

ISOMAG TM

The friendly magmeter

MS 3900



ULTRA COMPACT ISOMAG METER

Warranty conditions are available on this website:
www.isomag.eu only in English version

ISOIL 
INDUSTRIA
The solutions that count

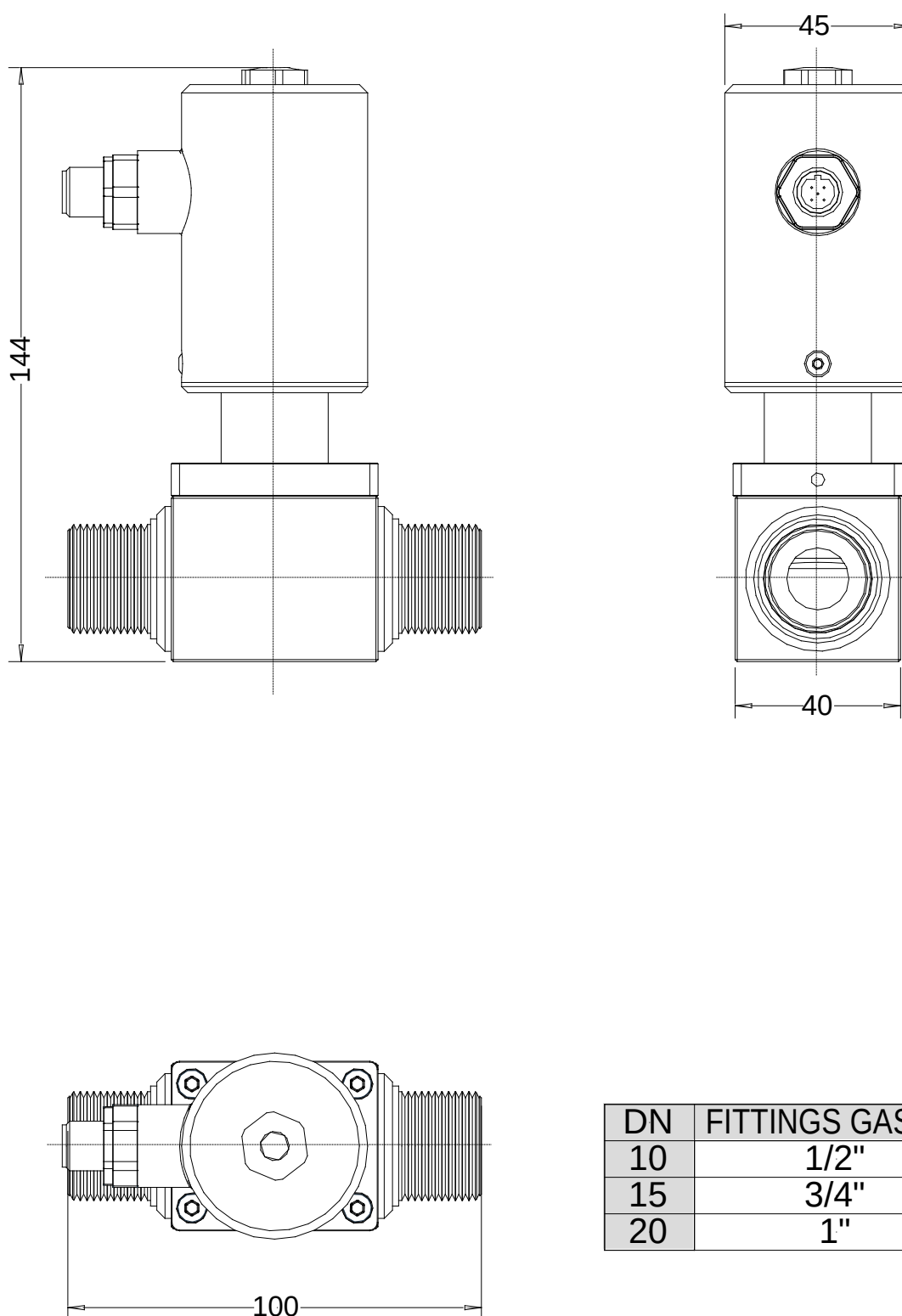
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TECHNICAL DATA

Nominal diameter	☐ 10 / 15 / 20
Body material	☐ Ptfе coated Zincked steel
Nominal pressure	☐ 1600 kPa
Lining material	☐ PTFE
Process connection	☐ Thread male UNI 338/NPT
Gasket material	☐ FPM
Electrodes material	☐ Stainless steel AISI 316
Temperature range	☐ Medium -10 to +100°C ☐ Ambient -10 to +60°C
Vacuum resistance	☐ 20 kPa (absolute) at 100 °C
Protection	☐ IP 67
Operating Voltage	☐ 18-30 V $\overline{=}$
Electrical connections	☐ M16 connectors (5 pins)
Programming Plug In	☐ Protected plug-in for connection to PC (IF2X)
Digital Input/Outputs	☐ N° 2 OUT for volume/alarms; N° 1 freely programmable as input or output
Current Output	☐ 0-20 or 4-20 mA Programmable
Temperature measure	☐ measure of temperature -10 .. +100 (it can be set as analog out on 4-20 mA)
Empty Pipe Detect Diagnostic Funct.	☐ Yes
Bi-Directional	☐ Yes
Full scale value	☐ 0,4...10m/s
Data Storage	☐ F-ram not volatile stored measuring values on power failure
CE Certification	☐ Instrument with CE certificate
Minimum conductivity	☐ 50 μ S/cm
Minimum Measurable Velocity	☐ 0,2 m/s
Accuracy	☐ FLOW RATE/VOLUME +/- 2% r.v. ☐ TEMPERATURE : +/- 2°C

OVERALL DIMENSIONS



DN	FITTINGS GAS / NPT
10	1/2"
15	3/4"
20	1"

MS3900: COMPONENTS

PG7 for IF23 plug

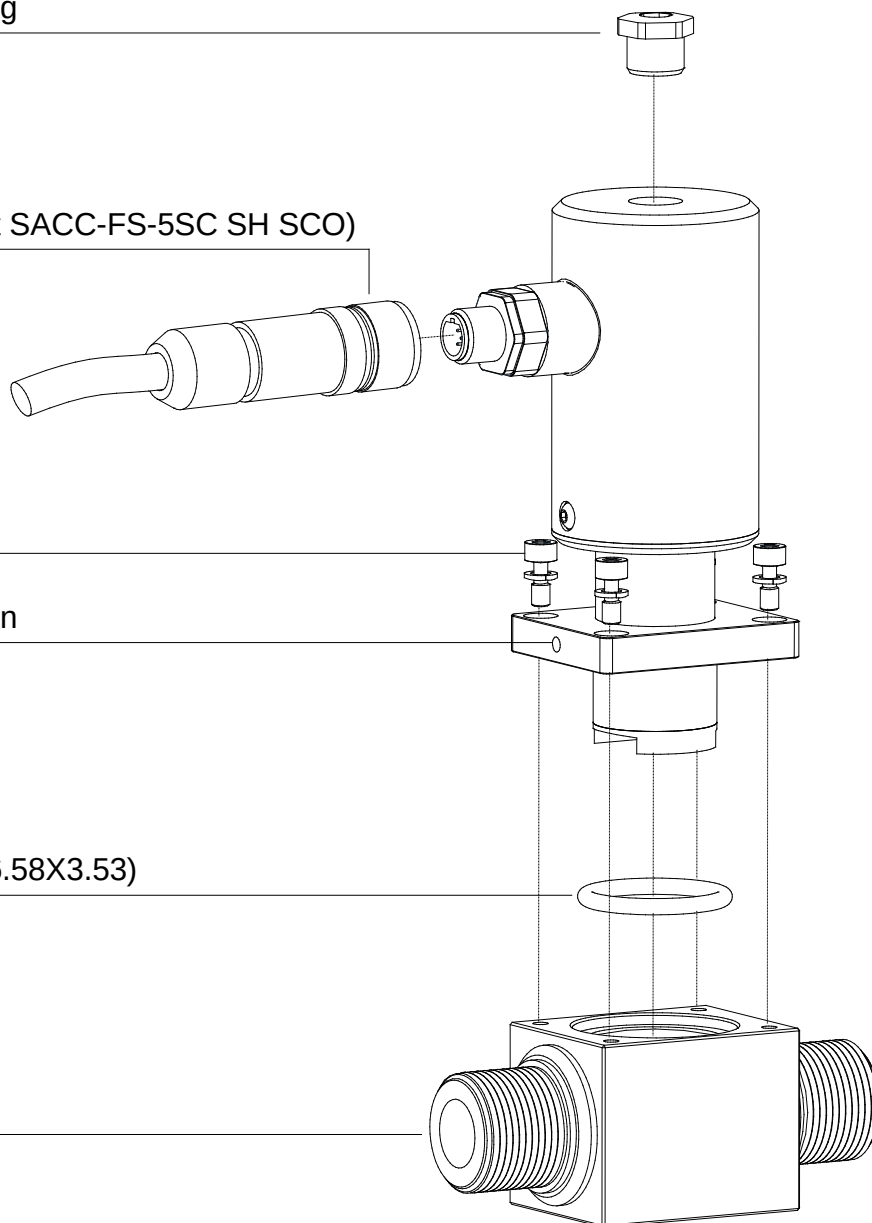
5 poles plug
(phoenix contact SACC-FS-5SC SH SCO)

M4 screws

Groud connection

O-Ring 4106 (26.58X3.53)

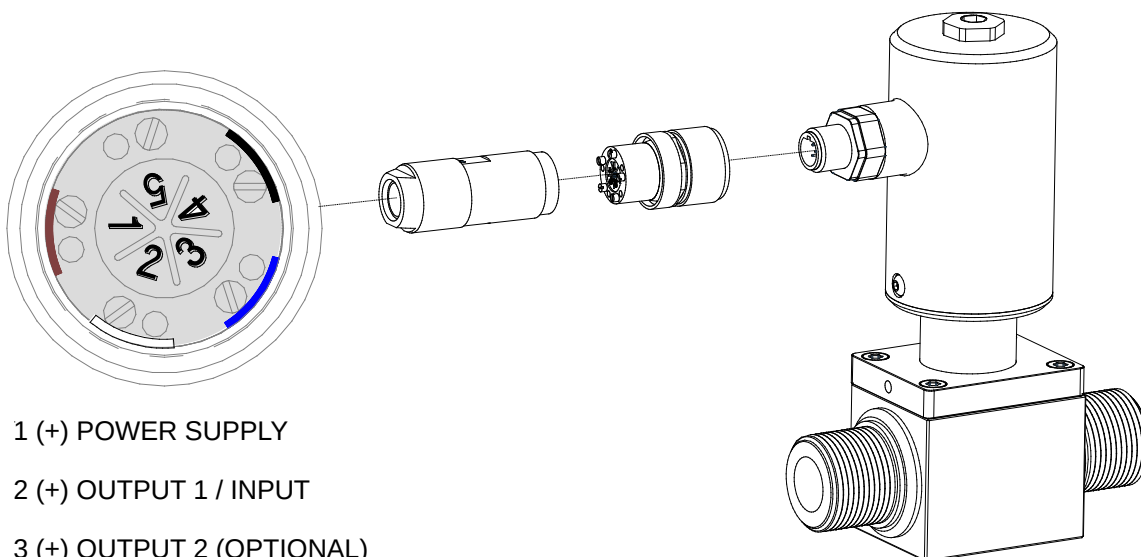
Lined body



TORQUES	
PG7 Plug	4Nm
5 poles plug	4Nm
M4 screws	3Nm

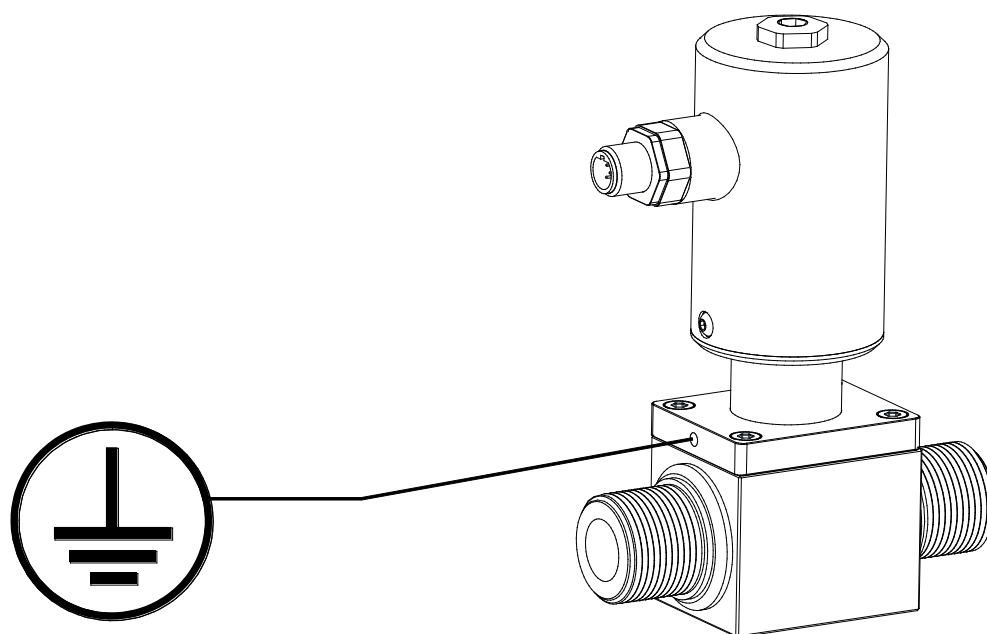
ELECTRICAL CONNECTIONS

INPUT/OUTPUTS

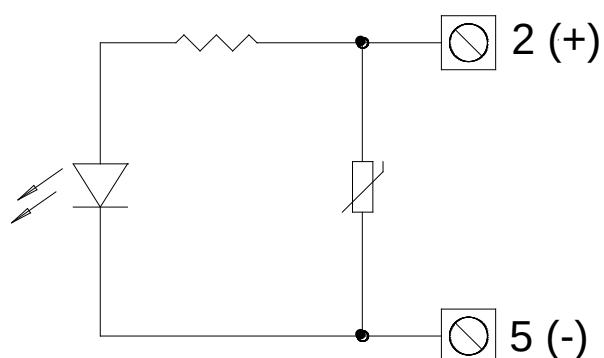


- 1 (+) POWER SUPPLY
- 2 (+) OUTPUT 1 / INPUT
- 3 (+) OUTPUT 2 (OPTIONAL)
- 4 (+) 4-20mA OUTPUT
- 5 (-) POWER SUPPLY / OUTPUTS / INPUT

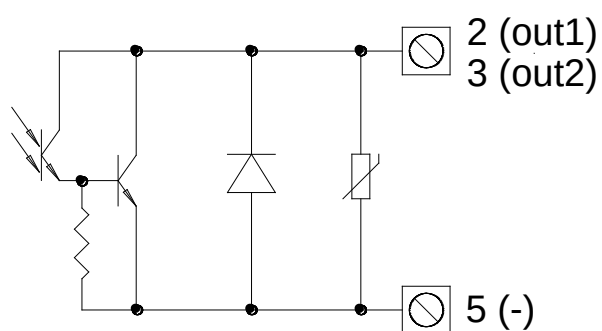
GROUNDING CONNECTION



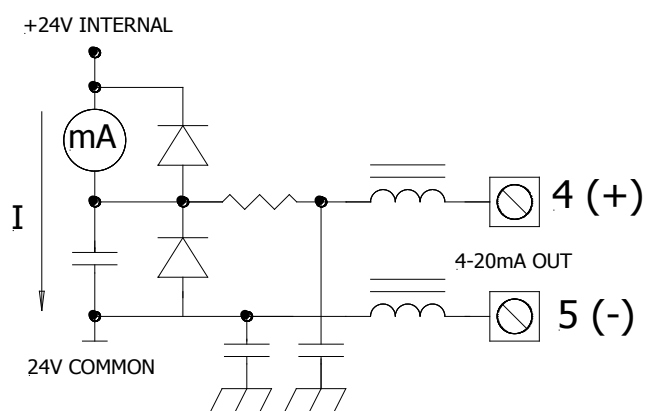
INPUT/OUTPUTS: SCHEMATICS



DIGITAL INPUT



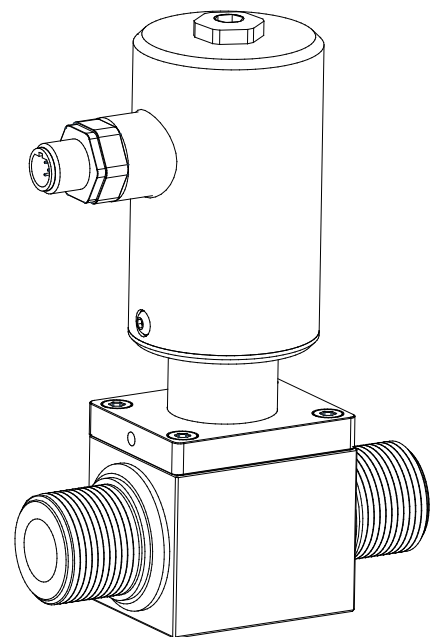
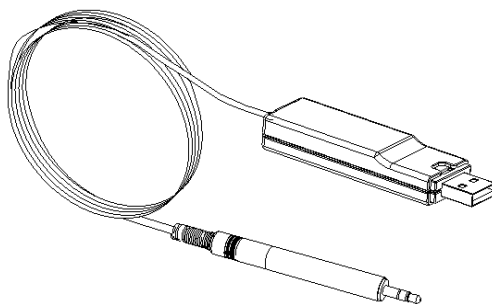
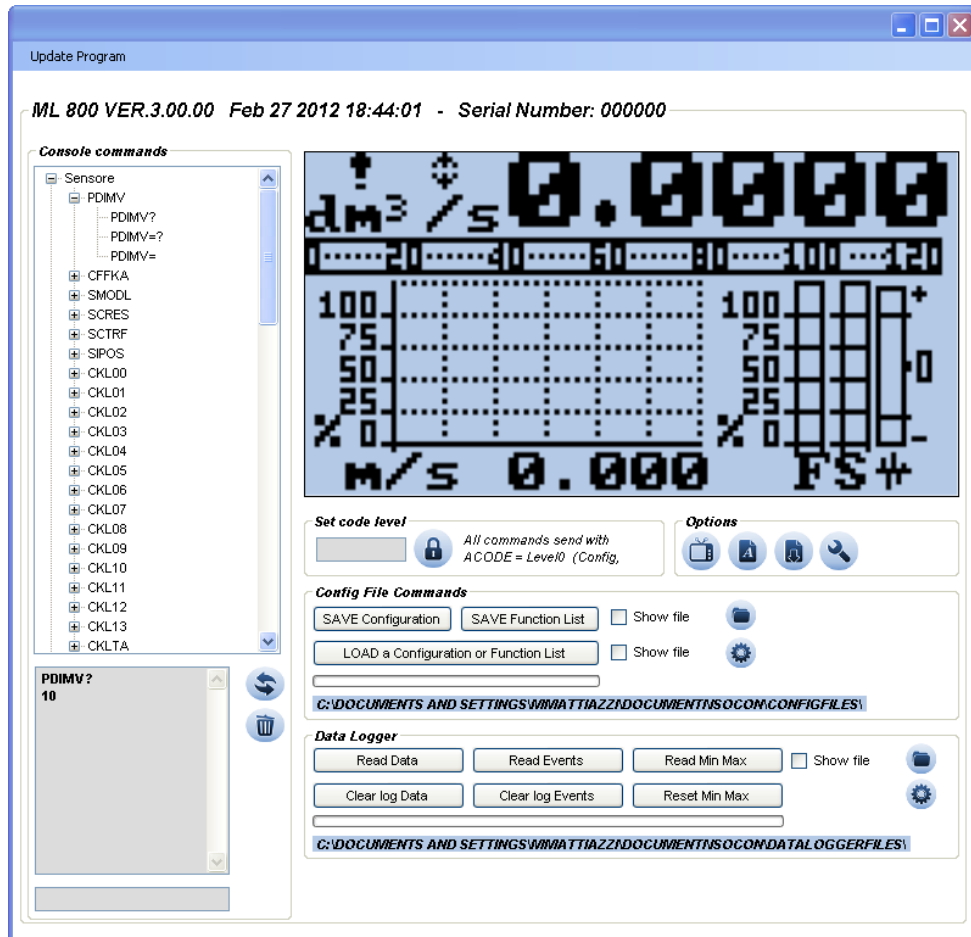
DIGITAL OUTPUTS



ANALOG OUTPUT

USER INTERFACE

MS 3900 can be programmed by ISOCON interface (IF23 is required)



AVAILABLE FUNCTIONS

```

MAIN MENU
1-Sensor
2-Scales
3-Measure
4-Alarms
5-Inputs
6-Outputs
7-Settings
8-About
9-Factory
10-Exit
11-Back
12-Forward
13-Reset
14-Factory
15-Exit
16-Back
17-Forward
18-Reset
19-Factory
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100-Exit

```

- 1.1 Sensor ND (10-15-20mm)
- 1.2 Sensor calibration data, visualized on sensor label
- 1.3 Sensor type: enter the first two characters of the sensor serial number
- 1.4 Enables the empty pipe detection feature
- 1.5 Electrodes cleaning
- 1.6 Value of empty pipe sensibility detection
- 1.7 Enables the automatic procedure of zero calibration

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```

- 2.1 Flow rate full scale value
- 2.2 Temperature start scale value
- 2.3 Temperature full scale value
- 2.4 Unit of measure and number of decimal place
- 2.5 Pulse value on channel 1
- 2.6 Pulse value on channel 2
- 2.7 Duration of the pulse generated on channel 1
- 2.8 Duration of the pulse generated on channel 2
- 2.9 Specific gravity set in kg/dm³

```

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```

- 3.1 Low flow zero threshold: 0-25% of full scale value
- 3.2 Main frequency filter
- 3.3 Measure filter

```

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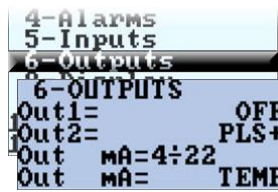
- 4.1 Maximum value alarm set for direct flow rate
- 4.2 Minimum value alarm set for direct flow rate
- 4.3 Maximum value alarm set for reverse flow rate
- 4.4 Minimum value alarm set for reverse flow rate
- 4.5 Maximum value alarm set for temperature
- 4.6 Minimum value alarm set for temperature
- 4.7 Hysteresis threshold set for the minimum and maximum flow rate and temperature alarms
- 4.8 Current output value in case of failure

```

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```

- 5.1 Total direct (positive) flow totalizers reset enable
- 5.2 Partial direct (positive) flow totalizers reset enable
- 5.3 Total reverse (negative) flow totalizers reset enable
- 5.4 Partial reverse (negative) flow totalizers reset enable
- 5.5 Totalizers counting lock command
- 5.6 Autozero calibration external command



- 6.1 Output 1 functions
- 6.2 Output 2 functions
- 6.3 Choice of the current output range
- 6.4 Choice of the current output function: flow rate or temperature



- 8.1 Choice of the language: EN= English, IT=Italian, FR= French, SP= Spanish
- 8.2 Display updating frequency: 1-2-5-10 Hz
- 8.3 Quick start menu visualization
- 8.4 Total direct (positive) flow totalizer reset
- 8.5 Partial direct (positive) flow totalizer reset
- 8.6 Total reverse (negative) flow totalizer reset
- 8.7 Partial reverse (negative) flow totalizer reset



- 9.1 Visualization function of minimum and maximum flow rate and temperature values
- 9.2 Immediate reset all minimum and maximum flow rate and temperature values stored



- 10.1 Immediate calibration of the instrument
- 10.2 Immediate autotest of the instrument
- 10.3 Flow rate simulation enabling
- 10.4 Visualize firmware revision/version



- 11.1 Level 2 access code enter
- 11.2 Immediate Re-Load of the pre-set factory data
- 11.3 KR coefficient (only for service purposes)
- 11.4 KS coefficient (only for service purposes)
- 11.5 KTMP, temperature coefficient (only for service purposes)

HOW TO ORDER

MS 3900							
				Size			
1				10 mm (thread 1/2")			
2				15 mm (thread 3/4")			
3				20 mm (thread 1")			
				Materials : body/lining /electrodes/ internal gasket			
A				Materials : PTFE coated Steel body, Sensor body in AISI304 (head in PTFE), electrodes in AISI316 , gasket in FKM			
Z				Sensor material: to be specified			
				Mounting			
			0	UNI 338 (GAS) Thread Male			
			1	NPT-Thread Male			
			9	Special connection: to be specified			
				Electronic board			
			A	SB 800 (Complete of n° 1 freely programmable digital I/O)			
				ANALOG Output			
			0	without Analog Out			
			1	with Analog Out			
				DIGITAL Output			
			A	without Additional Digital Out			
			B	n° 1 additional digital out			
MS3900	1	A	1	A	1	A	Fill all the digits to be sure of right code selection

The manufacturer reserves the right to make design improvements without notice.