



Magnetic Inductive Flow Meter

PIT with UMF and UMF2

- 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 electrode currency is proportional to the flow velocity and therewith to the volume flow.

The PIT-Sensor 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.

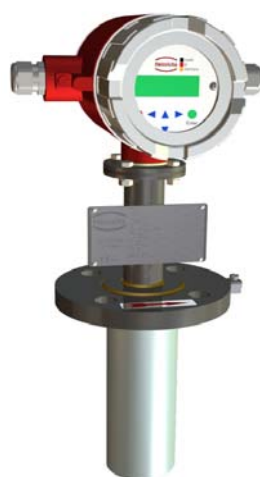
Pressure, temperature, density and viscosity do not affect the volume measurements.

Portions of solid particles and small gas pockets should be avoided.

Special electrodes are available for media that tend to form greasy films or crusts.

The PIT has following significant characteristics:

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



Technical data

Sensor

Material

Armature:	Stainless steel / PTFE, PFA other materials on request
Electrodes:	Hastelloy, Tantalum, Platinum, other materials on request
End connections:	Flanges acc. EN 1092, ASME B16.5, DIN2512, special connections on request.
Nominal pressure:	PN 40, ASME CI150 / 300 (stainless steel / PTFE) PN 16, ASME CI150 / 300 (PFA) higher pressures on request
Process temperature:	-40°C up to +100°C (stainless steel / PTFE) -40°C up to +150°C (PFA)
Ambient temperature:	-40°C up to +60°C
Ingress protection:	IP 65 / IP 68 (EN60529)
<u>Certification</u>	
Explosion protection:	BVS 03 ATEX E 150 X II 2G EEx e [ia] IIC T3–T6 NEPSI Approval Cert No. GYJ06474X

Range of application

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

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



Transmitter

UMF

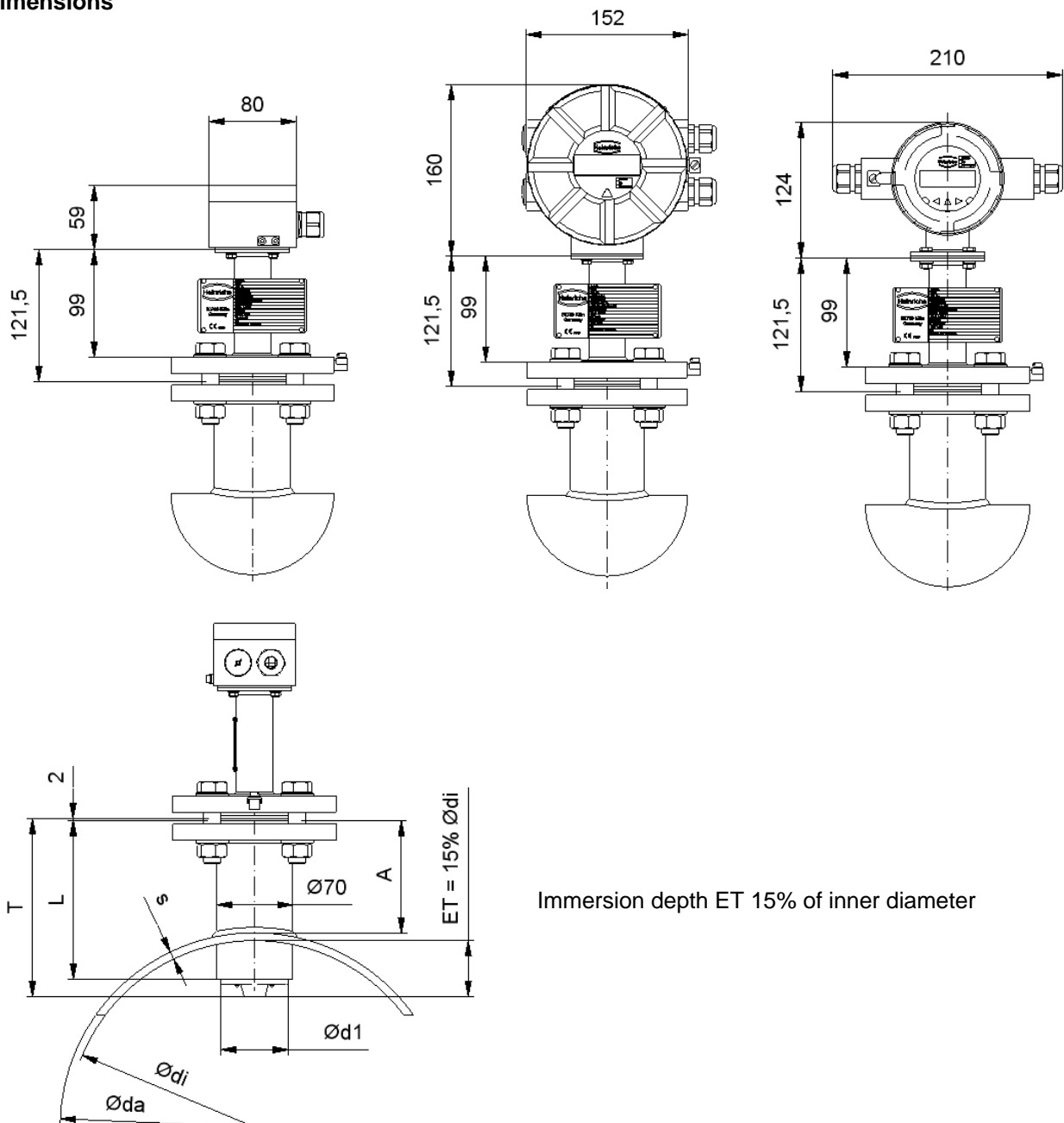


UMF2



Mounting:	integral or remote	
Power supply:	115 / 250 VAC 24 VDC 24 VAC	(UMF, UMF2) (UMF, UMF2) (UMF)
Outputs:	galvanically isolated	
Analog:	2 x 0/4-20 mA 1 x 0/4-20 mA	(UMF) (UMF2)
Binary 1:	active, potential free 24 V=, max. 200 mA passive, optocoupler, U _i =30 V, I _i =200mA, P _i =3 W	(UMF) (UMF, UMF2)
Binary 2 (status):	passive, optocoupler, U _i =30 V, I _i =200mA, P _i =3 W	(UMF)
Binary 3 (optional):	passive, optocoupler, U _i =30 V, I _i =200mA, P _i =3 W (only with 1 analog output)	(UMF)
Ambient temperature:	-20°C up to +60°C	
Ingress protection:	IP 68 (EN60529)	
Communication:	HART®	(UMF, UMF2)
<u>Accuracy</u>	± 1,5% of reading ± 0,5% from adjusted upper range value (under reference conditions)	
<u>Repeatability</u>	± 0,75% of reading ± 0,25% from adjusted upper range value (under reference conditions)	
<u>Certification</u>		
Explosion protection:	DMT 99 ATEX E 107 X	(UMF)
Increased safety EEx e (connection area):	II (1)/2G EEx de [ia] IIB/IIC T3-T6	
Explosion proof EEx d (connection area):	II (1)/2G EEx d [ia] IIB/IIC T3-T6	
Signal output/ input:	Intrinsically safe or not intrinsically safe	
	NEPSI Approval Cert No. GYJ06475	
CE-Marking:	Explosion Protection Directive 94/9/EC EMC-Directive 89/336/EEC	
Electromagnetic compatibility:	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 61000-4-2 to DIN EN 61000-4-6 EN 61000-4-8, EN 61000-4-11, EN 61000-4-29 EN 61326	

Dimensions



Immersion depth ET 15% of inner diameter

Model	DN	T	Ød1	L
PIT-PFA	150-600	163mm	62mm	145mm
PIT-SS	150-600	163mm	60,3mm	145mm
PIT-SS	700-1200	263mm	60,3mm	170mm
PIT-SS	1400-2000	363mm	60,3mm	170mm

For further information see device description PIT_GB_XX_en
Subjects to change without notice.

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