

FLOWMETER





Hydrodynamic design

Our Hidromag flowmeters are used to measure the volume and flow of the conductive liquid in a closed pipe.

The high accuracy in the measurement is guaranteed in the complete measuring range.

They implement 16-bit microprocessor, providing high integration and precision.



High resistance

The variations of density, viscosity, temperature, pressure and conductivity of the fluid do not affect the measure of the Counter.

CONVERTER HIDROMAG

Serial Number: 18090118
 Caliber: DN - 200 mm
 Sensor factor: 2.0898
 Meter factor: 0.8592
 Power Supply: 85 - 250 Vac,
 45-63 Hz
 Consumption: 7,62 W
 Room temp.: - 25 a 55 °C
 Rel. Humidity: 5 a 90 %
 Protection: IP54
 Outputs: 4 - 20 mA / 0 - 10 mA
 Pulses / Frequency
 RS-232

Model image 220VAC
 power supply.



Functioning

The working principle of the Electromagnetic Counter HIDROMAG is based on Faraday's Law of Magnetic Induction.

The Sensor is mainly composed of a measuring tube with an sealer coat, a pair of Electrodes inserted in the wall of the measuring tube, a pair of coils and iron cores to produce the magnetic field. When the conductive liquid goes through the measuring tube, a voltage between electrodes is produced, which is directly proportional to the speed of the liquid. The signal is amplified and processed by the converter to perform the various functions shown on the display.

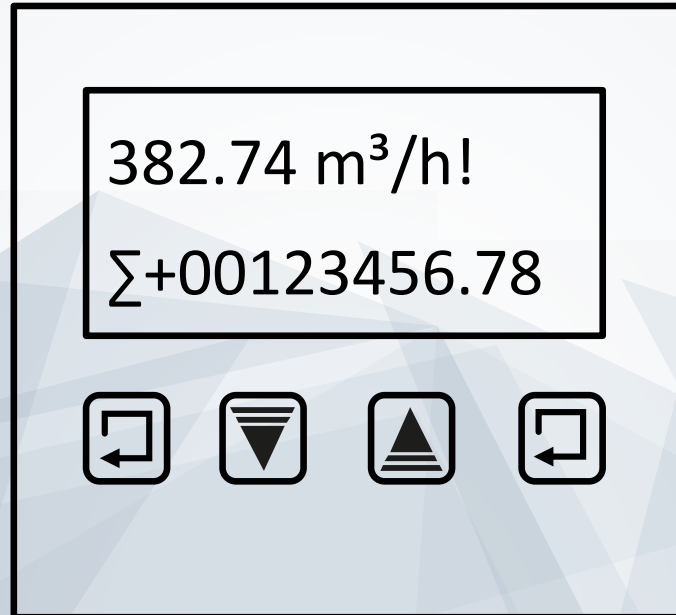
SENSOR HIDROMAG

Serial Number: 18090118	Protection: IP67
Caliber: DN-200mm	Fluid temp.: 0 a 80°C
Max. Pressure: 16 Bar	Room temp.: -25 a 55°C
Sensor factor: 2.0898	CE
Meter factor: 0.8592	
Lining: NBR	
Electrodes: AISI 316L	
Rel. Humidity: 5 a 90%	

Model image 220VAC
 power supply.



Dial



Model image 220VAC and 24VDC power supply.



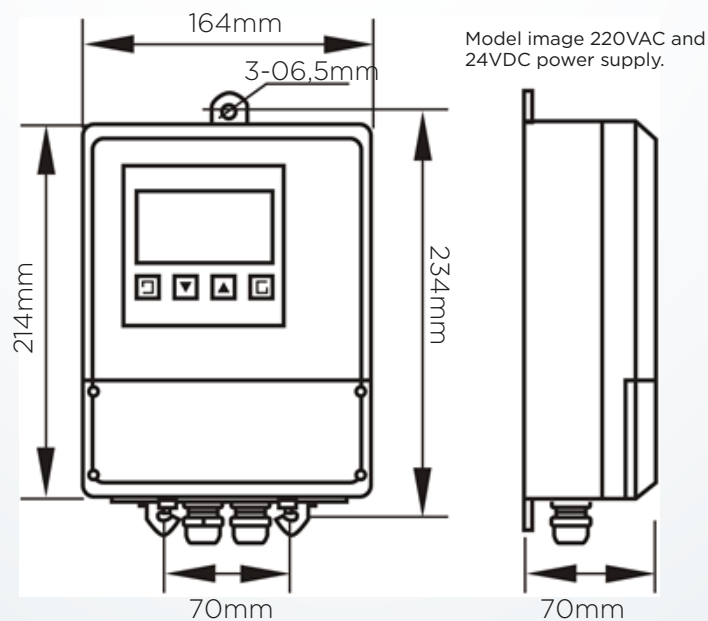
Technical Specifications

- ✓ - There are no obstacles in the pipe, therefore, there is no pressure loss and a smaller section of straight pipe is necessary.
- ✓ - Variety of coatings and electrode materials to work according to the different characteristics of the circulating fluid.
- ✓ - Installation conditions U3 - D0, downstream of the flowmeter, it doesn't need straight sections to guarantee its correct operation.
- ✓ - Programmable at low frequency of square wave excitation, improving measurement stability and consumption reduction.
- ✓ - The processing is digital, providing greater resistance to noise and producing more reliable measurements.
 - ✓ - Backlit high-definition LCD display.
 - ✓ - RS232 digital communication port (for 220VAC and 24VDC version).
 - ✓ - Intelligent Empty Pipe Detector.
 - ✓ - Separated version up to 100 meters.



Disassembly

Converter		
Supply	220 VAC (45 - 63 HZ), (optional: 24 VDC)	Internal supply
Consumption	7,62 Wativos.	
Digital Output	Pulse, frequency (1 - 5000 HZ).	Frequency train
Display	LCD and keyboard- 2 X 16 characters.	LCD and keyboard- 2 X 16 characters.
Alarms	Empty tube, upper limit, lower limit.	Empty tube, upper limit, lower limit.
Protection	IP - 54	IP - 54
Min. Fluid conductivity	$\geq 5\mu\text{S/cm}$.	$\geq 5\mu\text{S/cm}$.
Temperature amb. range	-25 to 55 °C.	-25 to 55 °C.
Version	Separated	Separated
Analog outputs	4-20mA / 0-10mA	
Interface	RS-232	
Communicatoin protocol	MODBUS	

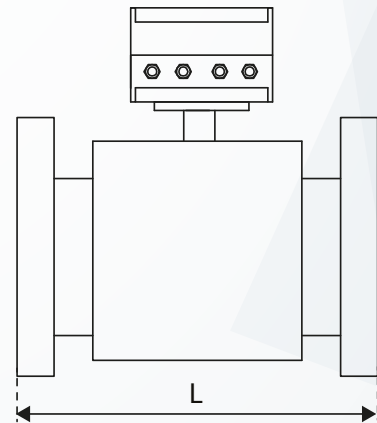


Sensor	
Nominal diameter	DN-50 a DN - 400
Nominal pressure	PN-16 (optional: PN-10, PN-40, PN-25)
Connections	Flanges
Electrode material	Stainless steel 316L (optional: titanium, tantalum and hastelloy B and C)
Coating	Neoprene (optional: teflon)
Fluid Temperature Range	0 - 80 °C.
Protection	IP-67.
Installation	Separated version
Maximum speed	15 m/s.
Flange Material	Carbon Steel
Precision	± 2 %
Relative humidity	5% a 90%
Sensor material	Stainless steel 304
Ambient temperature	-25 °C to 55 °C



Dimensions

Caliber		Long	Width	high	Weight
mm	inch.	mm			Kg
50	2"	200	160	260	8,5
65	2-1/2"	180	250	280	11,5
80	3"	240	200	300	13,5
100	4"	240	220	320	16,9
125	5"	240	250	360	21,5
150	6"	300	280	390	26,1
200	8"	350	340	430	35,0
250	10"	410	440	500	55,5
300	12"	460	500	560	64,5
350	14"	520	550	600	87,0
400	16"	580	600	660	106,0



Connections- Flanges PN16

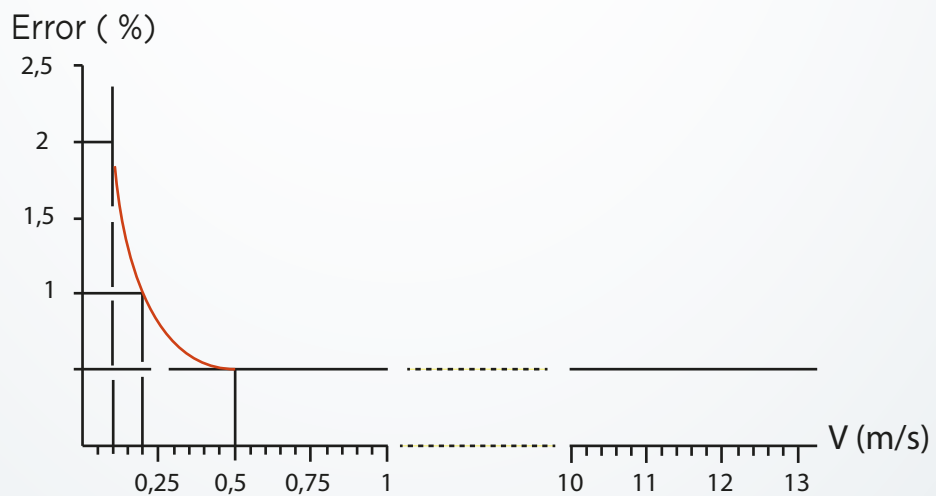


Flowmeters section range

Caliber		Q. (0,5m/sg)	Q. (5m/s)
mm	Inch.	m ³ /h	
50	2"	3,53	35,34
65	2-1/2"	5,97	59,70
80	3"	9,05	90,45
100	4"	14,14	141,35
125	5"	22,09	220,88
150	6"	31,81	318,05
200	8"	56,50	565,00
250	10"	88,35	883,50
300	12"	127,20	1.272,00
350	14"	173,15	1.731,50
400	16"	226,15	2.261,50

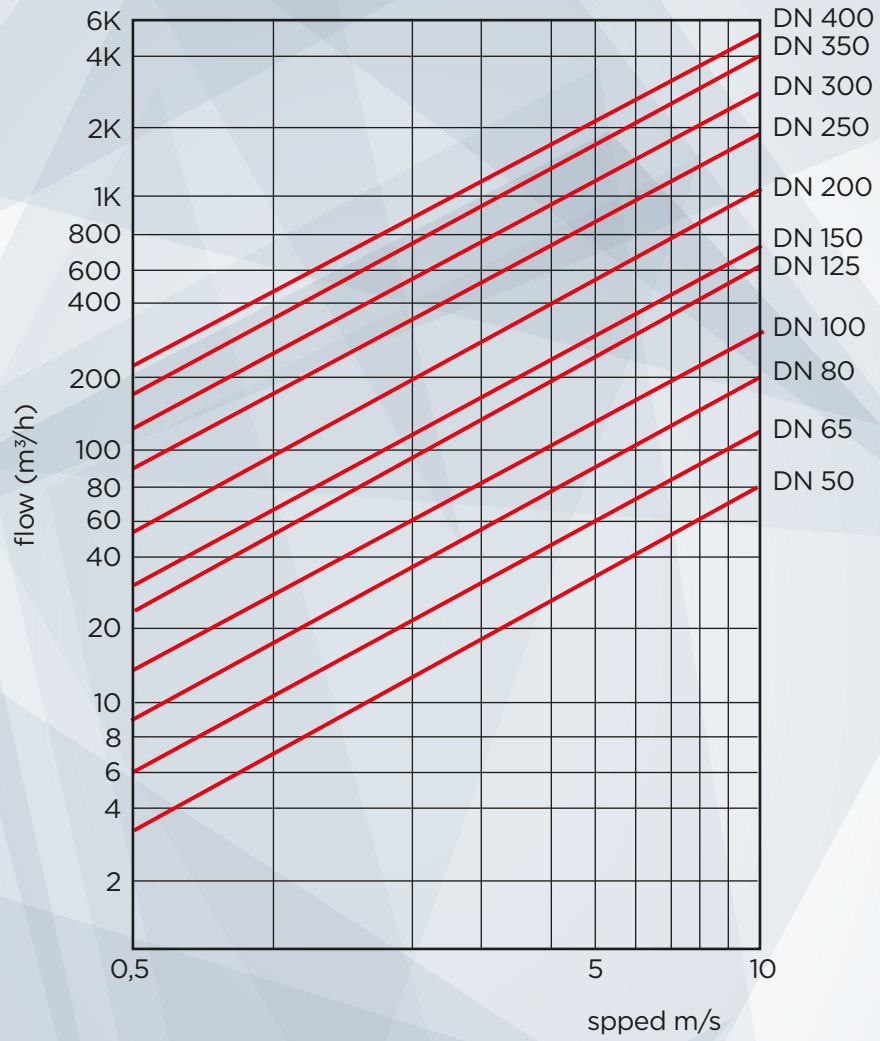


Error curve





Abacus for the choice of diameter





Installation schemes

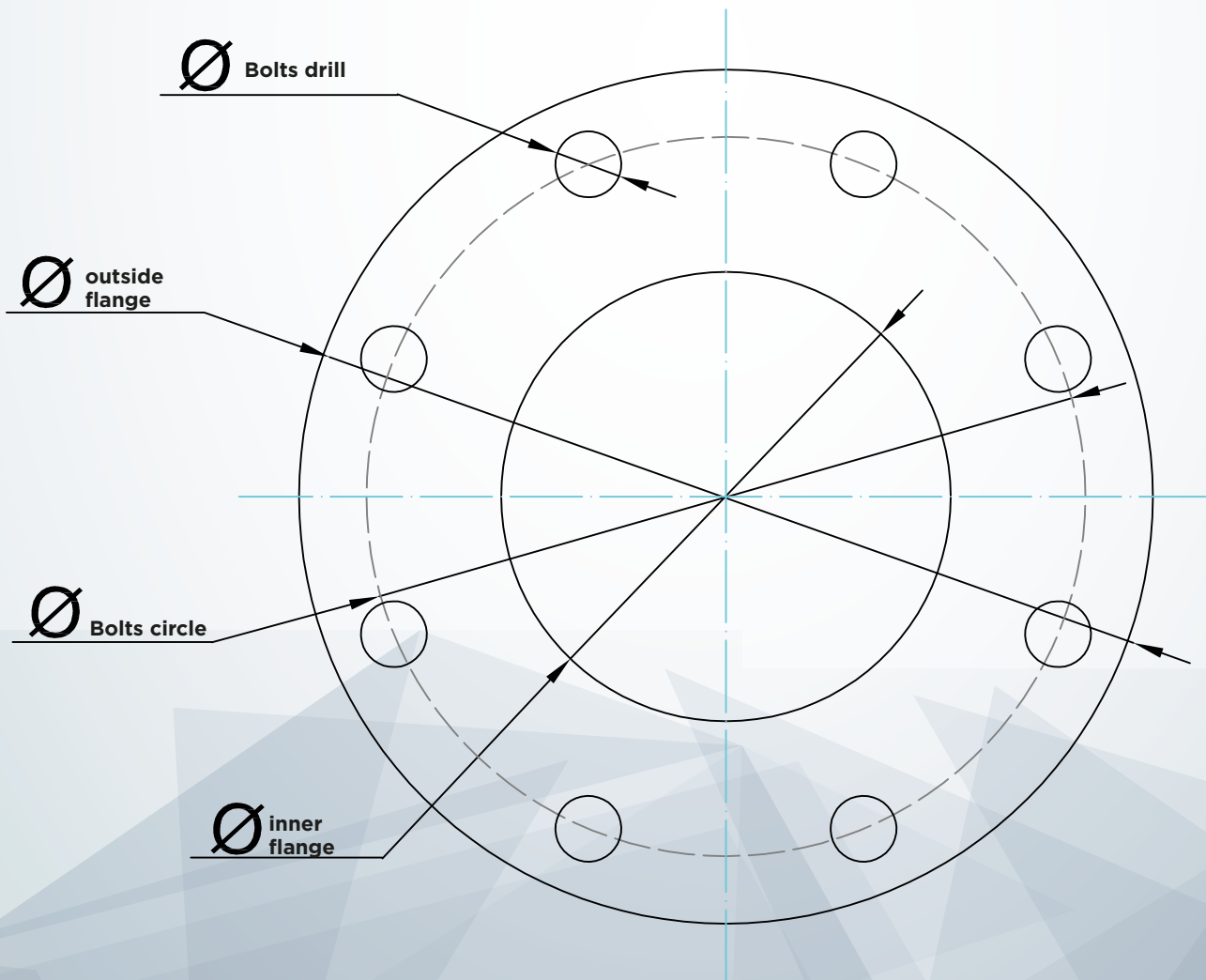
<p>Hung up right</p>	<p>Appropriate for reading</p>	<p>Prevention of strong sunlight</p>
<p>Avoid extreme temperature changes</p>	<p>Stay away from leaks</p>	<p>Stay away from fire</p>
<p>Installation level</p>	<p>Reasonable support</p>	<p>Filling the pipe</p>
<p>Check the requirements of the straight pipe section</p>	<p>Measure of precipitable water</p>	<p>Prevention of bubbles</p>
<p>Easy maintenance and cleaning</p>	<p>Avoid negative pressure and unfilled</p>	<p>Do not install in front of the pump inlet</p>
<p>Avoid sudden movements</p>		



Flange dimensions

DN (MM)	PN	OUTSIDE DIAMETER (MM)	BOLTS CIRCLE DIAMETER (MM)	Nº BOLTS	BOLTS DRILL DIAMETER (MM)	
50	PN10/16	165	125	4	18	UNE-EN 1092-1
65	PN10/16	185	145	4	18	
80	PN10/16	200	160	8	18	
100	PN10/16	220	180	8	18	
125	PN10/16	250	210	8	18	
150	PN10/16	285	240	8	22	
200	PN10	340	295	8	22	
200	PN16	340	295	12	22	
250	PN16	405	355	12	26	
300	PN16	460	410	12	26	
350	PN16	520	470	16	26	
400	PN16	580	425	16	26	

* For ANSI flanges consult.





WHEN WATER COUNTS

CUANDO EL AGUA ES LO QUE CUENTA

www.hidroconta.com

Ctra. Sta Catalina, 60
Murcia (30012)
España

T: +34 968 26 77 88
F: +34 968 34 11 49

hidroconta@hidroconta.com

Hidroconta disclaims responsibility for errors in the information contained in this document, which may be modified without notice. All rights reserved. © Copyright. 2016 HIDROCONTA S.A.U.

