

**ISOMAG**  **TM**  
**THE FRIENDLY MAG METER**

**SENSOR**

**MS 2410**



**CERTIFIED SENSOR "SANITARY". SPECIFIC FOR THE EMPLOYMENT IN ALIMENTARY OR DRUGGIST SYSTEMS, ADAPTED FOR EMPTY CONDITIONS**

The manufacturer guarantees only English text.  
Available on our web site: [www.isoil.com](http://www.isoil.com)

**ISOIL**   
INDUSTRIA

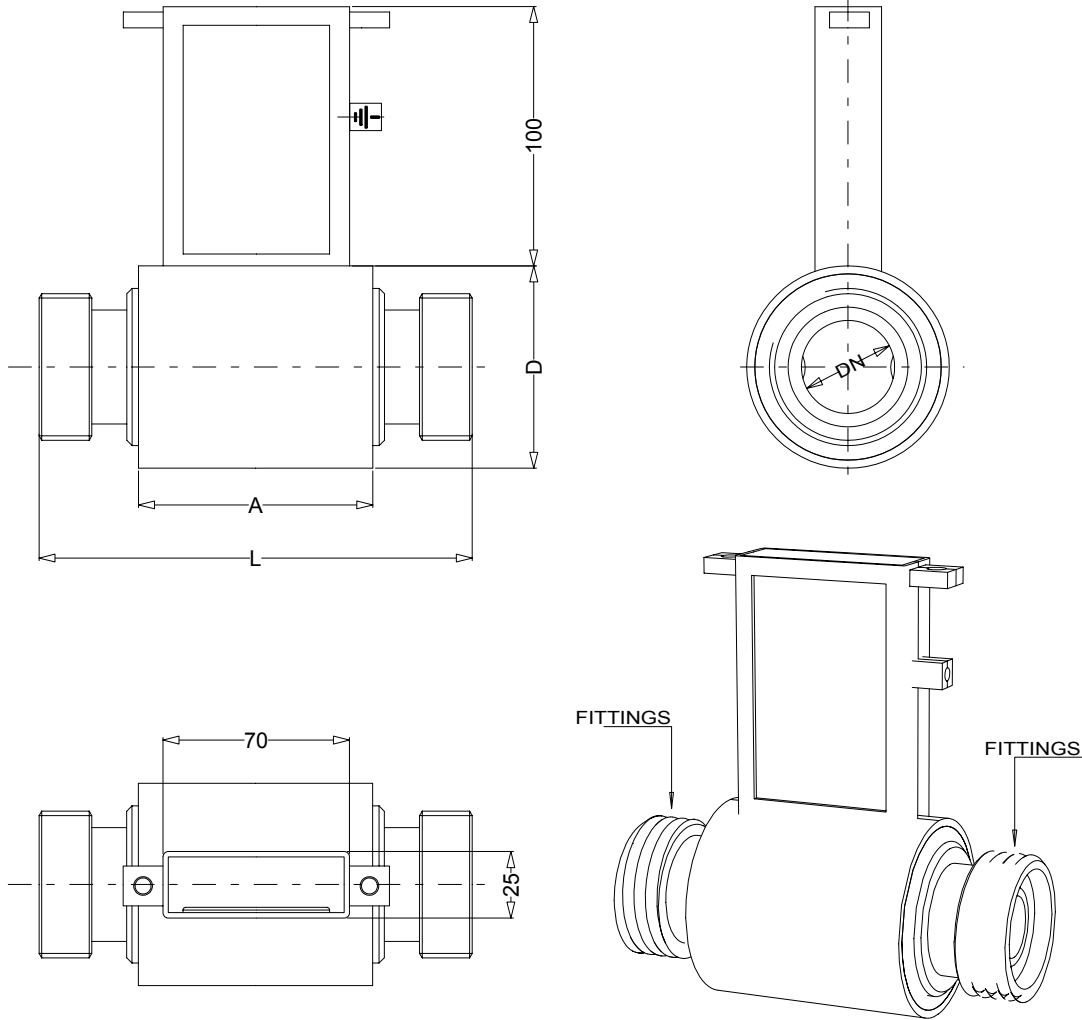
*The solutions that count*

## TECHNICAL DATA

<b>Body material</b>	<input type="checkbox"/> <b>Stainless steel AISI 304</b> <input type="checkbox"/> <b>Stainless steel AISI 316 (opt.)</b>
<b>Nominal diameter</b>	<input type="checkbox"/> <b>DN 3 ÷ 100</b>
<b>Nominal pressure</b>	<input type="checkbox"/> <b>PN 16</b>
<b>Process connection</b>	<input type="checkbox"/> <b>Sanitary DIN 11851</b> <input type="checkbox"/> <b>Tri-clamp®</b> <input type="checkbox"/> <b>Tri-clover®</b> <input type="checkbox"/> <b>SMS</b> <input type="checkbox"/> <b>Other on request</b>
<b>Vacuum resistance</b>	<input type="checkbox"/> <b>20 Kpa at 100 °C</b>
<b>Connection material</b>	<input type="checkbox"/> <b>Stainless steel AISI 316</b>
<b>Liquid temperature</b>	<input type="checkbox"/> <b>-20 °C ÷ +100 °C comp. version. ( 130 °C only with ML3F-1 )</b> <input type="checkbox"/> <b>-20 °C ÷ + 150 °C separate version.</b>
<b>Lining material</b>	<input type="checkbox"/> <b>PTFE</b>
<b>Gasket material</b>	<input type="checkbox"/> <b>FPM ( FDA approved )</b> <input type="checkbox"/> <b>Epdm ( FDA approved )</b>
<b>Electrode material</b>	<input type="checkbox"/> <b>Stainless steel AISI 316</b> <input type="checkbox"/> <b>Other on request</b>
<b>Version – protection rate</b>	<input type="checkbox"/> <b>Compact version – IP 67</b> <input type="checkbox"/> <b>Separate version (max 20m) – IP 68</b> <input type="checkbox"/> <b>Separate version (max 500 m), with preamplifier – IP 67 (OPT. IP 68)</b>
<b>Accuracy</b>	<input type="checkbox"/> <b>See Table Below</b>

# OVERALL DIMENSIONS

## DIN/SMS FITTINGS



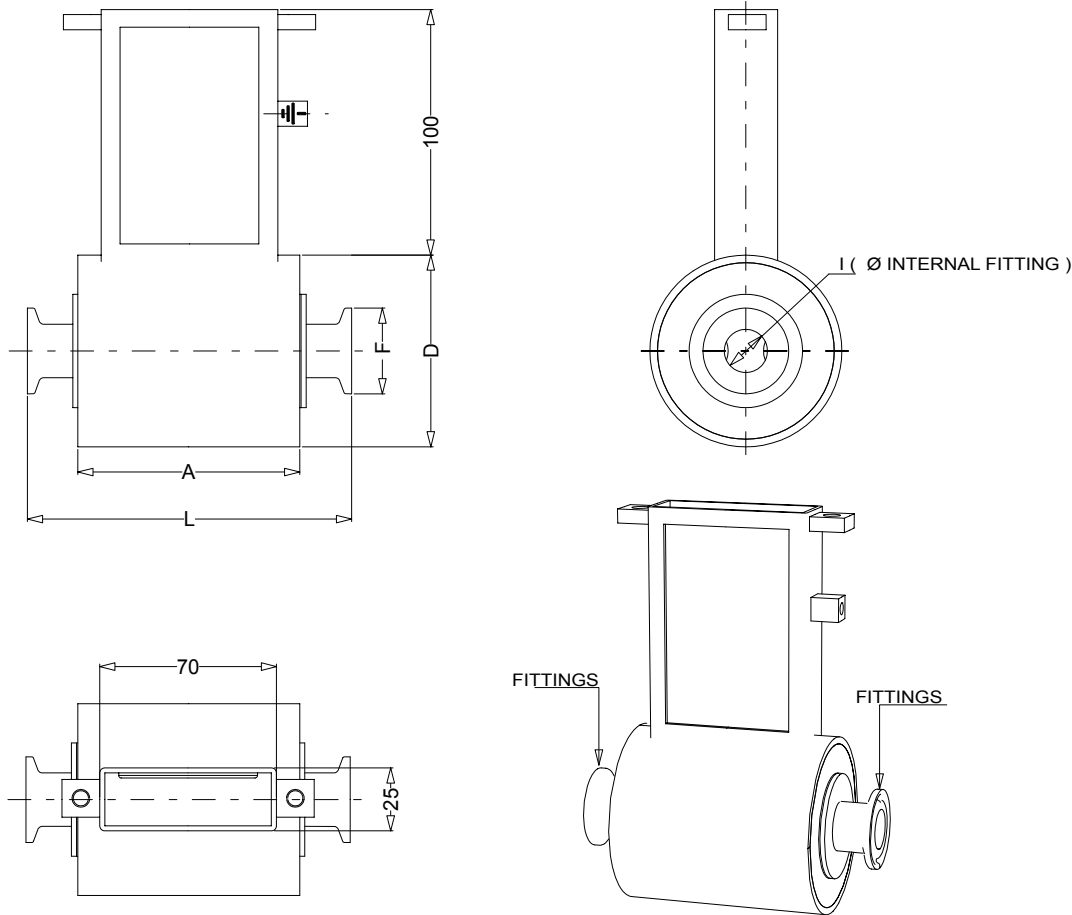
### FITTINGS DIN 11851

DIMENSIONS mm (inches)	DN											
	3 (1/8")	6 (1/4)	10 (3/8)	15 (1/2")	20 (3/4")	25 (1")	32 (1 1/4)	40 (1 1/2)	50 (2")	65 (2 1/2)	80 (3")	100 (4")
<b>A</b>	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)
<b>L</b>	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	200 (7.87)	200 (7.87)
<b>D</b>	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	89 (3.50)	89 (3.50)	114 (4.49)	140 (5.51)	140 (5.51)	168 (6.61)
<b>FITTINGS</b>	DN 10	DN 10	DN 10	DN 15	DN 20	DN25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100

### FITTINGS SMS

DIMENSIONS mm (inches)										
	10 (3/8)	15 (1/2")	20 (3/4")	25 (1")	40 (1 1/2)	50 (2")	65 (2 1/2)	80 (3")	100 (4")	
<b>A</b>	77 (3.03)	77 (3.03)	77 (3.03)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	
<b>L</b>	128 (5.04)	128 (5.04)	128 (5.04)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	200 (7.87)	200 (7.87)	
<b>D</b>	76 (3)	76 (3)	76 (3)	76 (3)	89 (3.50)	114 (4.49)	140 (5.51)	140 (5.51)	168 (6.61)	
<b>FITTINGS</b>	DN 25	DN 25	DN 25	DN25	DN 38	DN 51	DN 63	DN 76	DN 104	

**CLAMP FITTINGS**



**FITTINGS CLAMP ISO 2852**

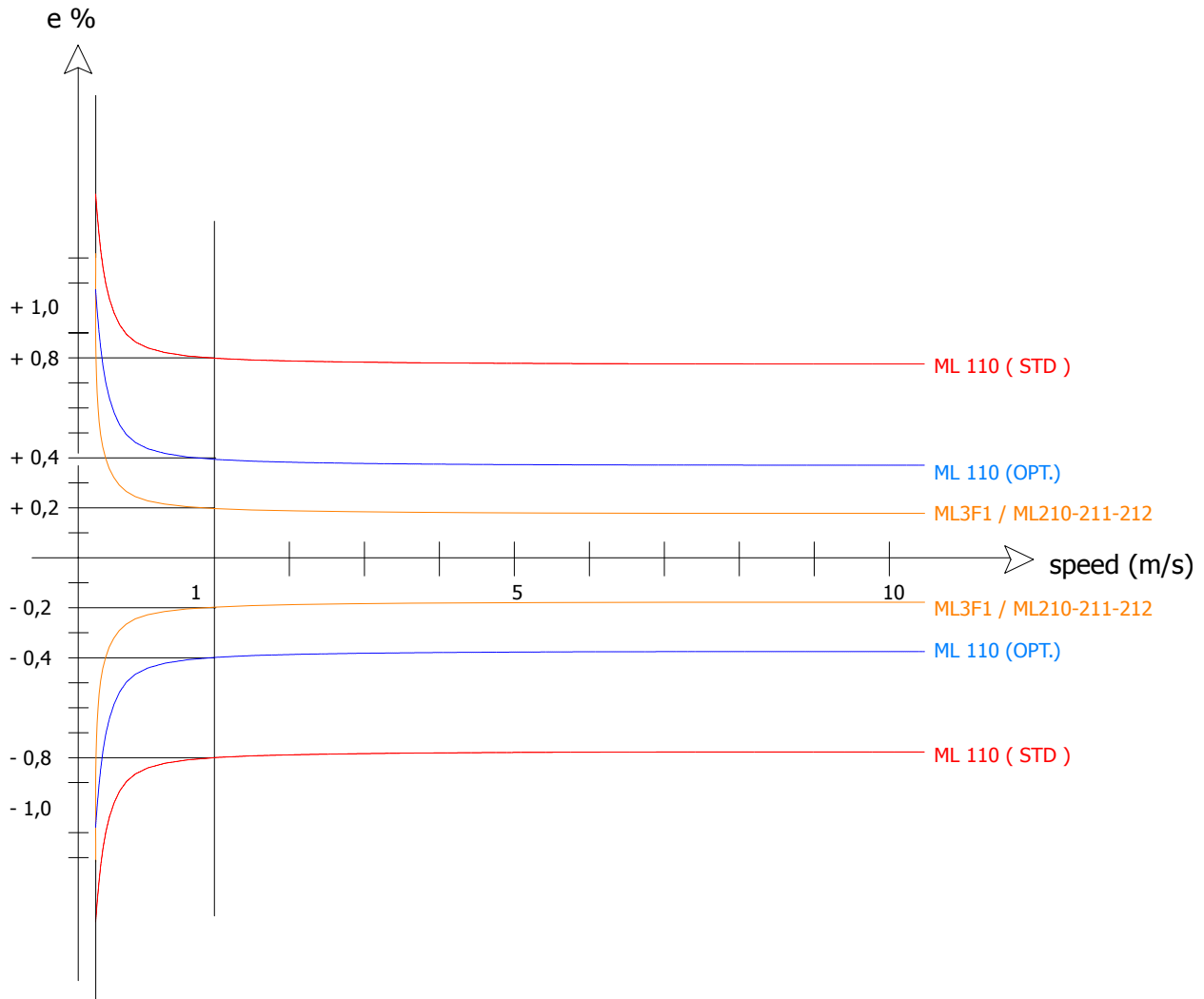
DIMENSIONS mm (inches)	DN										
	3 (1/8")	6 (1/4)	10 (3/8)	15 (1/2")	20 (3/4")	25 (1")	40 (1 1/2)	50 (2")	65 (2 1/2)	80 (3")	100 (4")
<b>A</b>	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)
<b>L</b>	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	200 (7.87)	200 (7.87)
<b>D</b>	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	89 (3.50)	114 (4.49)	140 (5.51)	140 (5.51)	168 (6.61)
<b>I</b>	12.7 (0.5)	12.7 (0.5)	12.7 (0.5)	17.2 (0.68)	21.3 (0.84)	22.6 (0.89)	35.6 (1.40)	48.6 (1.91)	60.3 (2.37)	72.9 (2.87)	97.6 (3.84)
<b>F</b>	34 (1.34)	34 (1.34)	34 (1.34)	34 (1.34)	34 (1.34)	50.5 (1.99)	50.5 (1.99)	64 (2.52)	77.5 (3.05)	91 (3.58)	119 (4.69)

**FITTINGS CLAMP BS 4825**

DIMENSIONS mm (inches)	DN										
	3 (1/8")	6 (1/4)	10 (3/8)	15 (1/2")	20 (3/4")	25 (1")	40 (1 1/2)	50 (2")	65 (2 1/2)	80 (3")	100 (4")
<b>A</b>	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	77 (3.03)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)	100 (3.94)
<b>L</b>	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	128 (5.04)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	200 (7.87)	200 (7.87)
<b>D</b>	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	76 (3)	89 (3.50)	114 (4.49)	140 (5.51)	140 (5.51)	168 (6.61)
<b>I</b>	9.5 (0.37)	9.5 (0.37)	9.5 (0.37)	15.85 (0.62)	22.2 (0.87)	22.2 (0.87)	34.9 (1.37)	47.6 (1.87)	60.3 (2.37)	73 (2.87)	97.6 (3.84)
<b>F</b>	25.4 (1)	25.4 (1)	25.4 (1)	25.4 (1)	50.5 (1.99)	50.5 (1.99)	50.5 (1.99)	64 (2.52)	77.5 (3.05)	91 (3.58)	119 (4.69)

## ACCURACY TABLE

- Reference condition
  - Water temperature: 20°C
  - Ambient temperature: 25 °C
  - Test time: > 60 sec.
  - Converter warm-up: > 60'
  - Constant flow rate during the test
  - Pressure : 50 Kpa
  - speed of liquid > 1m/s



### REPEATABILITY:

- ML 210-211-212 / ML3F1 = +/- 0,1%
- ML 110 = +/- 0,2%

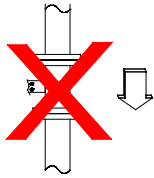
### NOTE :

- Between 0,02 and 0,4 m/s the accuracy become 2 time than the accuracy declared on the above diagram
- Between 0,4 and 1,0 m/s the accuracy become 1,5 time than the accuracy declared on the above diagram

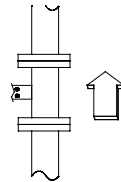
## SHREWDNESS AND PRECAUTIONS

### AVOID

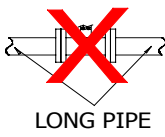
### RECOMMENDED



For vertical installations with descending flow direction contact the manufacturer



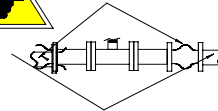
For vertical installations is preferable an ascending flow



Avoid the installation of the sensor in a long pipe line, without any support of the same

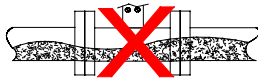


ANTI VIBRATION JOINTS

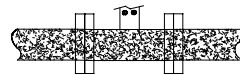


LONG PIPE

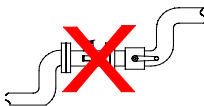
For installations on long pipe line, please use the anti vibration joints



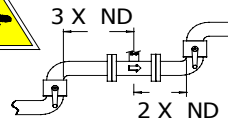
Avoid the functioning with the pipe partially empty



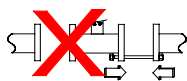
During the functioning the pipe must be completely full of liquid, or completely empty



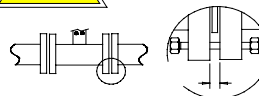
Avoid the installation near curves or hydraulic accessories



Install the sensor away from curves and hydraulic accessories



Avoid the approach of the flange and counter flange using the closing force of the nuts

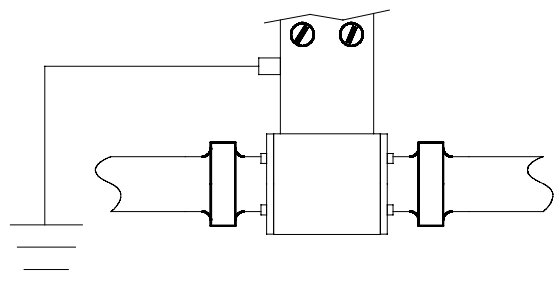


GASKET THICKNESS + 4mm

Before tightening the nuts approach as more possible the flange of the piping to the flange of the sensor

## SENSOR'S GROUNDING

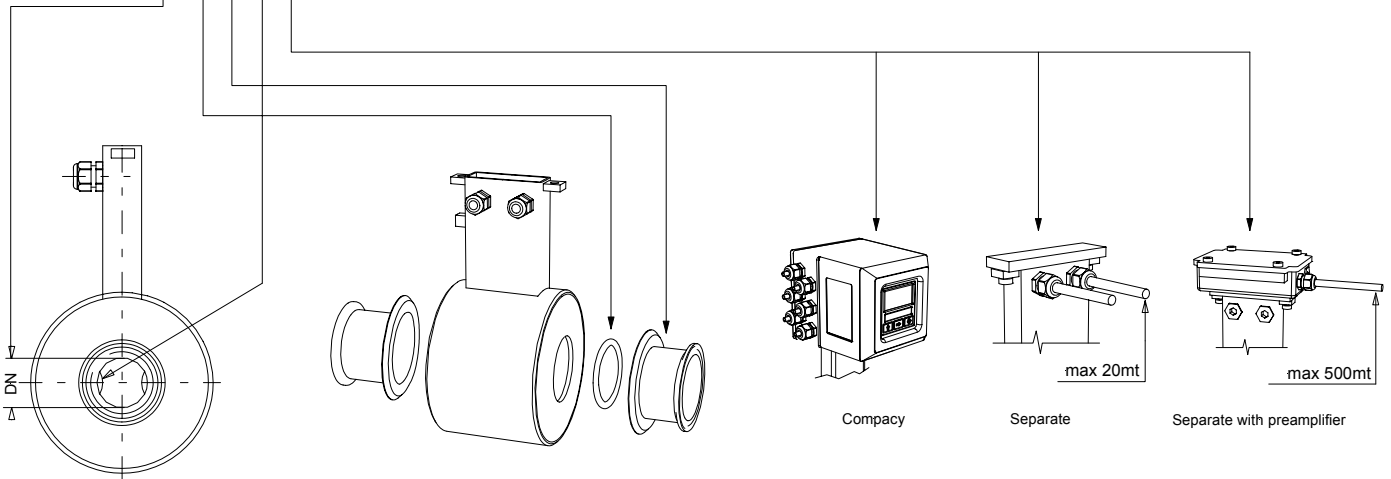
For correct operation of the meter is **NECESSARY** that the sensor and the liquid are equipotential, so **ALWAYS** connect the sensor and converter to ground.



# HOW ORDER

<b>MS 2410</b>	<b>Nominal Diameter - Lining - Measuring range</b>
T06	ND3 ( 1/8 " ), PTFE lining, measuring range 0.. 10 / 0...250 l/h
T10	ND6 ( 1/4 " ), PTFE lining, measuring range 0...40/0...1000 l/h
T15	ND10 ( 3/8 " ), PTFE lining, measuring range 0..120/0...3000 l/h
T20	ND15 ( 1/2 " ), PTFE lining, measuring range 0.. 240/0...6000 l/h
T25	ND20 ( 3/4 " ), PTFE lining, measuring range 0.. 500/0...12500 l/h
T32	ND25 ( 1" ) PTFE lining, measuring range 0 ... 0,72 / 0 ... 18 m3/h
T40	ND32 ( 1 1/4 ), PTFE lining, measuring range 0 ... 1,6 / 0 ... 29 m3/h
T50	ND40 ( 1 1/2 ), PTFE lining, measuring range 0 ... 1,8 / 0 ... 45 m3/h
T65	ND50 ( 2" ), PTFE lining, measuring range 0 ... 2,88 / 0 ... 72 m3/h
T80	ND65 ( 2 1/2 ), PTFE lining, measuring range 0 ... 4,8 / 0 ... 120 m3/h
T100	ND80 ( 3" ), PTFE lining, measuring range 0 ... 7,2 / 0 ... 180 m3/h
	ND100 ( 4" ), PTFE lining, measuring range 0 ... 11,2 / 0 ... 280 m3/h
	<b>Gasket material (internal tightness)</b>
2	O-Ring : Epdm
3	O-Ring : FPM ( FDA1770 )
9	Other O-Ring
	<b>Process connection type</b>
A	DIN11850/11852
B	Clamp ISO2852
C	SMS (da/from DN10)
D	Clamp GB special connections
E	Clamp BS 4825
Z	Other fittings
	<b>Number and electrodes material</b>
1	n. 2 measure electrodes in AISI316
0	Other
	<b>Execution - Protection rate</b>
A	Compact execution, IP67 protection rate, liquid maximum temperature 100 °C
B	Separate execution "C", maximum length 10 m (20m, see note 1), liquid maximum temperature 150 °C, protection rate IP68
C	Separate execution "L" (in Carbon Steel), with preamplifier (maximum length 500 m), liquid maximum temperature 100 °C, protection rate IP67
D	Separate execution "L" (in AISI304), with preamplifier (maximum length 500 m.), liquid maximum temperature 100 °C, protection rate IP67

**MS 2410 T03 2 A 1 A EXAMPLE OF ORDER CODE**



**In accordance with a continuous evolution of the Product, the company reserves the right to modify without warning the information contained in this document**