

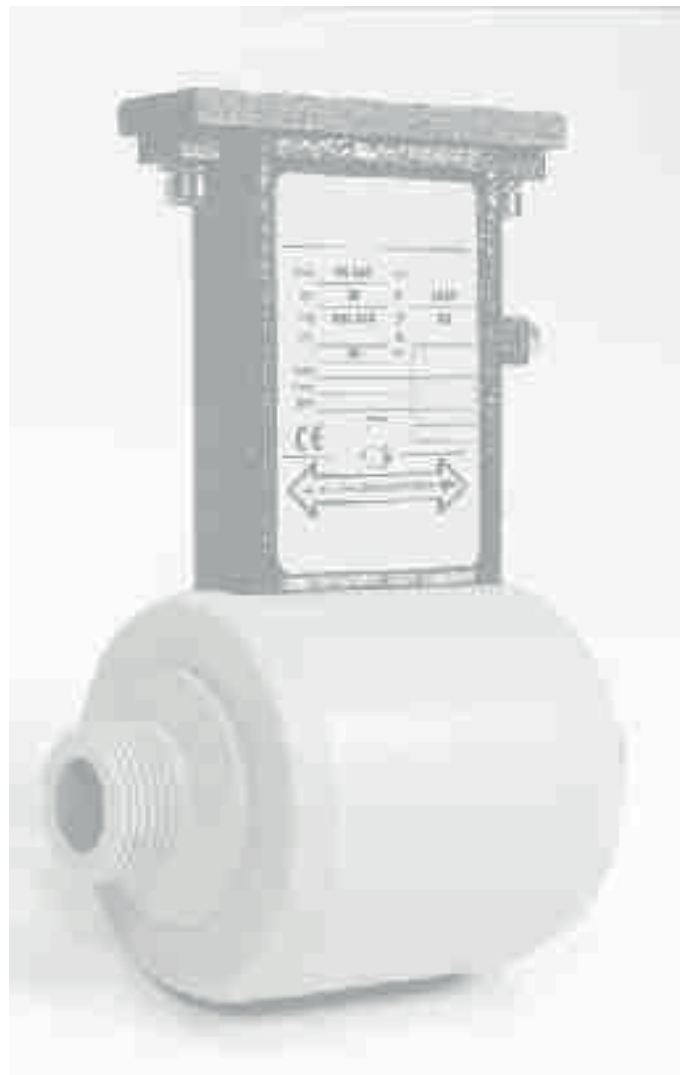


**ISOMAG** 

*The friendly magmeter*

**DATA SHEET**

**MS600**



**CE**

**ISOIL**   
INDUSTRIA

# INDEX



TECHNICAL DATA	2
OVERALL DIMENSIONS	3
INSTALLATION RECOMMENDATIONS	4
SENSOR GROUNDING	5
SEPARATE VERSION	6
ACCURACY TABLE	7
HOW TO ORDER	8

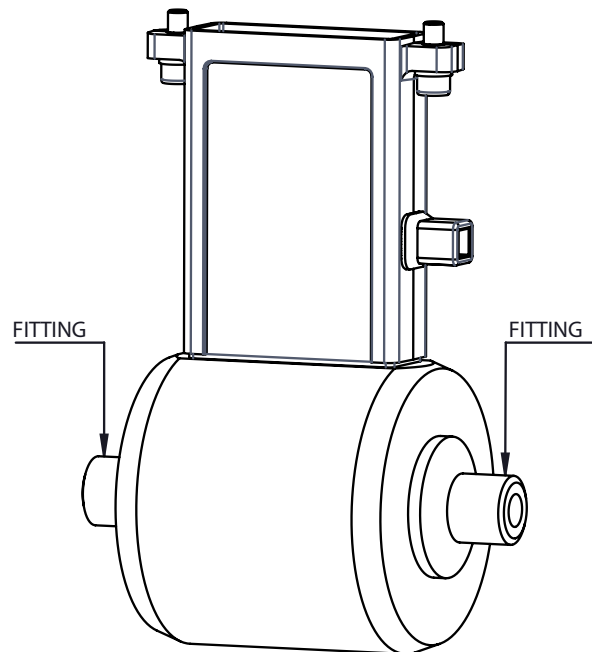
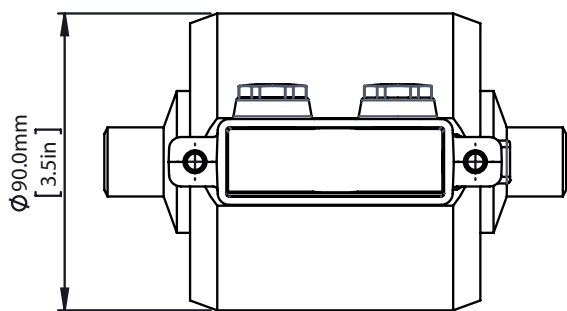
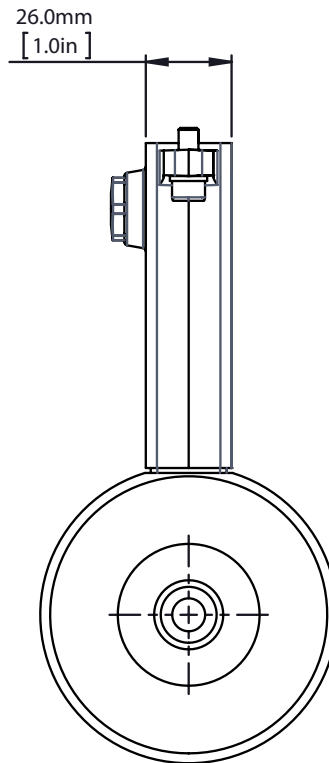
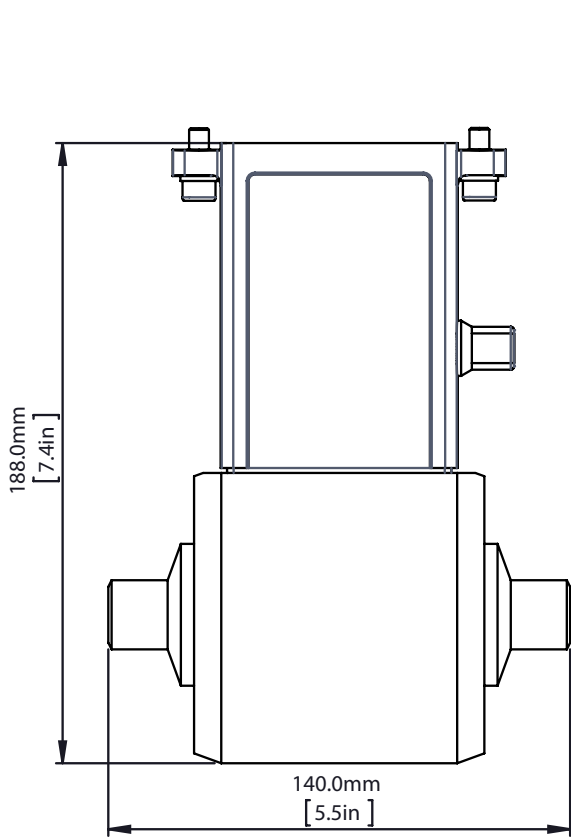
## TECHNICAL DATA

<b>OVERALL FEATURES</b>	
<b>Nominal diameter</b>	<input type="checkbox"/> DN 3 ÷ 20
<b>Minimum conductivity</b>	<input type="checkbox"/> 5 µS/cm
<b>Humidity Range</b>	<input type="checkbox"/> 0÷100% (IP 67)
<b>Accuracy</b>	<input type="checkbox"/> See relevant converter datasheet
<b>CE Certification</b>	<input type="checkbox"/> Yes

<b>STANDARD FEATURES</b>	
<b>Body material</b>	<input type="checkbox"/> Polypropylene
<b>Nominal pressure</b>	<input type="checkbox"/> 1600 kPa
<b>Process connection</b>	<input type="checkbox"/> Threaded UNI 338 <input type="checkbox"/> Threaded NTP
<b>Version - Protection Rating</b>	<input type="checkbox"/> Compact IP67
<b>Connection material</b>	<input type="checkbox"/> Polypropylene
<b>Lining material</b>	<input type="checkbox"/> Polypropylene
<b>Gasket material</b>	<input type="checkbox"/> FPM
<b>Liquid temperature</b>	<input type="checkbox"/> 0 °C ÷ 60 °C
<b>Vacuum resistance</b>	<input type="checkbox"/> 10 Kpa absolute at 60 °C
<b>Electrodes material</b>	<input type="checkbox"/> Stainless steel AISI 316 <input type="checkbox"/> Hastelloy C276 <input type="checkbox"/> Platinum-rhodium <input type="checkbox"/> Titanium <input type="checkbox"/> Tantalum

<b>OPTIONAL FEATURES</b> (CHECK FOR MORE DETAILS 'HOW TO ORDER' ON LAST PAGE)	
<b>Gasket material</b>	<input type="checkbox"/> EPDM
<b>Process connection</b>	<input type="checkbox"/> Other on request
<b>Electrodes material</b>	<input type="checkbox"/> On request
<b>Version - protection rate</b>	<input type="checkbox"/> Separate (max 20m) - IP68 <input type="checkbox"/> Separate (max 500m) with pre-amp IP67 (IP68 optional)

OVERALL DIMENSIONS



FITTINGS GAS/NPT


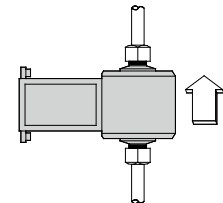
DIMENSIONS mm (inches)	DN				
	3 (1/8")	6 (1/4)	10 (3/8)	15 (1/2")	20 (3/4")
FITTINGS	1/4"	3/8"	1/2"	3/4"	1"


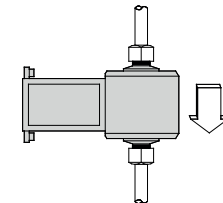
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# INSTALLATION RECOMMENDATIONS


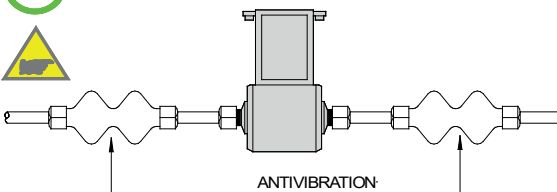
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**In vertical installation an ascending flow is preferable.  
For vertical installations with descending flow direction contact the manufacturer**


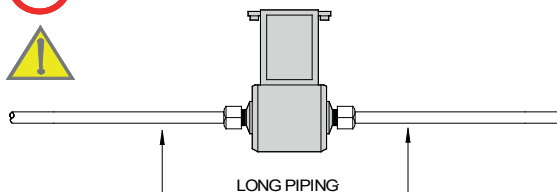



**For installations in long pipe lines, please use anti vibration joints**


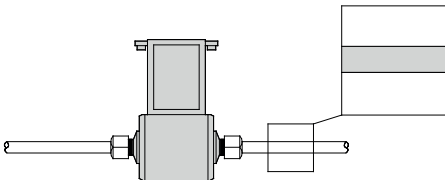




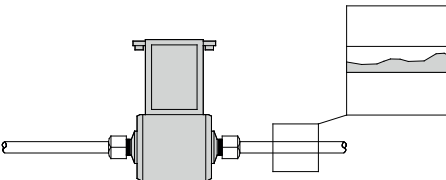
ANTIVIBRATION


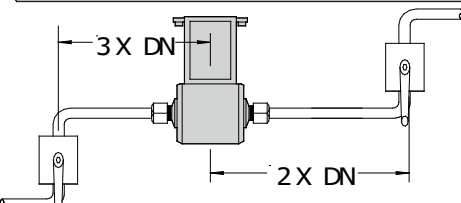
LONG PIPING

**Avoid a partially empty pipe, during operation the pipe must be either completely full of liquid or completely empty**


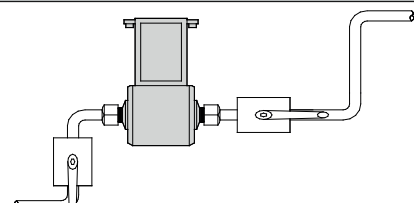



**Install the sensor away from bends and hydraulic accessories and hydraulic accessories**


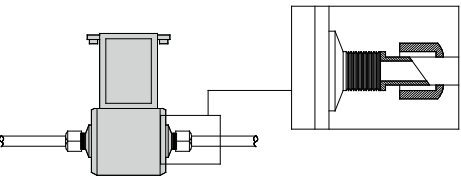




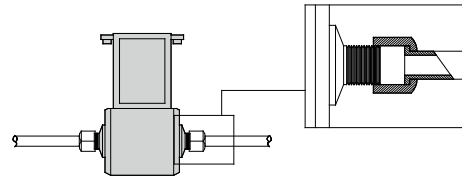
3 X DN

2 X DN

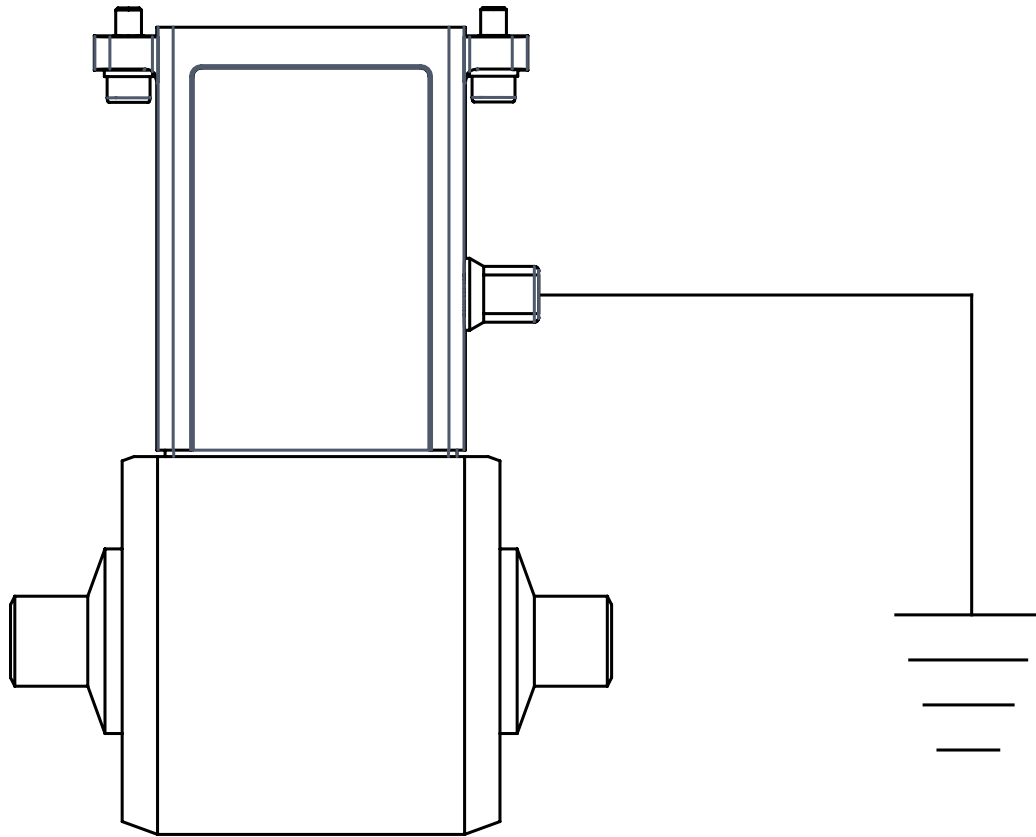



**Avoid positioning flange and counter flanges by tightening the nuts.**

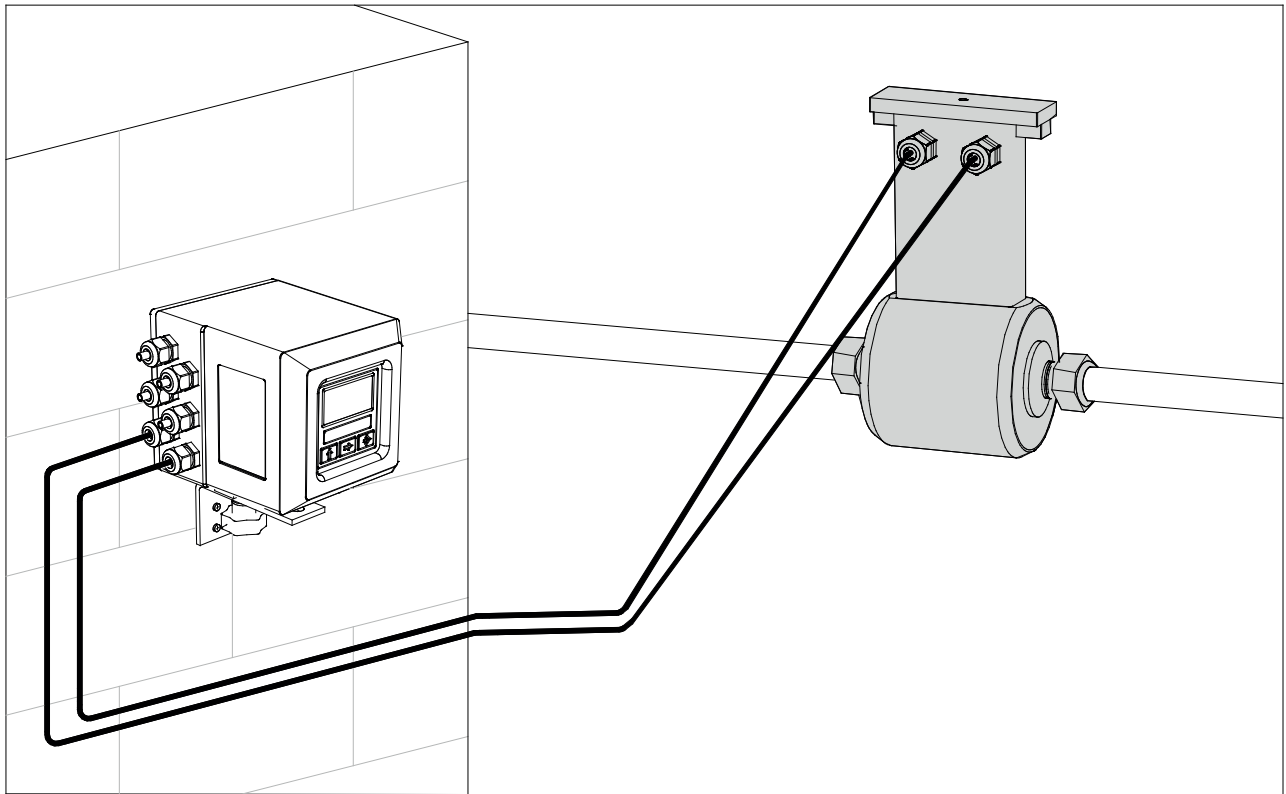



## SENSOR GROUNDING

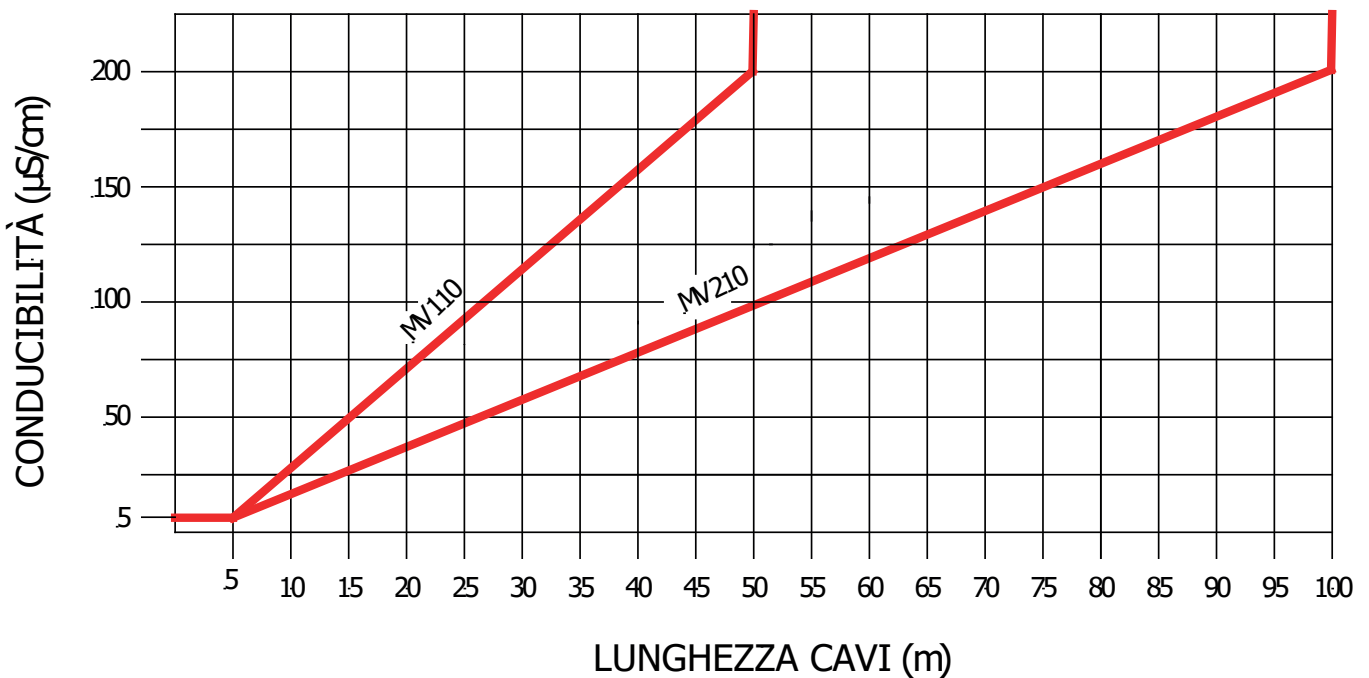


For the correct operation of the meter the sensor and liquid must be equipotential. ALWAYS connect sensor and converter to the ground.

SEPARATE VERSION



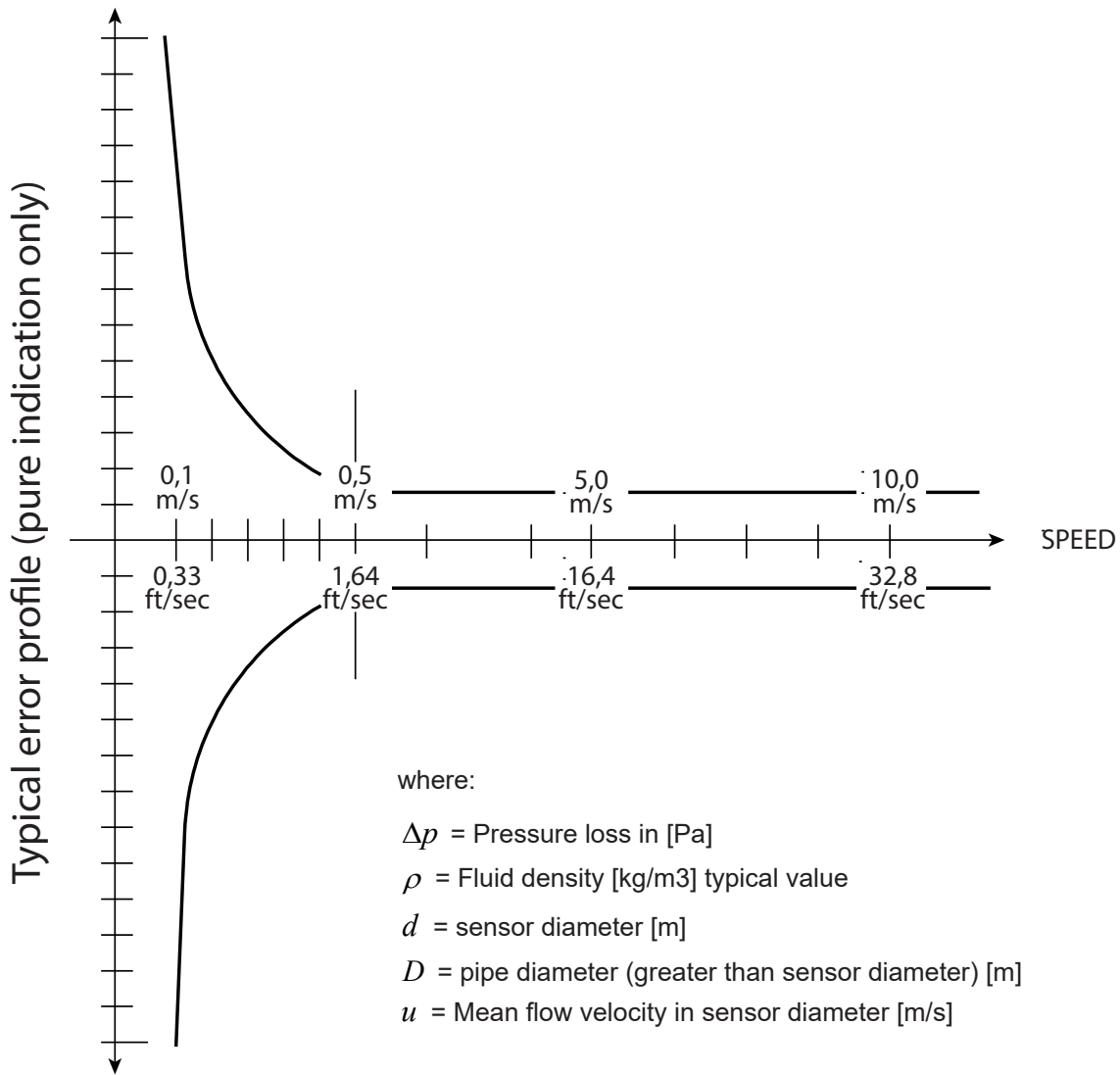
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Notes:

- It is recommended to install the connection cables away from, or protect against sources of electromagnetic noise.
- The minimum conductivity of the liquid medium to ensure correct functionality of the empty pipe detection is 20  $\mu\text{S/cm}$

ACCURACY TABLE



Calculation examples $\Delta p$ [mbar]									
$d/D$ \ $u$	1 [m/s]	2 [m/s]	3 [m/s]	4 [m/s]	5 [m/s]	6 [m/s]	7 [m/s]	8 [m/s]	
0.5	1.1	4.3	9.6	17.0	26.6	38.3	52.1	68.0	
0.6	0.9	3.6	8.2	14.6	22.7	32.7	44.6	58.2	
0.7	0.8	3.0	6.8	12.2	19.0	27.4	37.2	48.6	
0.8	0.6	2.5	5.7	10.1	15.7	22.7	30.9	40.3	
0.9	0.5	2.1	4.8	8.6	13.4	19.3	26.3	34.3	

Notes:

- $\rho = 1000 [kg / m^3]$  as goodness approximation of water density in common use.
- Inner diameter of sensor is used for  $d$ , express in meters.
- Indeed pressure loss equation is dimensionally correct in [Pa]. The equation results in table are show in [mbar].

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## HOW TO ORDER

EXAMPLE CODE	CODE / DESCRIPTION	
<b>Nominal Diameter / Lining / Maximum temperature / Measuring range</b>		
P03	P03	DN3 ( 1/8 " ), PP lining, measuring range 0.. 10,3 / 0...259 l/h
	P06	DN6 ( 1/4 " ), PP lining, measuring range 0...41,4/0...1036 l/h
	P10	DN10 (3/8 " ), PP lining, measuring range 0..115,2/0...2880 l/h
	P15	DN15 (1/2 " ), PP lining, measuring range 0.. 259,2/0...6480 l/h
	P20	DN20 (3/4 " ), PP lining, measuring range 0.. 460,8/0...11520 l/h
<b>Gasket material ( internal tightness )</b>		
1	1	O-Ring : FKM
	2	O-Ring : Epdm
	4	O-Ring : FFKM
	9	O-Ring : to be specified
<b>Process connection type</b>		
A	A	Male threaded UNI338 (FOR THE DIMENSIONS CONSULT THE OVERALL DIMENSIONS DRAWING)
	B	Male threaded NPT( FOR THE DIMENSIONS CONSULT THE OVERALL DIMENSION DRAWING)
	Z	Gasket material: to be specified
<b>Number and electrodes material</b>		
2	2	n. 4 (2 measure + 2 for ground) electrodes in AISI 316
	4	n. 4 (2 measure + 2 for ground) electrodes in Hastelloy C
	5	n. 4 (2 measure + 2 for ground) electrodes in Titanium
	6	n. 4 (2 measure + 2 for ground) electrodes in Tantalum
	7	n. 4 (2 measure +21 for ground) electrodes in Platinum
	0	Electrode material: to be specified
<b>Execution / Protection rate</b>		
A	A	Compact execution, IP67 protection rate
	B	Separate execution , maximum length 20m, remember to <b>added the cables cost</b> , protection rate IP68 (standing immersion with 1,5 m of head
	F	Execution separate with N° 2 connectors IP 68 suitable for <b>C015/16 for fast cable connections (max 20 m-ADD THE COST)</b>
	G	Execution separate with N° 1 connectors IP 68 suitable for <b>C018 for fast cable connections (max 20 m-ADD THE COST)</b>
	M	Compact execution, IP67 protection rate, <b>with the possibility to turn the converter of 90°</b>

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Complete code  
example for  
order



**MS600-P03-1A2A**

**ISOIL INDUSTRIA S.p.A.**

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If you want to find the complete list of our distributors access at the following link:

<http://www.isoil.it>



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