ISOIL INDUSTRIA

ELECTROMAGNETIC FLOW METER SERIE'S

ISOMAG *Millennium*

ML 250

CONVERTER FOR ELECTROMAGNETIC FLOW METER WITH POWER SUPPLY FROM BATTERY UP TO TEN YEARS, UNIVERSAL (10÷400 V AC/DC) OR 4/20 mA (TWO WIRE) .

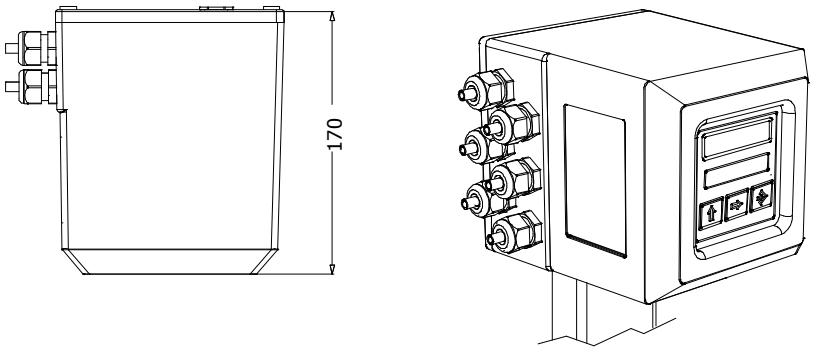
ML 250 WALL VERSION

ML 250 PANEL MOUNTING VERSION

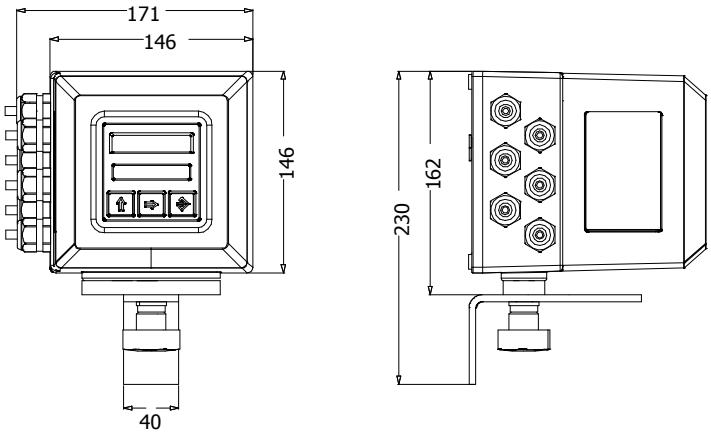
TECHNICAL DATA

Material Box	❑ Wall/Compact : Painted Aluminium Die Casting ❑ Panel Version : NORYL UL 94 V-0 Black
Dimension	❑ 140 X 140 X 160 Mm / 176 X 173 X 154 (Max. Dim.)
Protection Rate	❑ IP 67 (Wall-Compact) – IP 54 (Opt. Ip 65) Panel Version
Connection Sensor Cable/Cable Gland	❑ C018 Cable (MAX 20 meters) / Standard N° 4 PG 11
Amb. Temperature	❑ -20... +60°C
Display LCD	❑ Alphanumeric Display 2 Lines X 16 Characters NOT Back lighted
Keyboard	❑ 3 Membrane Keys
Analog Input	❑ N°1 4÷20 ma Programmable
Pressure measure	❑ Input for pressure sensor (0÷16 , 0÷40)
Built-in Modules	❑ Out 4÷20 ma (Passive, Used Also To Supply Power To The Entire Electronic), N°2 Out On/Off + N°1 In On/Off, Serial Door RS 232 , GSM (SMS/CSD system)
Data Logger	❑ TWO SETS: ▪ 8192 Records Sampled at Rate Of 1, 2, 3, 6, 8, 12, 24, 48 hours ▪ 1024 Records Collected at Measure Sample Rate Note : Both Sets of Records Contain Date/Time Reference, Flow Rate, Positive and Negative Volumes and Auxiliary Input (4/20 mA OR PRESSURE) Expressed in Technical Units ❑ Recording Of Last 64 Alarm Events
Bi-directional	❑ Yes
FS Value	❑ 0,4...10m/S
Diagnostic Functions	❑ Yes
Empty Pip Detect.	❑ Yes
Galvanic Isolation	❑ All The Inputs / Outputs Are Galvanically Isolated From Power Supply
Data Storage	❑ Eeprom, Battery Backup RAM
Programming Plug In	❑ Protected Plug In For Connection To PC (IF2)
CE Certification	❑ Instrument With CE Certificate
Measurements Tolerance	❑ Flow rate (Volume) = ±1 % V.L. /(continuously sampling)
Repeatability	❑ Better Than 0,5% (continuously sampling)
Power Supply (See Details At Pag. 5)	❑ Standard: N°1 Lithium Battery Size D Not Rechargeable, Autonomy 2 Years Using 15 S Sample Rate, 1 Month With Continuous Sampling; Universal Power Supply 10÷400 VDC, 15÷265VAC 44÷66 Hz; Functioning Also As Mixed System Network Power Supply + Battery As Backup. Optional: Up To N°4 Lithium Battery
Max Consumption	❑ 0.08W With Battery, 0.2W With Power Supply

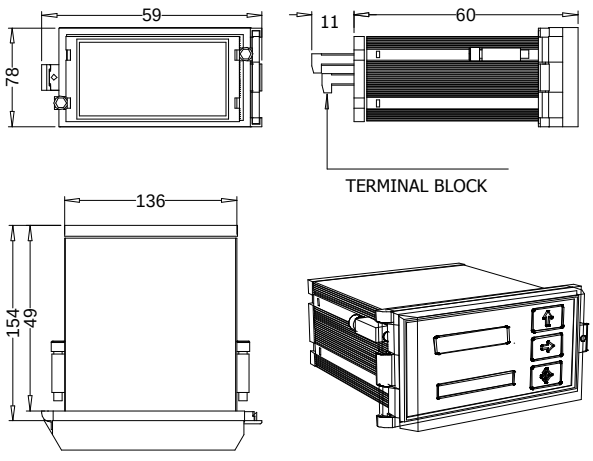
ML 250 CONVERTER : COMPACT VERSION



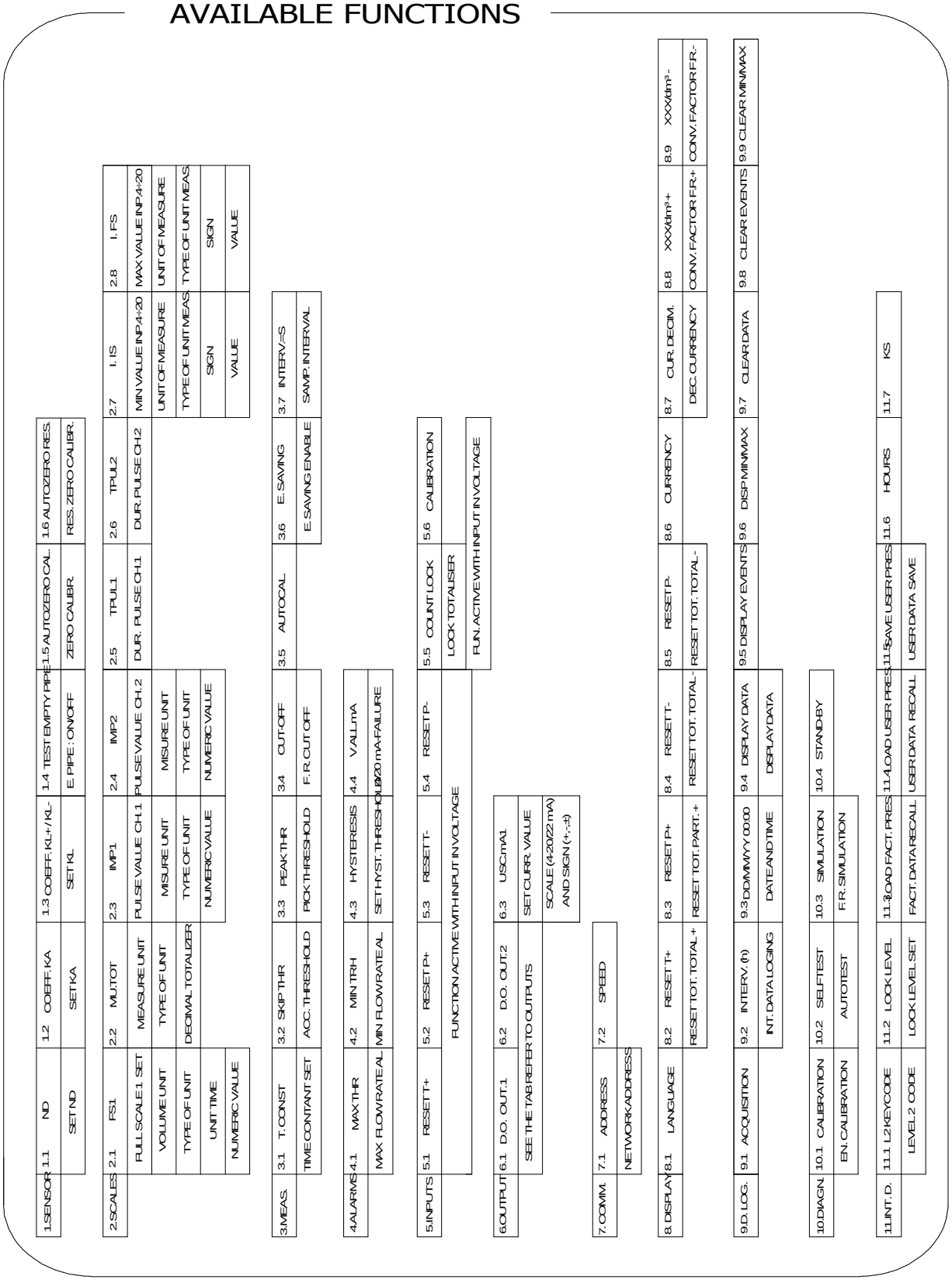
ML 250 CONVERTER : WALL VERSION



ML 250 CONVERTER : FRONT PANEL VERSION



AVAILABLE FUNCTIONS



MEASURE / SAMPLING FREQUENCY

The converter ML 250 could be used in two different mode :

- CONTINUOUS SAMPLING (fig. 1)

In this mode the converter effect the measure according to the classical scheme of the magnetic flow meter; the system consumption, any it is the diameter of sensor is 0.1 W. **The battery life is 1 month (4 with 4 battery)** The system accuracy is define in this operation mode.

- SAMPLING AT PROGRAMMED INTERVALS (fig. 2)

This sample mode allows a big saving of energy. In this mode, the consumption are:

Sample time (s)	1 Battery life (years)	4 Battery life (years)
1	6 months	2,4
2	1	4,2
5	2	7,5
10	2,3	9,4
15	2,7	> = 10
30	4,7	> = 10
60	7,5	> = 10

FIG1 : CONTINUOUS SAMPLING

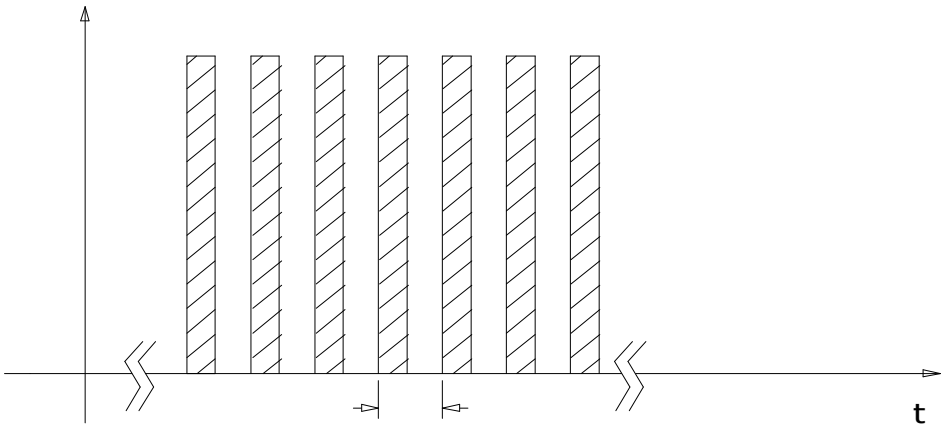
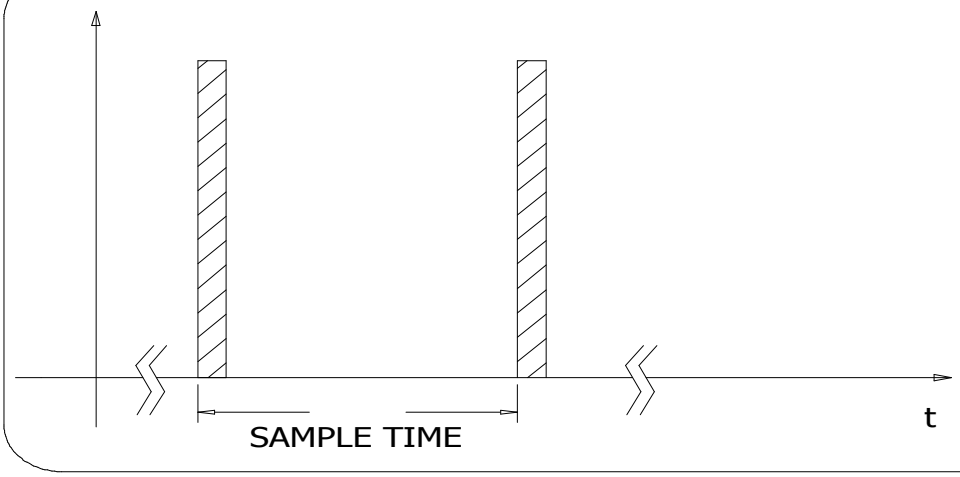
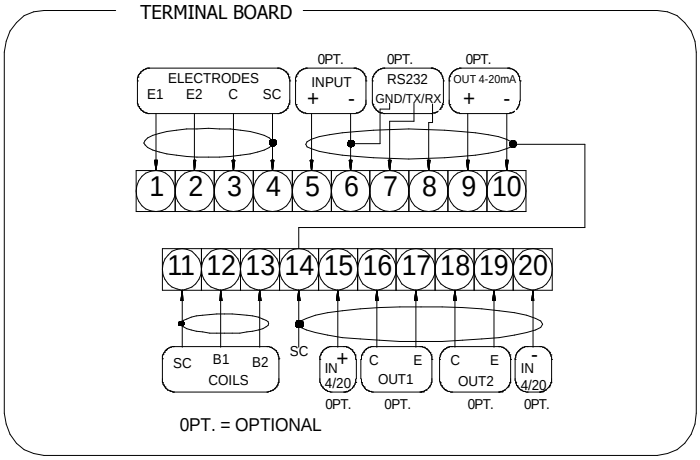
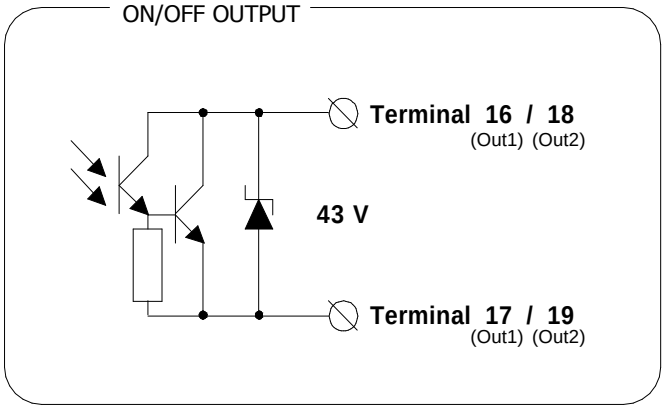


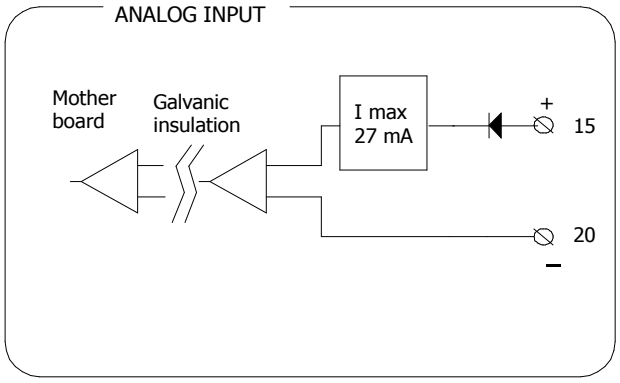
FIG.2 : SAMPLING AT PROGRAMMED INTERVALS

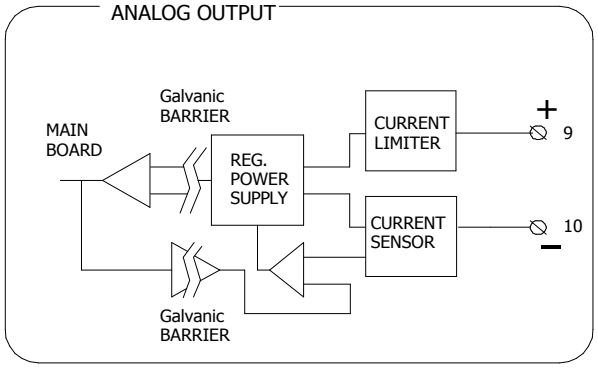


ELECTRICAL CONNECTIONS









HOW ORDER

ML 250	**Display**
	A — Blind version without display and keyboard
	B — Alphanumeric LCD display execution, 2 line each of 16 characters and 3 programming keys

Housing material - Protection rate	
0	Painted aluminum die casting (painted RAL6028) ,protection rate IP67
2	NORYL UL 94 V-0 black (ONLY "F" VERSION) IP 54
3	NORYL UL 94 V-0 BLACK (ONLY "F" VERSION)+TRANSPARENT FRONTAL COVER IP 65

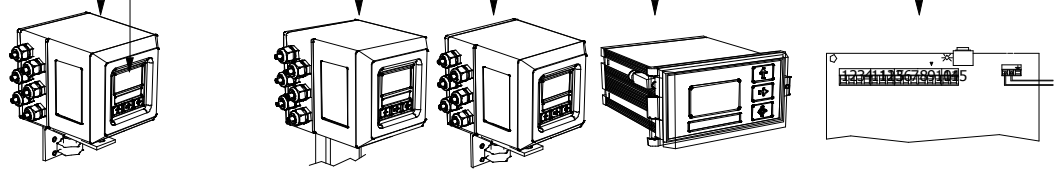
Version	
A	Compact version with sensor MS.... (liquid maximum temperature 100 °C)
B	Separate version for wall monting, complete with mounting accessories in Carbon Steel (painted RAL6028)
F	Separate version for front panel mounting according DIN 43700, complete with mounting accessories, dimensions 72 x 144 mm

Power supply	
1	Power supply : n° 1 Lithium Battery + Universal
2	Power supply : n° 4 Lithium Battery + Universal
3	Power supply : 4/20 mA (see module 2)
9	Power supply : other

INPUT	
A	Without remote input
B	Remote analog input 4/20 mA
C	PRESSURE PROBE (TO BE DEFINE MAX VALUE 16 - 40)
Z	Other

Additional module	
1	Without additional module
2	ME41: n. 1 4/20 mA (also for converter power supply)
3	ME 42 : n. 2 input ON / OFF + 1 out ON/OFF
4	ME 43 : comunication door RS 232
5	ME 44 : GSM MODULE
6	ME 45 : option of module ME41+ME42+ME43
9	Other

ML 250	B	0	A	1	B	1	EXAMPLE OF CODE FOR ORDER



ML 250 — COMPACT VERSION — WALL VERSION — PANEL VERSION — BOARD

WARNING

THE ABOVE DATA CAN BE CHANGED WITHOUT NOTICE