ISOMAG™

The friendly magmeter

ULTRA COMPACT ISOMAG METER

MS 3900

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

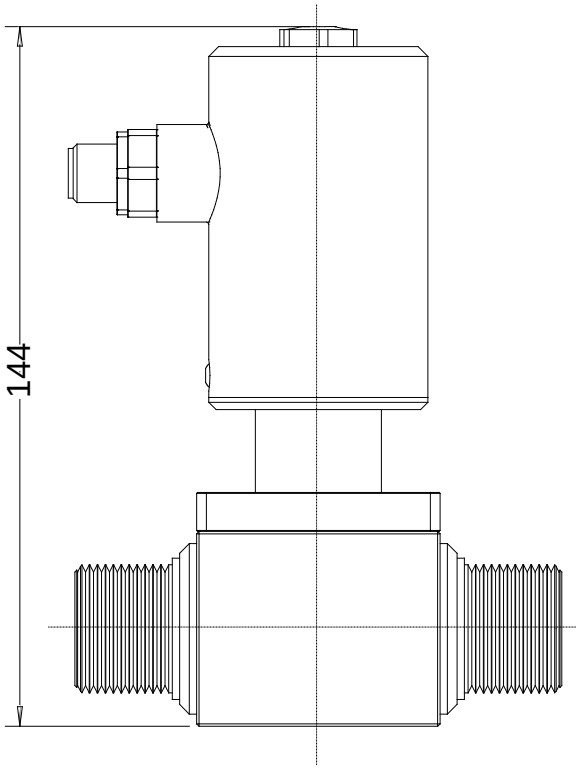
ISOIL INDUSTRIA
The solutions that count

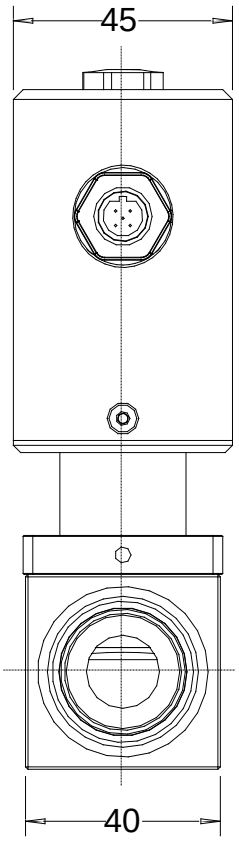
INDEX

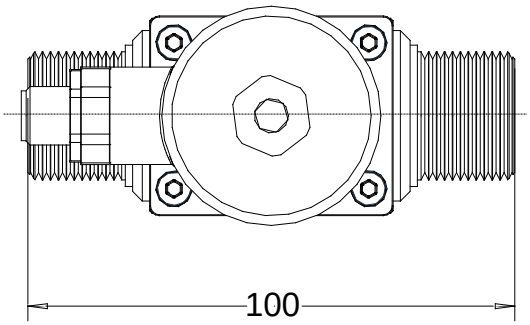
TECHNICAL DATA

Nominal diameter	❑ **10 / 15 / 20**
Body material	❑ **Ptfe 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⎓**
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 μS/cm**
Minimum Measurable Velocity	❑ **0,2 m/s**
Accuracy	❑ **FLOW RATE/VOLUME +/- 2% r.v.** ❑ **TEMPERATURE : +/- 2°C**

OVERALL DIMENSIONS

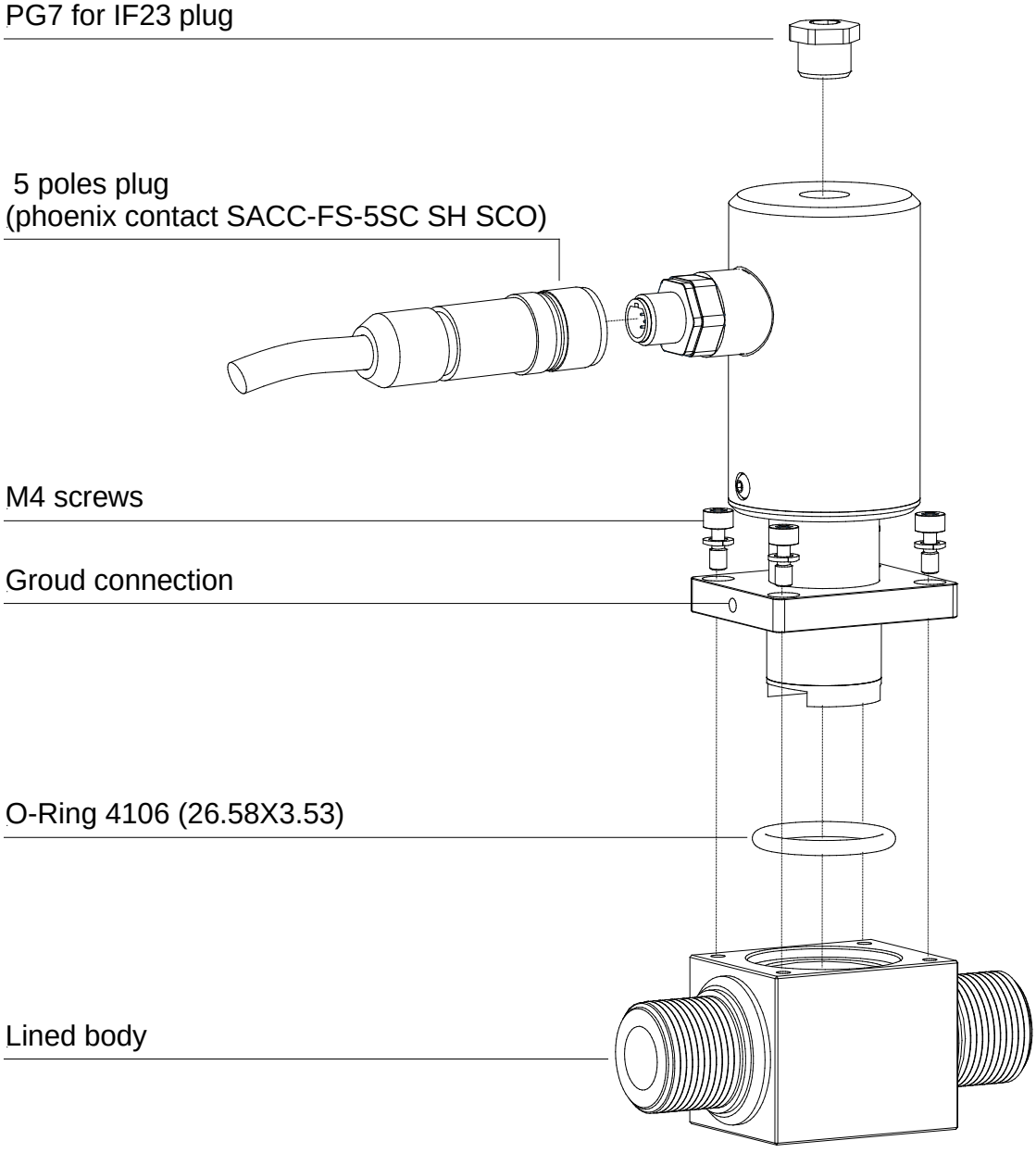






DN	FITTINGS GAS / NPT
10	1/2"
15	3/4"
20	1"

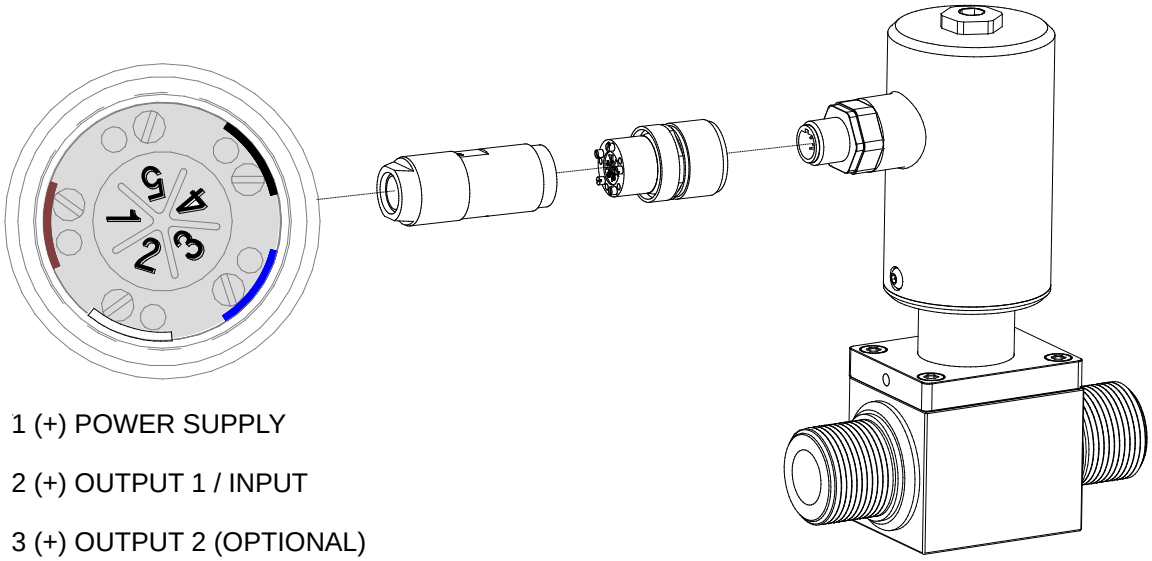
MS3900: COMPONENTS



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

ELECTRICAL CONNECTIONS

INPUT/OUTPUTS



1 (+) POWER SUPPLY

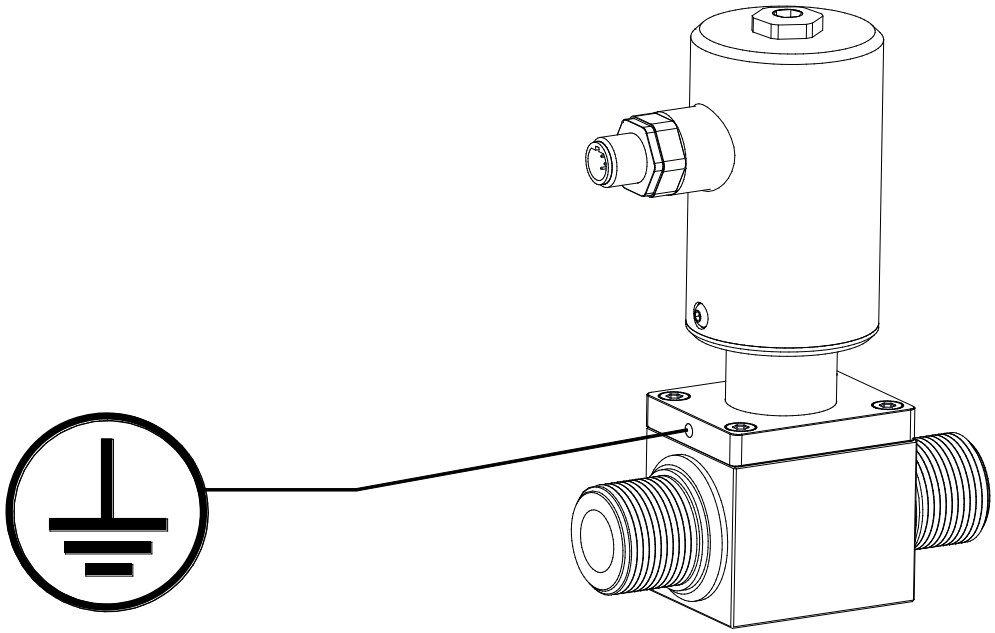
2 (+) OUTPUT 1 / INPUT

3 (+) OUTPUT 2 (OPTIONAL)

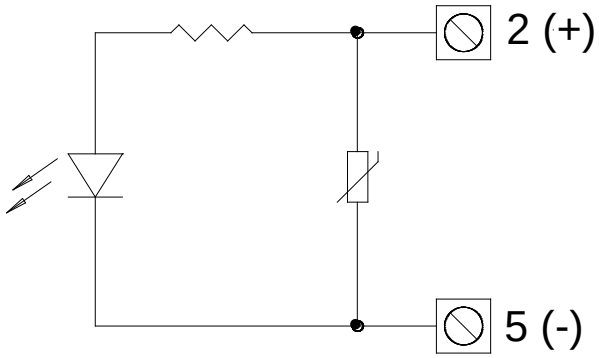
4 (+) 4-20mA OUTPUT

5 (-) POWER SUPPLY / OUTPUTS / INPUT

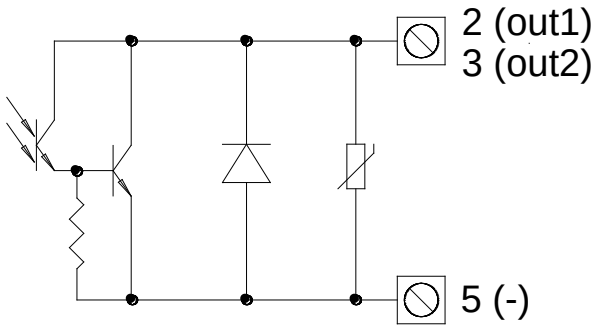
GROUNDING CONNECTION



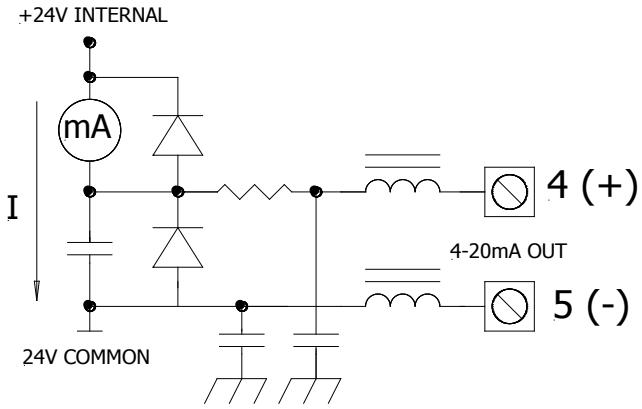
INPUT/OUTPUTS: SCHEMATICS



DIGITAL INPUT



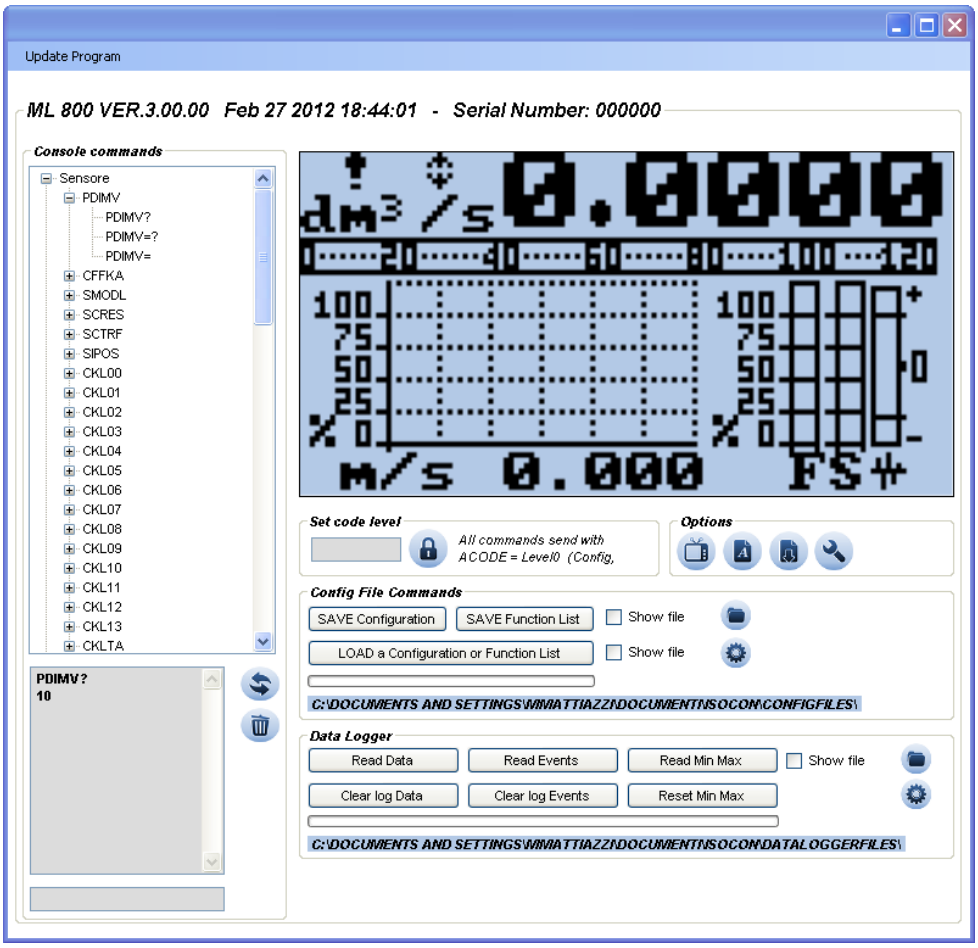
DIGITAL OUTPUTS

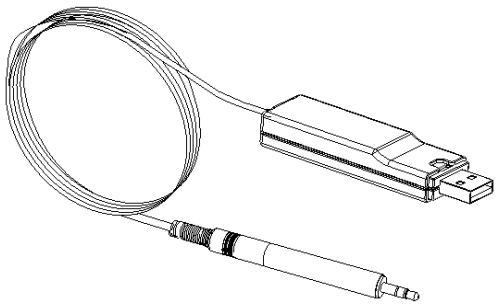


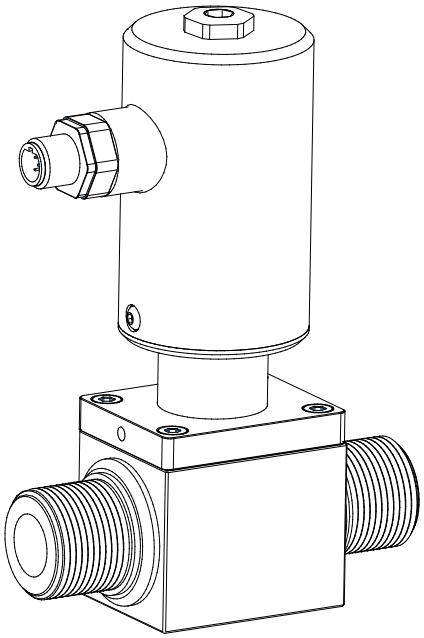
ANALOG OUTPUT

USER INTERFACE

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

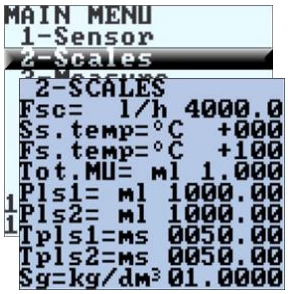




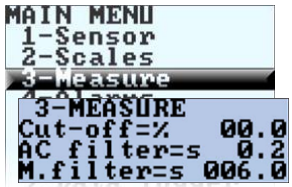


AVAILABLE FUNCTIONS

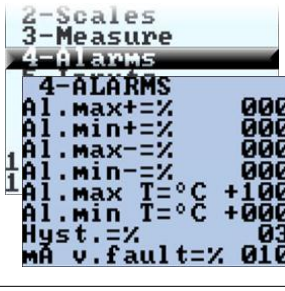
1.1 Sensor ND (10-15-20mm)
1.2 Sensor calibration data, visualized on sensor label
1.3 Sensor type: enter the first two characters of the sensor serial number
1.4 Enables the empty pipe detection feature
1.5 Electrodes cleaning
1.6 Value of empty pipe sensibility detection
1.7 Enables the automatic procedure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



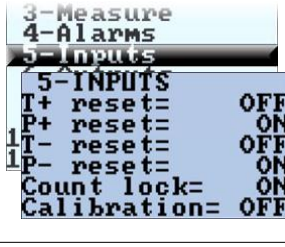
2.1 Flow rate full scale value
2.2 Temperature start scale value
2.3 Temperature full scale value
2.4 Unit of measure and number of decimal place
2.5 Pulse value on channel 1
2.6 Pulse value on channel 2
2.7 Duration of the pulse generated on channel 1
2.8 Duration of the pulse generated on channel 2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



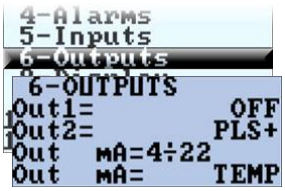
3.1 Low flow zero threshold: 0-25% of full scale value
3.2 Main frequency filter
3.3 Measure filter



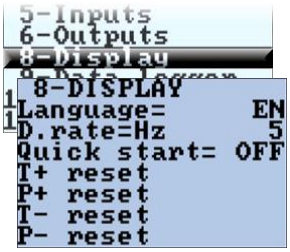
4.1 Maximum value alarm set for direct flow rate
4.2 Minimum value alarm set for direct flow rate
4.3 Maximum value alarm set for reverse flow rate
4.4 Minimum value alarm set for reverse flow rate
4.5 Maximum value alarm set for temperature
4.6 Minimum value alarm set for temperature
4.7 Hysteresis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



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.

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