

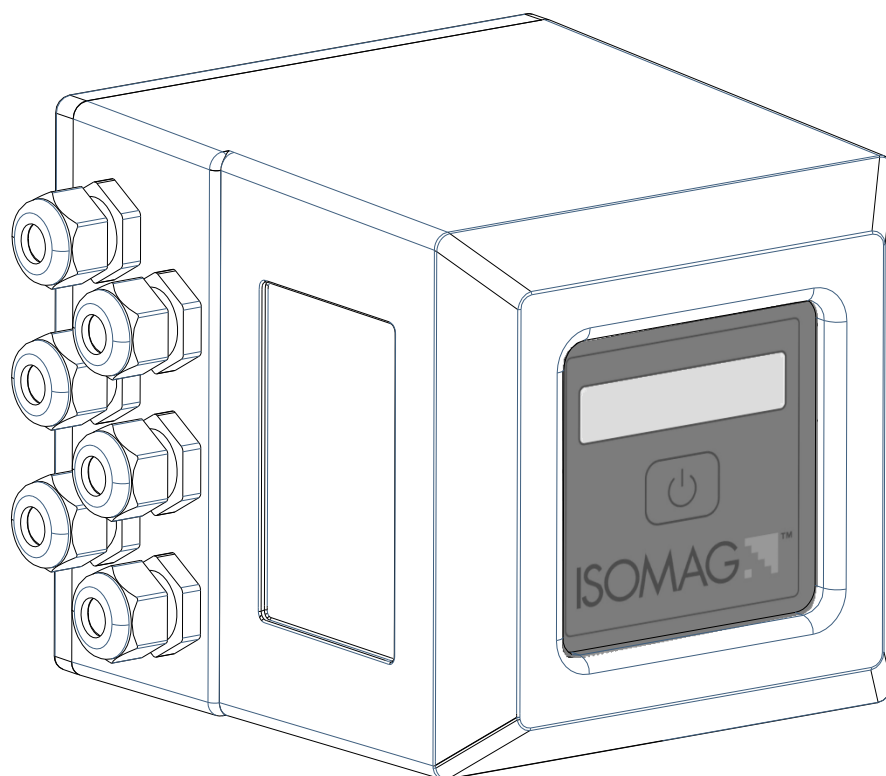
THE MOST ACCURATE BATTERY POWERED SYSTEM

ISOMAG TM

The friendly magmeter

ML 145

(FLOWIZTM FAMILY)



Electromagnetic converter powered by batteries, solar panel or DC power with 4/20 mA output.

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

OVERALL FEATURES	
Suitable For	☐ ISOMAG sensors UP TO DN 800
Minimum Conductivity	☐ 20 μS/cm
Version	☐ Compact ☐ Separate
Power Consumption	☐ 0.08W With Batteries; Average 0.2W/Max 3W With solar panel or DC power
Altitude	☐ -200 m up to 4000 m
Ambient Temperature	☐ -20... +60°C / -4... +140 °F
Humidity Range	☐ 0÷100% (IP 67)
Accuracy	☐ See Table

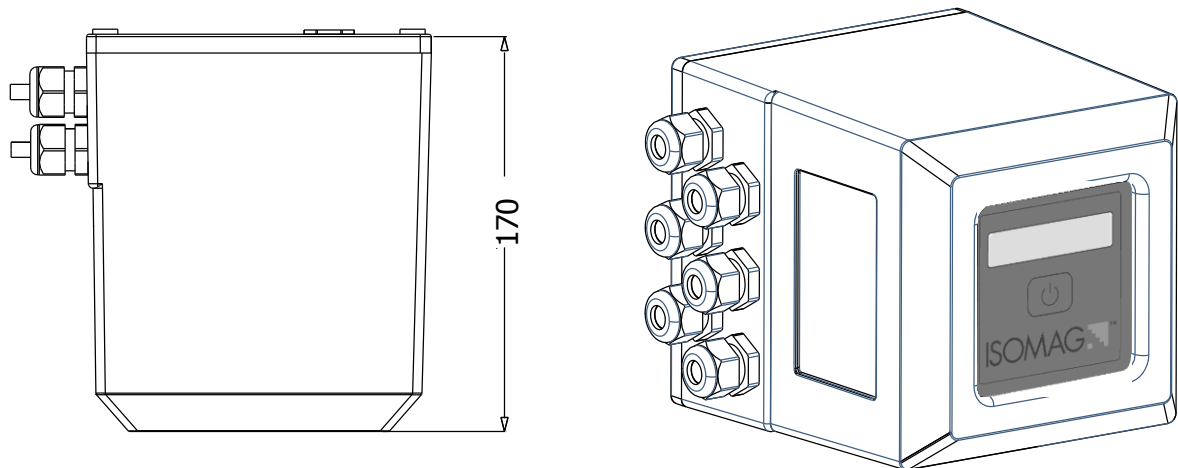
STANDARD FEATURES	
Housing Materials	☐ Painted Aluminium die casting
Protection Rate	☐ IP 67
Power Supply	☐ Mixed System Batteries and main Power Supply; n° 1 Size D Not Rechargeable Lithium Battery
Data Logger	☐ MicroSD Memory Card 2 GBytes
Data Storage	☐ F-Ram
Protocols	☐ ETP
Galvanic Isolation	☐ All the inputs/outputs are galvanically isolated from power supply up to 500 V
Programming Plug In	☐ Protected plug in for the connection to PC (IF2X interface)
Bi-Directional	☐ Yes
Dual Range	☐ Yes
Diagnostic Functions	☐ Yes
Empty Pipe Detect.	☐ Yes
CE Certification	☐ Yes

OPTIONAL FEATURES (CHECK FOR MORE DETAILS 'HOW TO ORDER' ON LAST PAGE)	
Housing Materials	☐ AISI304
Protection Rate	☐ IP 68
Sensor-Converter Connection Cable	☐ CABLE C015 - C016 (for separate version)
Wires connections	☐ IP 68 Connectors
LCD Display	☐ Alphanumerical display: 2 lines x 16 characters NO back light
Power Supply	☐ Up to 6 Size D Not Rechargeable Lithium Battery+Main Power :10-30V---
Pulses/Alarm Outputs	☐ N°2 , 50 Hz, 100mA, 40 Vdc
Digital Input	☐ N°1 On/Off Input
Analog Output (NOT galvanically separated from Main Power)	☐ 0/4..20 mA (available ONLY with Main Power Supply)

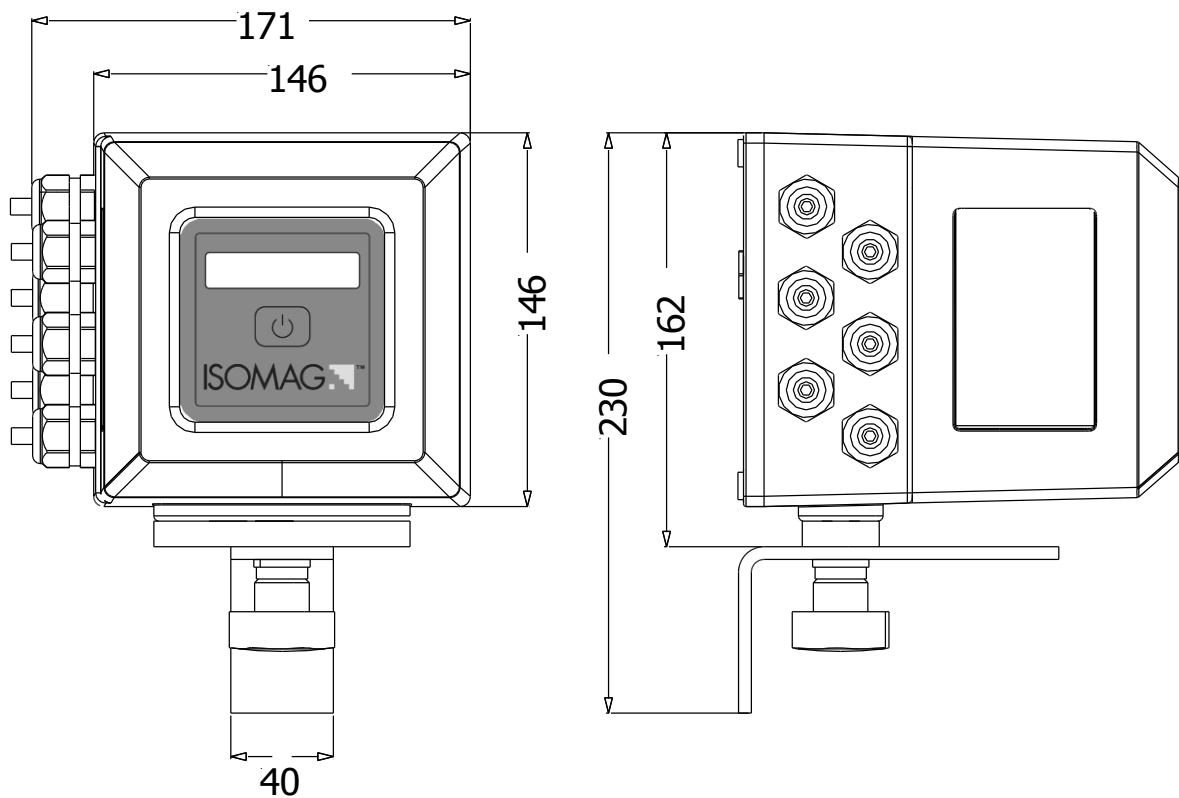
ACCURACY	
Measurements tolerance	☐ Flow rate (volume) = $\pm 0,1\%$ v.l.
Accuracy (whole system converter+sensor)	☐ See table

OVERALL DIMENSIONS

COMPACT VERSION

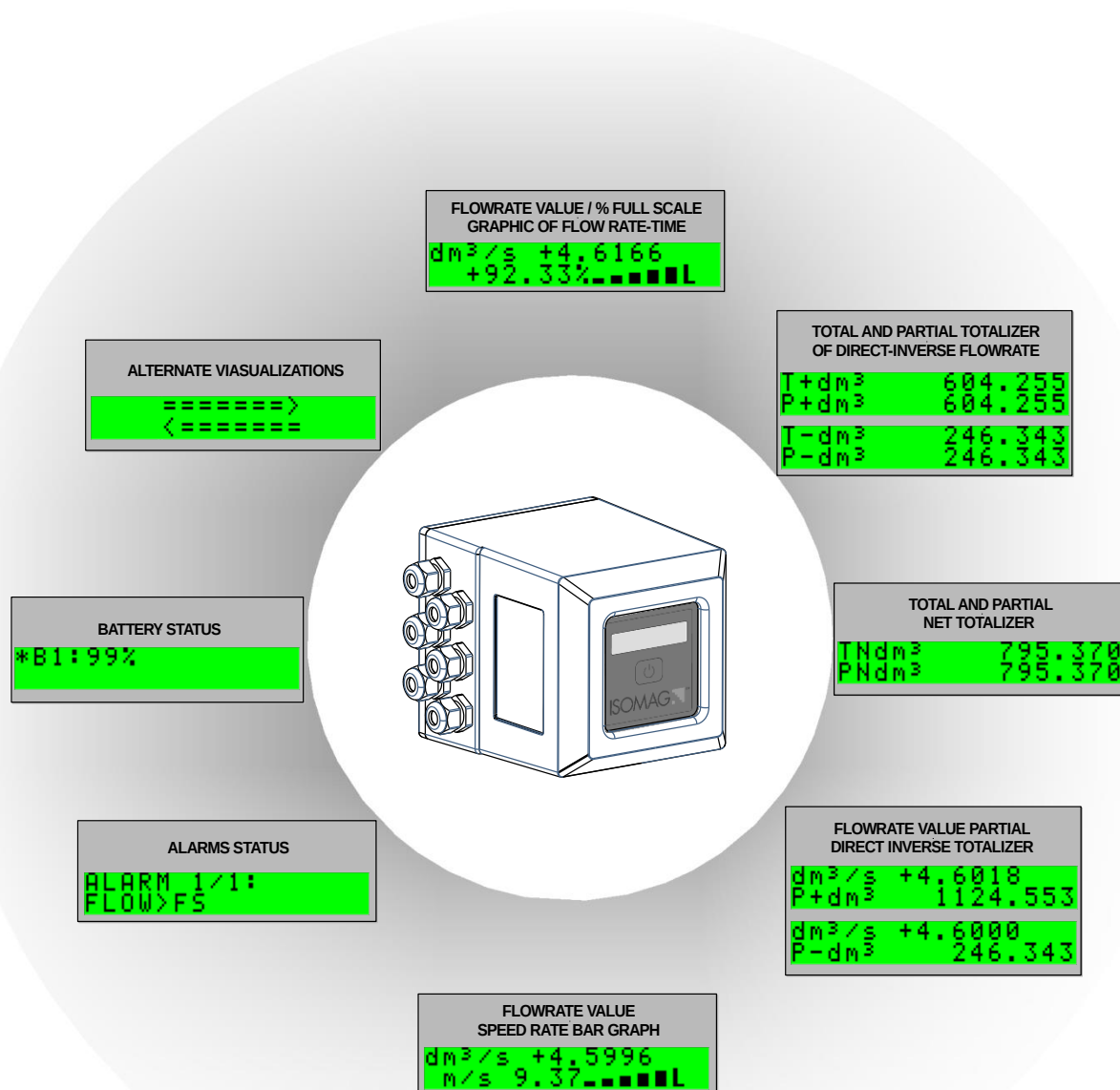


SEPARATE VERSION

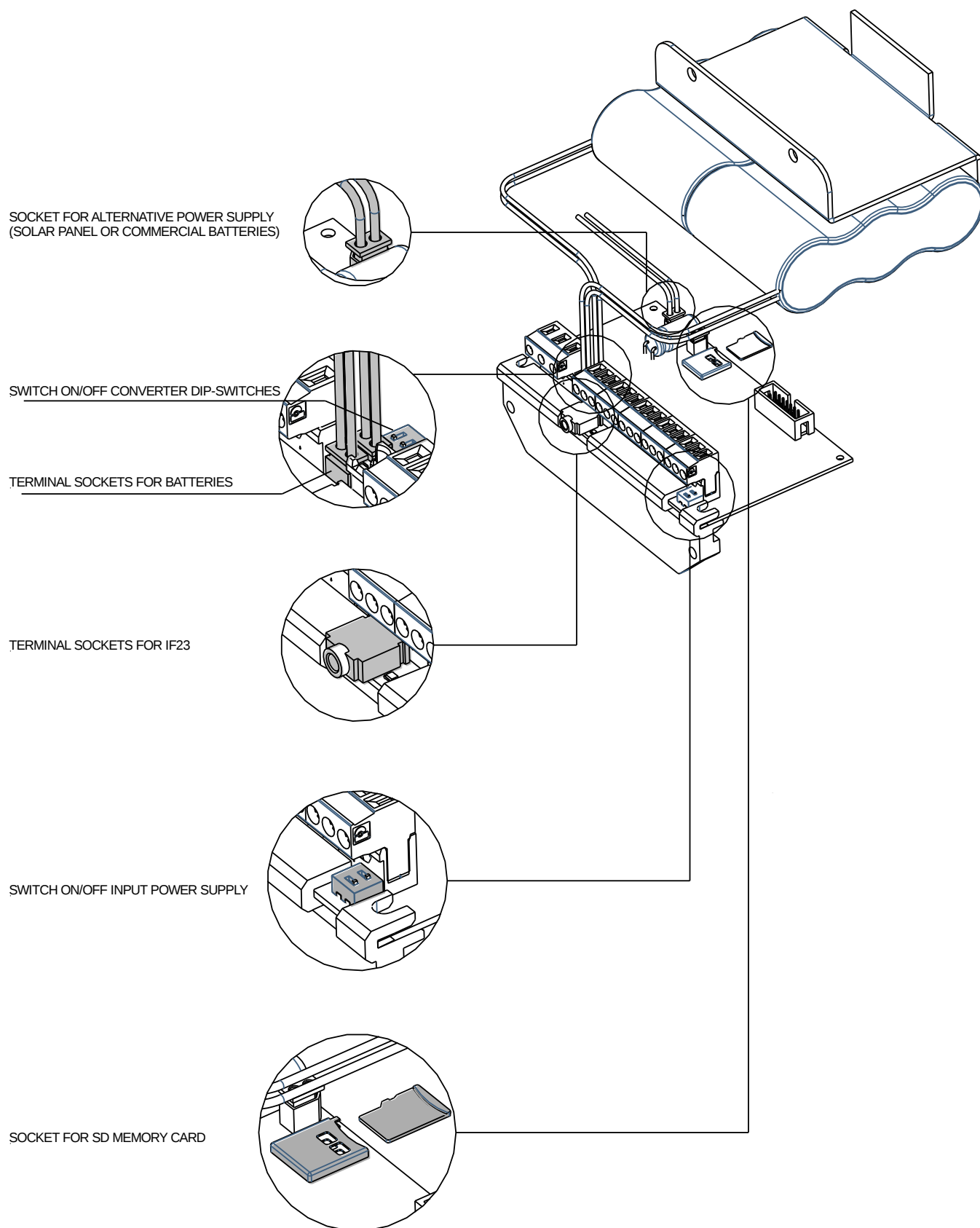


VISUALIZATION PAGES

Different visualization possibilities

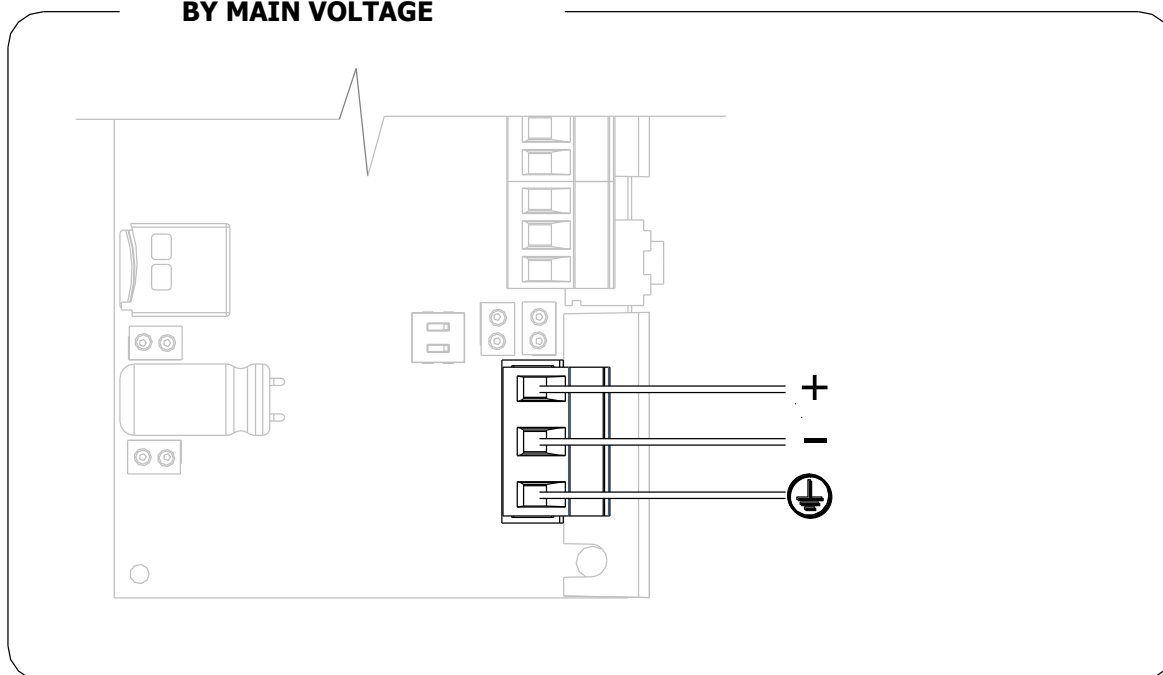


PCB LAYOUT



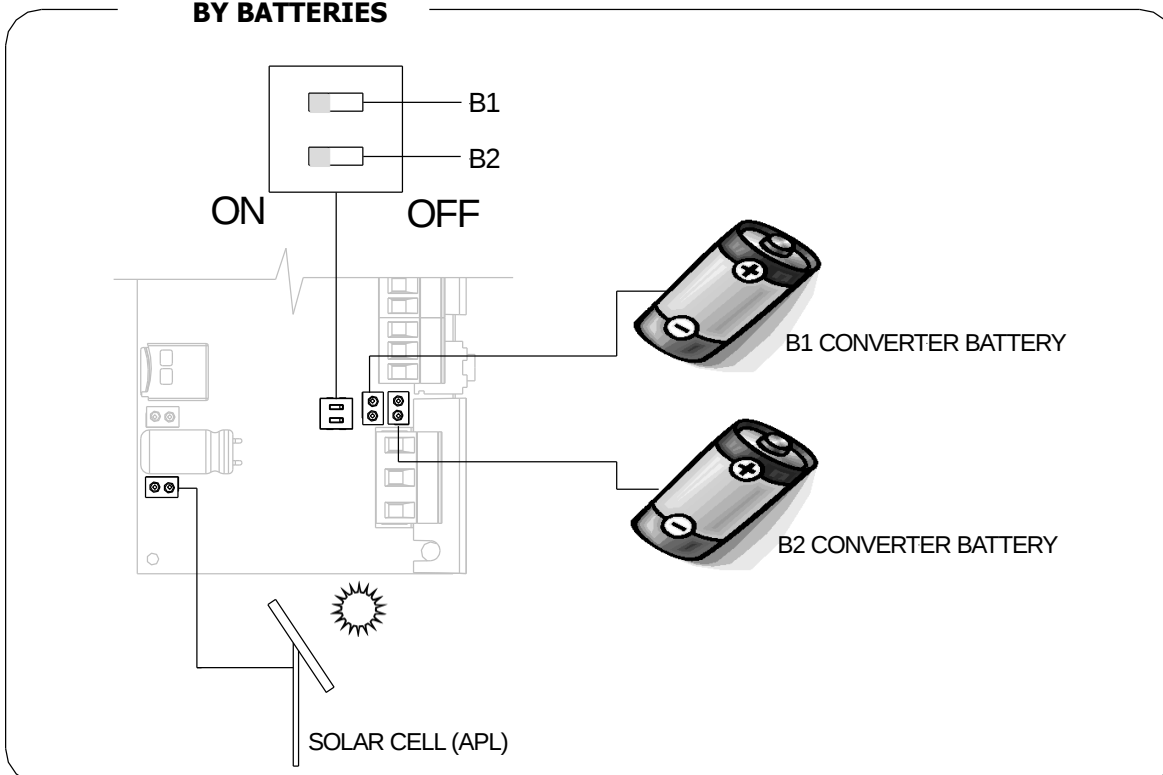
POWER SUPPLY

BY MAIN VOLTAGE



Auto detection of the power source: when main power supply is ON, batteries are excluded and the system operate in continuous sampling mode

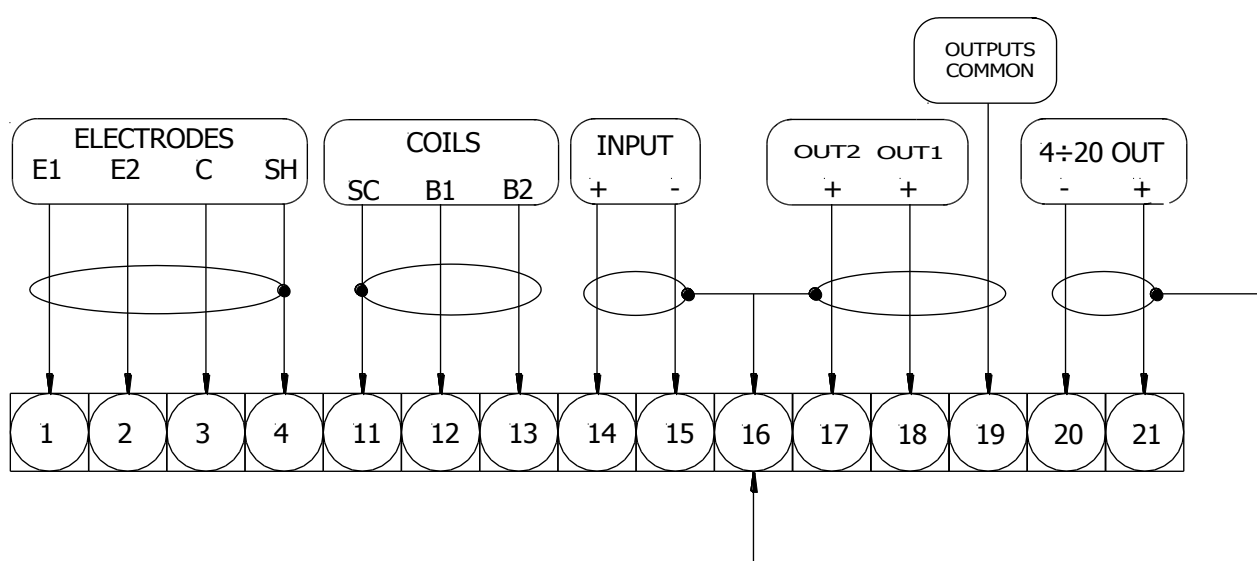
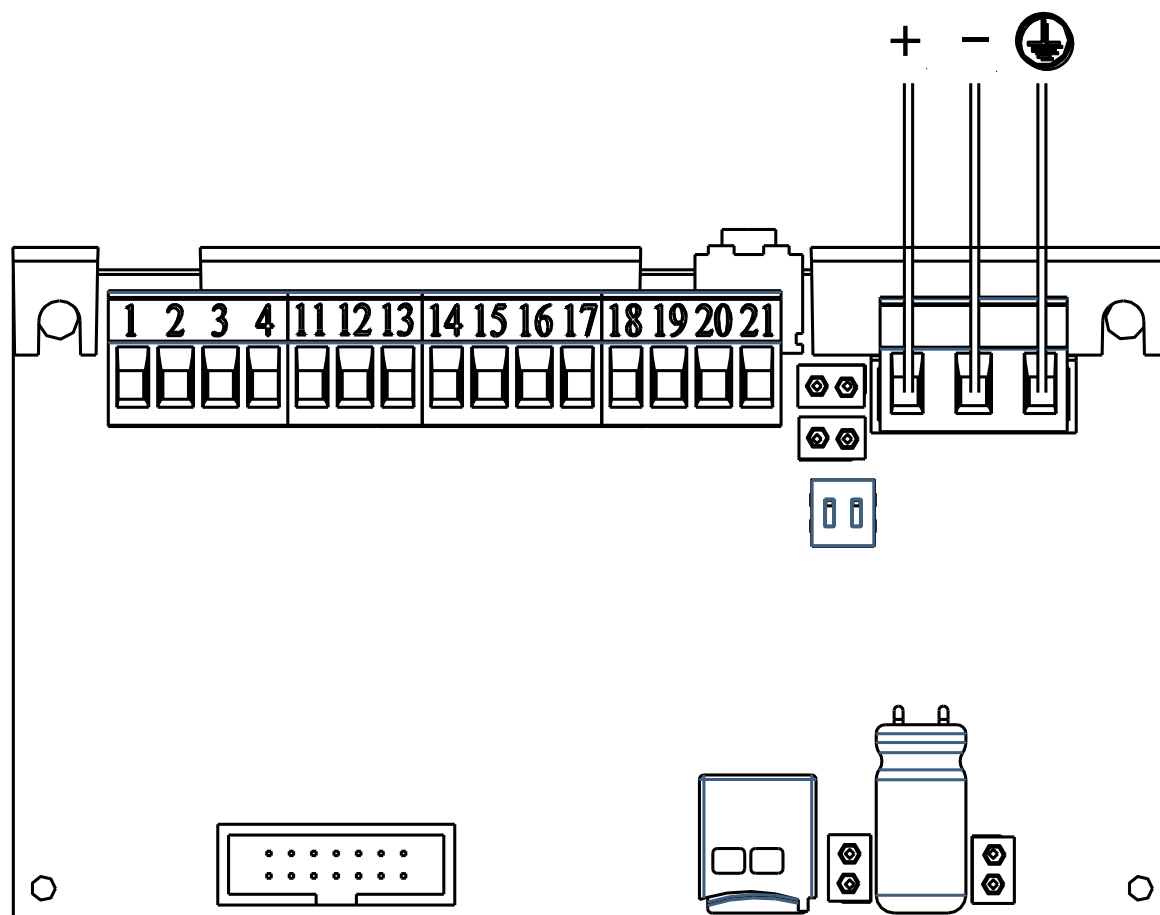
BY BATTERIES

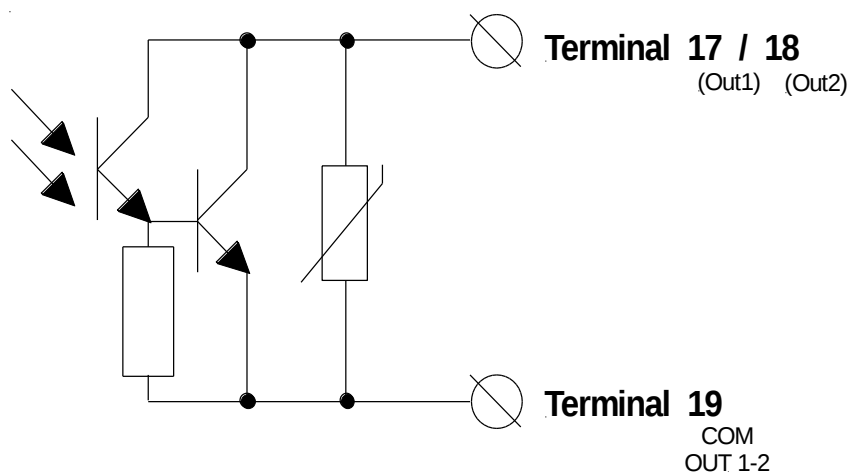
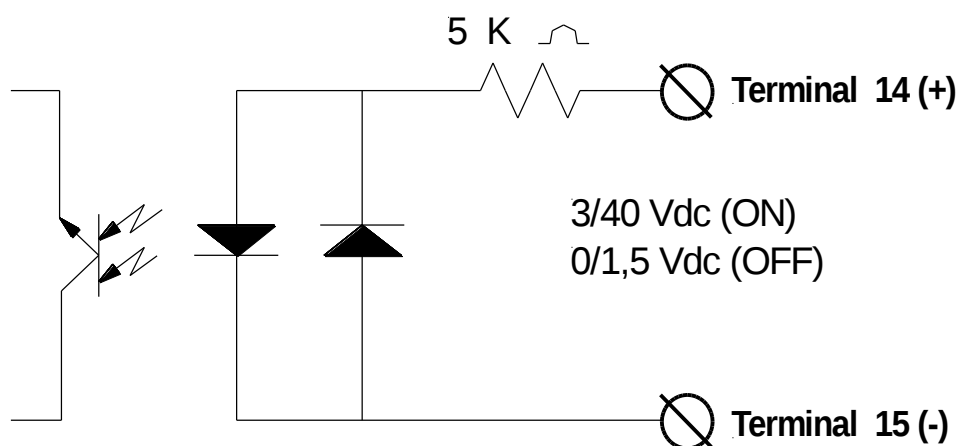


Note : Lithium batteries are subject to special transportation regulations according to "Regulation of Dangerous Goods, UN3090 and UN 3091". Special documentation is required to observe there regulations.

ELECTRICAL CONNECTIONS

TERMINAL BLOCK: COMPACT/SEPARATE VERSION



DIGITAL INPUT / OUTPUT**ON/OFF OUTPUT****ON/OFF INPUT**

FUNCTION'S LIST

```

MAIN MENU
1-Sensor
1-SENSOR
ND=mm      00025
KA=        -01.0000
Sens.type= 004
Ins.position= 0
Ki=        1.0000
Kp=        1.0000
E.P.detect= 0N
E.P.thr.=  100
1Zero cal.
1Zero res.

```

- 1.1 Insert ND of sensor (0-3000)
- 1.2 Calibration data of sensor visualized on sensor's label
- 1.3 Sensors model: Enter the first two characters of the serial number of the sensor
- 1.4 Position for insertion sensors: 0=1/8DN, 1=1/2DN, 2=7/8DN
- 1.5 Automatic setting according to ID (insertion meter only)
- 1.6 Automatic setting according to ID (insertion meter only)
- 1.7 Enables the empty pipe detection function
- 1.8 Value of empty pipe sensibility detection
- 1.9* Enables the automatic zero calibration system
- 1.10 Reset the preceding value

```

MAIN MENU
1-Sensor
2-Scales
2-SCALES
Fs =dm³/s  5.0000
Temp.u.meas.= "F
Tot1MU=dm³ 1.0000
Pls1=dm³   1.00000
Pls2=dm³   1.00000
1Tpls1=ms   0010.0
1Tpls2=ms   0010.0

```

- 2.1* Full scale value measure set for flowrate
- 2.2 Unit of measure of temperature
- 2.3* Unit of measure and number of decimal totalizes
- 2.4* Pulse value on channel 1
- 2.5* Pulse value on channel 2
- 2.6* Duration of the pulse generated on channel 1
- 2.7* Duration of the pulse generated on channel 2

```

MAIN MENU
1-Sensor
2-Scales
3-Measure
3-MEASURE
Cut-off=%   00.0
Prof.=      SMART

```

- 3.1 Low flow zero threshold: 0-25% of full scale value
- 3.2* Consumption profiles

```

MAIN MENU
1-Sensor
2-Scales
3-Measure
4-Alarms
4-ALARMS
Al.max+=%   000
Al.min+=%   000
1Al.max-=%  000
1Al.min-=%  000
Hyst.=%     03

```

- 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 Hysteresis threshold set for the minimum and maximum flow rate alarms

```

MAIN MENU
1-Sensor
2-Scales
3-Measure
4-Alarms
5-Inputs
5-INPUTS
T+ reset=   OFF
P+ reset=   OFF
T- reset=   OFF
P- reset=   OFF
1Count lock= OFF
1Calibration= OFF
Inp.pwr=    EXT
Alarm=      OFF

```

- 5.1* Total direct (positive) flow totalise reset enable
- 5.2* Partial direct (positive) flow totalise reset enable
- 5.3* Total reverse (negative) flow totalise reset enable
- 5.4* Partial reverse (negative) flow totalise reset enable
- 5.5 Totalise counting lock command
- 5.6* Autozero calibration external command
- 5.7 Input power supply
- 5.8 Alarm from external signal (i.e. flooding/intrusion/..)

```

MAIN MENU
1-Sensor
2-Scales
3-Measure
4-Alarms
5-Inputs
6-Outputs
6-OUTPUTS
1 Out1= OFF 6.1* Output 1
1 Out2= PLS 6.2* Output 2
Out mA=4.22 6.3 4÷20 Output

```

6.1* Output 1
6.2* Output 2
6.3 4÷20 Output

```

5-Inputs
6-Outputs
7-Communication
7-COMMUNICATION
IF2 prot.= DPP 7.1 Choice of the communication protocol for the IF2 device
10-Diagnostic
11-Internal data

```

7.1 Choice of the communication protocol for the IF2 device

```

6-Outputs
7-Communication
8-Display
8-DISPLAY
1 Language= EN 8.1 Choice of the language: EN= English, IT=Italian, FR= French, SP= Spanish
1 D.time=s 060 8.2 Time for switch off display (shown with function 3.7 enabled)
Quick start= OFF 8.3 Visualization of "Quick start menu"
Disp.lock= OFF 8.4 Lock of DISPLAY in ONE SPECIFIC visualization page
T+ reset 8.5* Total direct (positive) flow totalizer reset from keyboard
P+ reset 8.6* Partial direct (positive) flow totalizer reset from keyboard
T- reset 8.7* Total reverse (negative) flow totalizer reset enable from keyboard
P- reset 8.8* Partial reverse (negative) flow totalizer reset enable from keyboard

```

8.1 Choice of the language: EN= English, IT=Italian, FR= French, SP= Spanish
8.2 Time for switch off display (shown with function 3.7 enabled)
8.3 Visualization of "Quick start menu"
8.4 Lock of DISPLAY in ONE SPECIFIC visualization page
8.5* Total direct (positive) flow totalizer reset from keyboard
8.6* Partial direct (positive) flow totalizer reset from keyboard
8.7* Total reverse (negative) flow totalizer reset enable from keyboard
8.8* Partial reverse (negative) flow totalizer reset enable from keyboard

```

7-Communication
8-Display
9-Data logger
9-DATA LOGGER
1 12013/04/04 08:45 9.1* Date and time set
1 Acquisition= ON 9.2* Automatic data logger enable
Double int.= ON 9.3* Choice of single (off) or double (on) interface
int.1 =00h10m00s 9.4* Interval time 1 for the data logging function
int.2 =00h01m00s 9.5* Interval time 2 for the data logging function
int.2 = HOURLY 9.6 Interval period 2 for the data logging function
T.ON =00d00h00m 9.7 Interval 2 start login time
T.OFF =00d00h00m 9.8 Interval 2 stop login time
Log T+= OFF 9.9 Enables the sending of direct total totalizer
Log P+= OFF 9.10 Enables the sending of direct partial totalizer
Log T-= OFF 9.11 Enables the sending of reverse total totalizer
Log P-= OFF 9.12 Enables the sending of reverse partial totalizer
Log NT= OFF 9.13 Enables the sending of net total totalizer
Log NP= OFF 9.14 Enables the sending of net partial totalizer
Log Q= OFF 9.15 Enables the sending of flow rate
Log STAT= OFF 9.16*Logging of statistical data
M.units= OFF 9.17 Enables the sending of measure units ( technical units )
% values= OFF 9.18 Enables the sending of measure units ( % )
Separator= , 9.19 Symbol used as separator on CSV files

```

9.1* Date and time set
9.2* Automatic data logger enable
9.3* Choice of single (off) or double (on) interface
9.4* Interval time 1 for the data logging function
9.5* Interval time 2 for the data logging function
9.6 Interval period 2 for the data logging function
9.7 Interval 2 start login time
9.8 Interval 2 stop login time
9.9 Enables the sending of direct total totalizer
9.10 Enables the sending of direct partial totalizer
9.11 Enables the sending of reverse total totalizer
9.12 Enables the sending of reverse partial totalizer
9.13 Enables the sending of net total totalizer
9.14 Enables the sending of net partial totalizer
9.15 Enables the sending of flow rate
9.16*Logging of statistical data
9.17 Enables the sending of measure units (technical units)
9.18 Enables the sending of measure units (%)
9.19 Symbol used as separator on CSV files

```
8-Display
9-Data logger
10-Diagnostic
110-DIAGNOSTIC
Sensor test
Self test
Simulation= OFF
Stand-by
Read SDC info
Firmware rev.
```

- 10.1 Perfrom a sensor test (SENSOR MUST BE CONNECTED)
- 10.2* Converter auto-test
- 10.3* Flow rate simulation enabling
- 10.4* Stand-by function
- 10.5* SD card status/info
- 10.6* Show firmware revision of converter

```
8-Display
9-Data logger
10-Diagnostic
11-Internal data
11-INTERNAL DATA
L2 code= *****
Load fact.data
KS= +1.0000
```

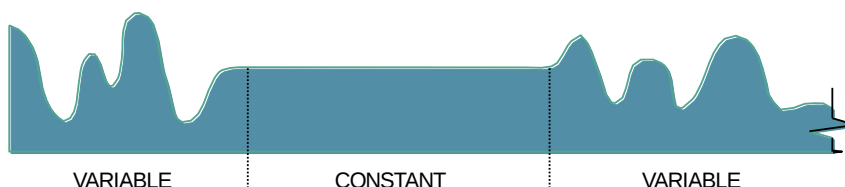
- 11.1 Level 2 access code enter
- 11.2 Load factory data pre-set
- 11.3 Ks Coefficient

Note : all references to page number are linked to the operating manual .

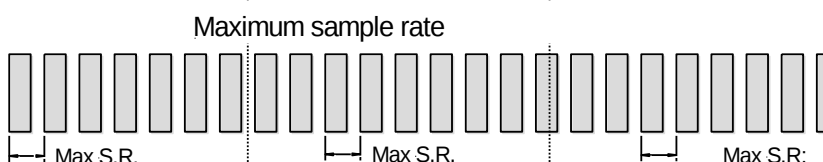
MEASURE / SAMPLE FREQUENCY

ML 145 can be programmed to measure in four different modes:

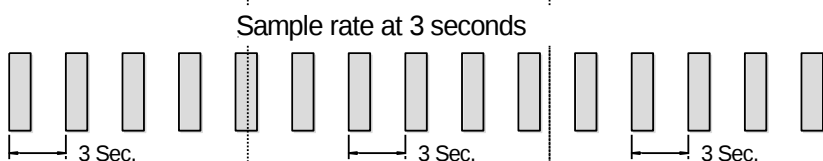
REAL FLOW PROFILE



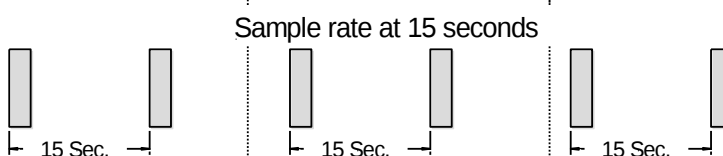
CONTINUOUS SAMPLING



AVERAGE SAMPLING

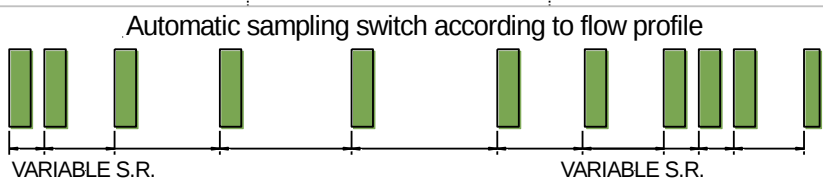


MAX LIFE SAMPLING



S.R.=SAMPLE RATE

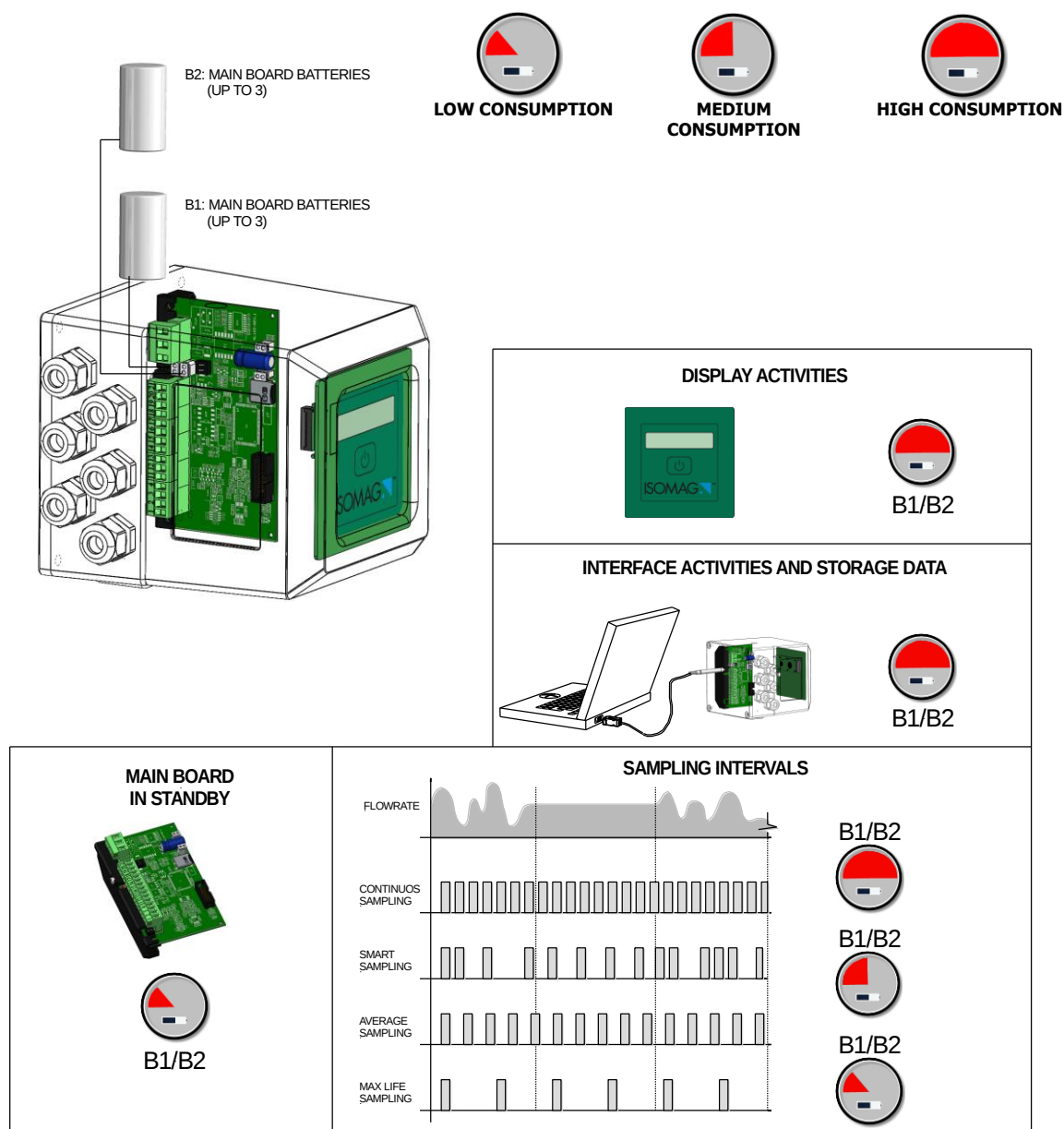
THE NEW SMART SAMPLING FUNCTION



An internal algorithm allows the unit to automatically detect flow rate variations in the process. This capability determines the automatic setting of the sampling frequency. No variations means lower sampling frequency, with less power consumption; high variations means higher frequency to follow the changes in the process.

BATTERIES CONSUMPTION

Battery consumption depends on the setting of the following elements: main board, sampling profiles, sensor diameter, amount of collected data, interfaces activity (display, etc.).

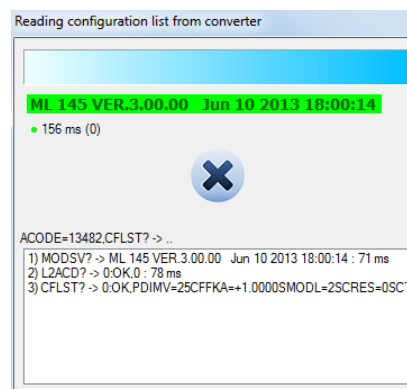
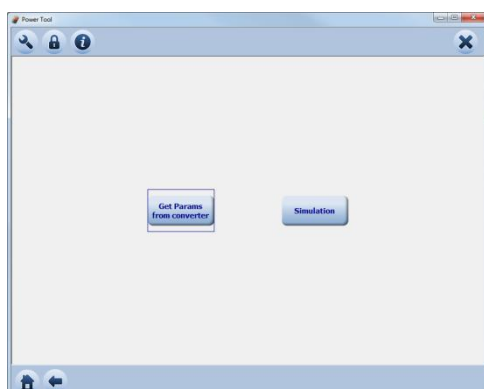


POWER TOOL SOFTWARE

Power tool is a software which allows to evaluate the instrument's battery life. The estimation is done with an easy guided procedure :

Connect the converter to the PC throughout the IF23 cable, then :

- launch the Power tool software
- select the relevant converter
- select "Get params from converter" or "Simulation" if the converter is not available
- waiting for the reading of converter's parameters (not in simulation mode)

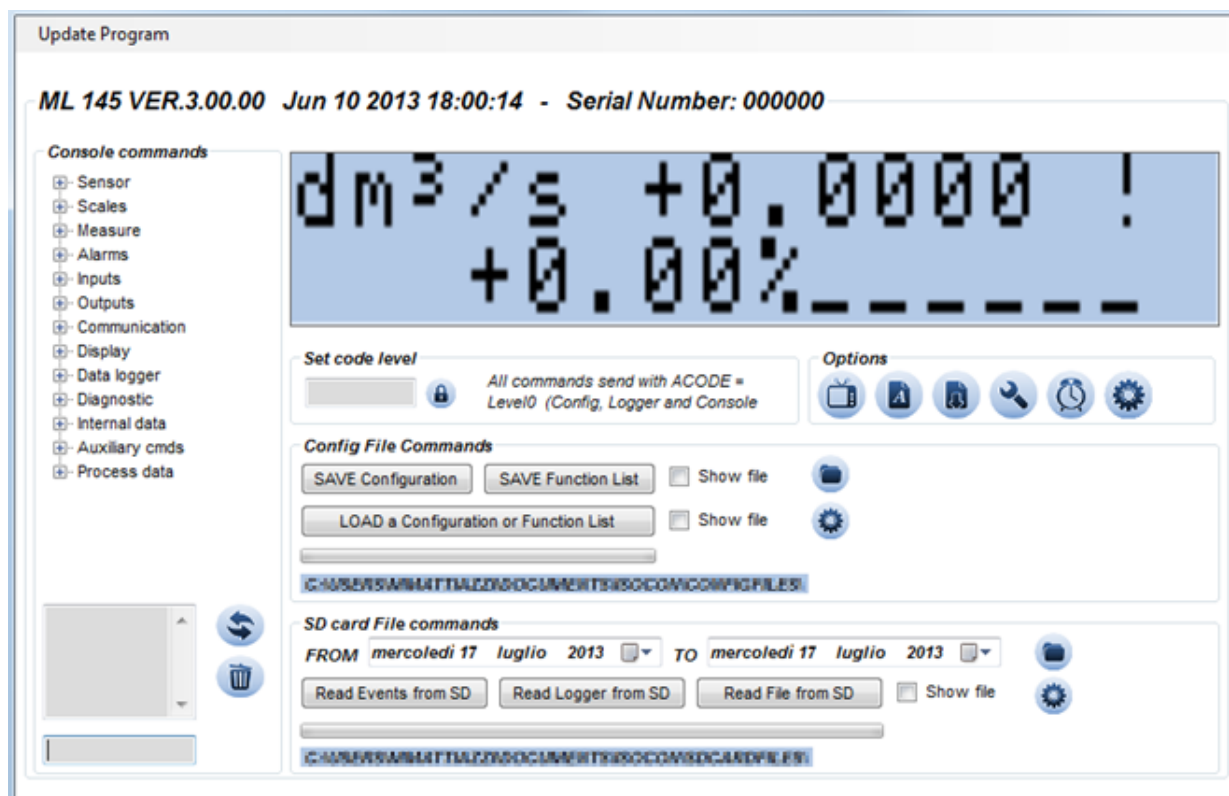


It is now possible to calculate the expected life battery; it is automatically updates after any parameters change. Once the procedure will be completed, the new configuration can be send to the converter by the relevant key.



USER INTERFACE

Besides the keyboard, the converter can be programmed by ISOCON INTERFACE: a real time interface between converter and PC.



DATA LOGGER

Data is stored on micro SD card; the recorded data or the events, can be easily downloaded by the ISOCON INTERFACE, pressing the relevant key as shown below

SD card File commands

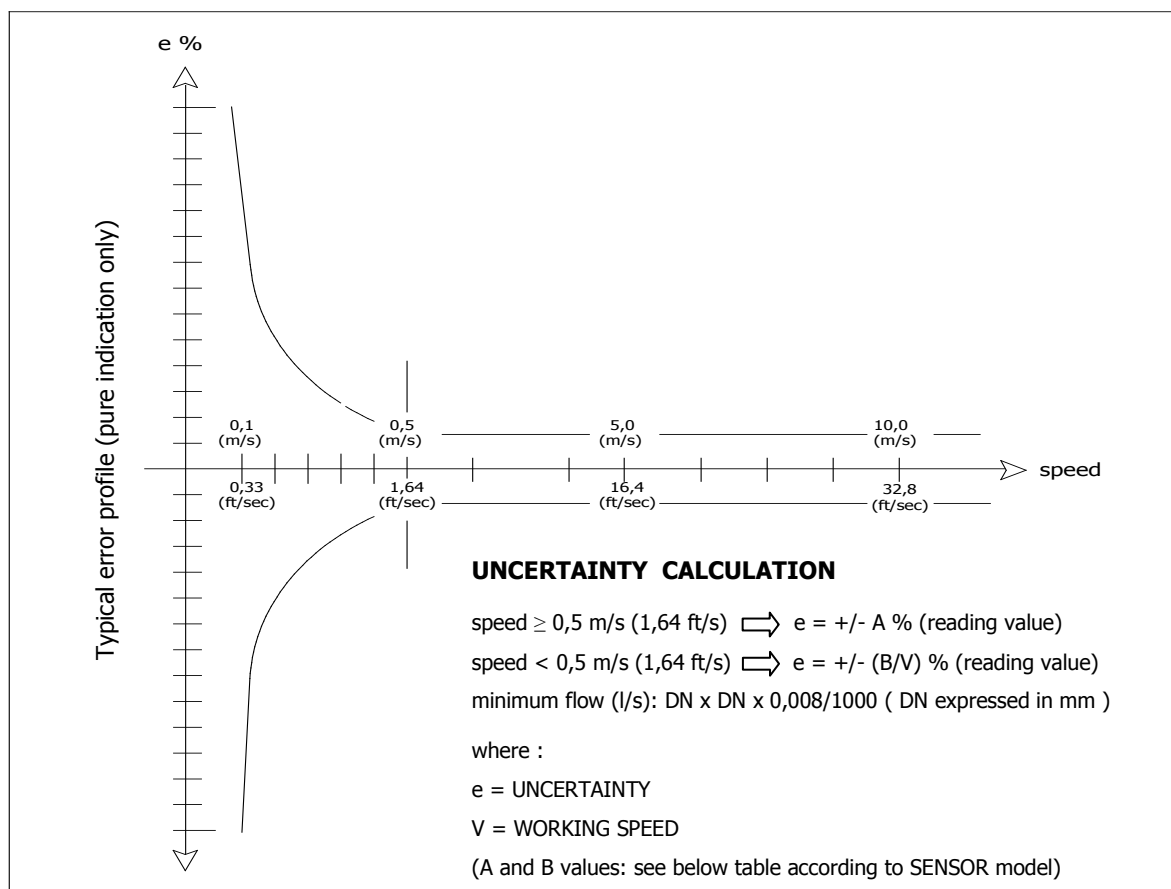
FROM TO

☒ Show file

Note: to record correctly the data, the date and time shall be properly set.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	IJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	VV	VW	VX	VY	VZ	XA	XB	XC	XD	XE	XF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZV	ZW	ZX	ZY	ZZ
REFERENCE DATA TIME																												TOTAL		MAXIMUM		MINIMUM		AVERAGE		STANDARD DEVIATION		VARIANCE		COEFFICIENT OF VARIATION		CORRELATION COEFFICIENT		SKEWNESS		KURTOSIS		SHARPNESS		TAPER		FLATNESS		RUGGEDNESS		SMOOTHNESS		TEXTURE		GRAIN		PATTERN		STRUCTURE		COMPOSITION		PROPERTIES		CHARACTERISTICS		FEATURES		DETAILS		FINISH		QUALITY		QUANTITY		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT		SYMBOL		VALUE		UNIT																																																																																																																																																																																																		

ACCURACY TABLE



FULL BORE SENSORS

MS501/MS1000/MS2500			MS5000		
A	B(m/s)	B(ft/s)	A	B(m/s)	B(ft/s)
0,5*	0,25*	0,82	2,0	1,0	3,28

INSERTION SENSORS

See MS 3770 / MS 3800 DATA SHEET

Reference conditions below and as per internal testing procedures:

- ☐ Constant flow rate during the test
- ☐ Pressure: >30 Kpa
- ☐ Flow condition : fully developed flow profile
- ☐ Zero stability +/- 0,005 %

* Special accuracy on request

HOW TO ORDER

CODE EXAMPLE	DISPLAY
B	A Blind version (without display)
	B Alphanumerical display: 2 lines x 16 characters NO back light
	HOUSING MATERIAL / PROTECTION RATE
0	0 Painted aluminium die casting , protection rate IP 67
	1 AISI304 Stainless Steel housing, protection rate IP67 (NO ROTATABLE DISPLAY)
	5 AISI304 Stainless Steel housing, protection rate IP68 1,5 meters under water (COMPACT VERSION ONLY, NO ROTATABLE DISPLAY)
	6 Painted aluminium die casting IP 68 1,5 meters under water (COMPACT VERSION ONLY, NO ROTATABLE DISPLAY)
	7 Painted aluminium die casting IP 68 1,5 meters under water (SEPARATE VERSION ONLY, NO ROTATABLE DISPLAY) COMPLETE WITH 2 CONNECTORS IP 68 FOR CABLE C015/C016
	8 AISI 304 - IP 68 1,5 meters under water (SEPARATE VERSION ONLY, NO ROTATABLE DISPLAY) COMPLETE WITH 2 CONNECTORS IP 68 FOR CABLE C015/C016
	VERSION
A	A Compact version with sensor MS
	B Separate version for wall mounting, complete with Aluminium mounting accessories, max length of C015/C016 = 20 m
	D Separate version for wall mounting, complete with AISI304 mounting accessories, max length of C015/C016 = 20 m
	POWER SUPPLY
1	0 n° 1 LITHIUM BATTERY - WITHOUT MAIN POWER DC
	1 n° 1 LITHIUM BATTERY - WITH MAIN POWER DC
	2 n° 4 LITHIUM BATTERIES (1 + 1 PACK OF 3) - WITH MAIN POWER DC
	4 n° 6 LITHIUM BATTERIES (2 X 3 PACKS) - WITHOUT MAIN POWER DC
	5 n° 3 LITHIUM BATTERIES (1 PACK OF 3) - WITHOUT MAIN POWER DC
	6 n° 4 LITHIUM BATTERIES (1 + 1 PACK OF 3) - WITHOUT MAIN POWER DC
	7 WITHOUT BATTERIES WITH MAIN POWER DC
	8 WITHOUT BATTERIES WITHOUT MAIN POWER DC (Batteries to be purchased locally)
	9 n° 6 LITHIUM BATTERIES (2 X 3 PACKS) - WITH MAIN POWER DC
	a n° 2 LITHIUM BATTERIES (1+1) - WITHOUT MAIN POWER DC
	OUTPUT
A	A NONE
	B N° 2 on/off out (max 50 Hz - max 100 mA) + n° 1 digital input
	C N° 1 out 4/20 mA (Available ONLY with MAIN POWER DC option)
	D Options B + C
	E N° 2 on/off outs (max 50 Hz - max 100 mA) + n° 1 digital input with IP68 connector
	F Options C + E with N° 1 IP 68 connectors
	SPECIAL FEATURES
1	0 NONE
	1 WITH ANTICONDENSE CAP
	2 Connector for IP68 out connection (One piece , 10 contacts)
	3 N° 1 IP 68 CONNECTOR FOR IF22 INTERFACE
	4 Options 2 + 3

ML145-B0A1A1 (Complete code example for order)

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