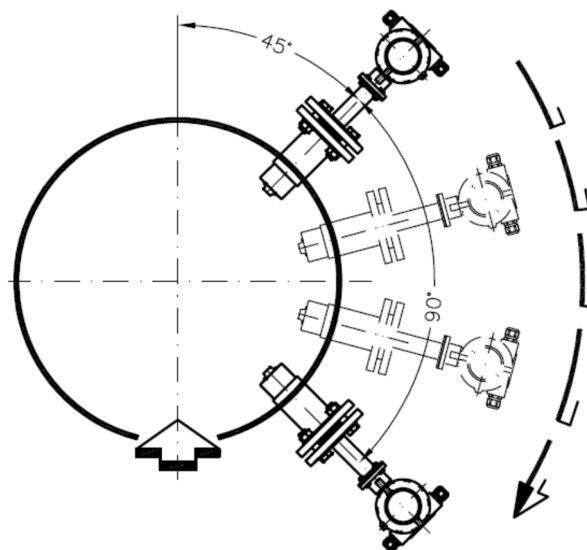
Application

The magnetic-inductive PIT flow velocity sensor is used to measure or monitor the volume flow of liquids, slurries, pastes and other electrically conductive media while minimizing pressure drop.

Pressure, temperature, density and viscosity do not affect the volume measurements.

Portions of solid particles and small gas pockets should be avoided. The sensor will be inserted into a pipe via a weld-on adapter – see sketch below. Special electrodes are available for media that tend to form covers, or coat the electrodes.

For a safe operation we recommend to mount the measuring system in a vertical position between 1 to 5 o'clock position.



PIT / UMF2 Flow Meters have the following significant characteristics:

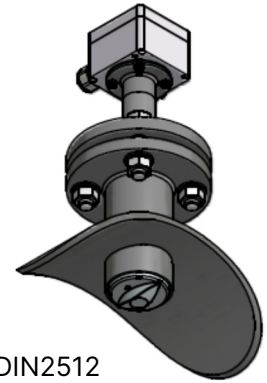
- Different wetted materials available
- Electrodes in Hastelloy, Tantalum, Platinum and other materials available.
- Retracting device for use under process conditions

Technical data

Sensor PIT:

Material

Sensor:	Stainless steel / PTFE, PFA other materials on request	
Electrodes:	Hastelloy, Tantalum, Platinum, other materials on request	
Process connections:	Flanges acc. EN 1092, ASME B16.5, DIN2512 special connections on request.	
Nominal pressure:	PN 40, ASME CI150 / 300 PN 16, ASME CI150 / 300 higher pressures on request	(stainless steel / PTFE) (PFA)
Process temperature:	-40°C up to +100°C -40°C up to +150°C	(stainless steel / PTFE) (PFA)
Ambient temperature:	-40°C up to +60°C	
Ingress protection	IP 67 / IP 68 (EN60529) 5 m standard, cable length remote version IP 68 (EN60529) up to 25 m - on request IP 68 seawater resistant version - on request	



Range of application

For sizes:	DN125 up to DN2000 DN125 up to DN600	(stainless steel / PTFE) (PFA)
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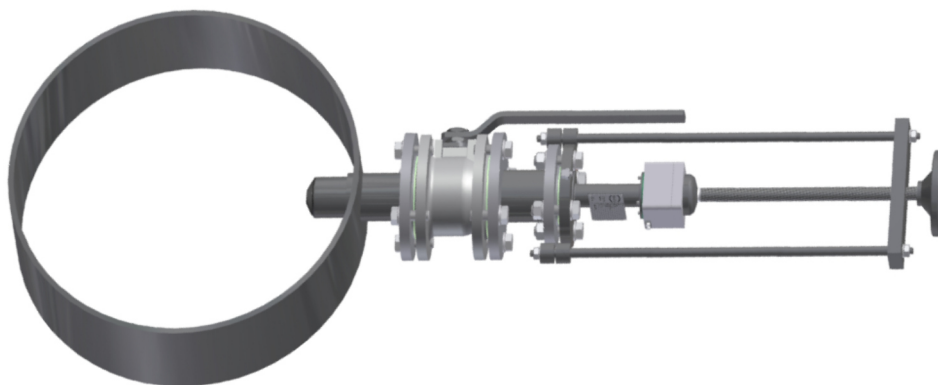
Adjustable upper range values

Standard:	1 m/s - 10 m/s
Special:	0,5 m/s - 5 m/s

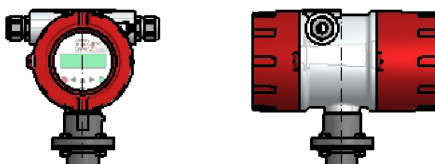
OPTIONS:

Retractor device

With the optional available retractor device the PIT sensor can be built in and out under process conditions.



Transmitter UMF2 (b)



Mounting:	integral or remote
Power supply:	115 / 250 VAC 24 VDC
Outputs:	galvanically isolated
Analog:	1 x 0/4-20 mA
Binary 1:	passive, optocoupler, Um=30 V, Im=200mA,
Ambient temperature:	-20°C up to +60°C
Ingress protection:	IP 68 (EN60529)
Communication:	HART®
Accuracy	±1,5% of reading ±0,5% from adjusted upper range value. (under reference conditions)
Repeatability	±0,75% of reading ±0,25% from adjusted upper range value. (under reference conditions)
CE-Marking:	EMC-Directive 2004/108/EG EN 61010-1:2004 EN 61000-6-3:2001 (emissions residential environments) EN 61000-6-2:1999 (immunity for industrial environments) EN 55011:1998+A1: 1999 Group 1, Class B (radio interference) EN 61326-1:2008 Safety requirements for electrical measuring, control and laboratory devices.

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