ISOMAG

The friendly magmeter

DATA SHEET

MV110

CE

ISOIL INDUSTRIA

INDEX

TECHNICAL DATA

OVERALL FEATURES	
Minimum conductivity	❑ 5 µS/cm
Altitude	❑ -200 m up to 4000 m
Ambient Temperature	❑ -20… +60°C / -4… +140 °F - Aluminium housing ❑ -10… +50°C / +14…+122 °F - Reinforced Nylon
Humidity Range	❑ 0÷100%

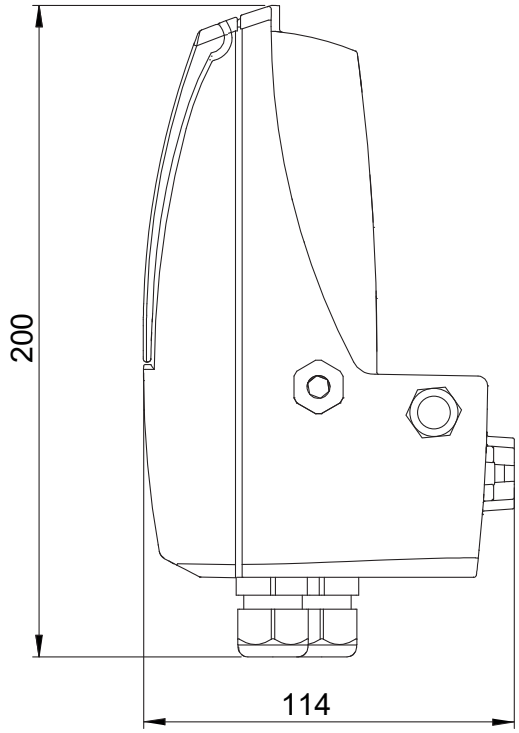
STANDARD FEATURES	
Version	❑ Compact ❑ Separate
Housing materials	❑ Painted Aluminium die casting ❑ Nylon reinforced with 15% of fiber glass ❑ AISI304 Stainless Steel
Protection Rate	❑ IP 67
Power Supply/Consumption	❑ 5W – 44-66 Hz
Cable Gland	❑ N° 5 cable gland PG 11
Full scale value	❑ 0,4…10m/s
Dig. Input	❑ N°1 , programmable function (i.e. Totalizer reset)
Data Storage	❑ Values storing system in case of power failure
Galvanic Insulation	❑ All the inputs/outputs are galvanically insulated
Programming Plug In	❑ USB port for the connection to PC (USB cable type A/USB MINI B is required for the programmation)
Bi-Directional	❑ Yes
Diagnostic Funct.	❑ Yes
Empty Pipe Detect.	❑ Yes
CE Certification	❑ Yes

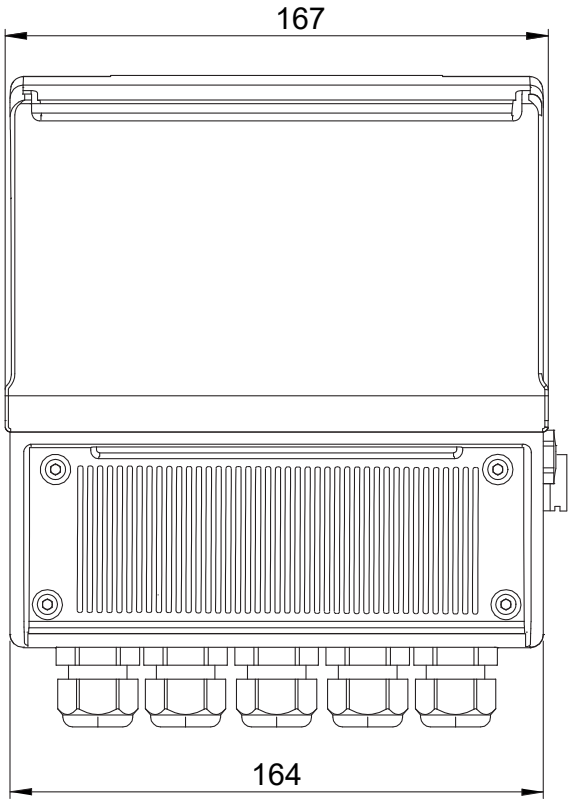
OPTIONAL FEATURES (CHECK HOW TO ORDER, AT LAST PAGE, FOR MORE DETAILS)	
Protection Rate	❑ IP 68
Conn. Sensor Cable	❑ CABLE C014 for separate version
LCD Display	❑ Graphic display 128x64 pixels back light, 3 programming keys
Power Supply/Consumption	❑ Power supply : 24 … 36 VAC/VDC 0...45/66 Hz ❑ Power supply : 12…48 VDC ❑ Power supply : 100 ... 240 VAC 44/66 Hz + 1 Rechargeable Battery ❑ Power supply : 24 … 36 VAC/VDC 0...44/66 Hz + 1 Rechargeable Battery ❑ Power supply : 12…48 VDC + 1 Rechargeable Battery
Outputs: Pulses/Frequence/Alarms	❑ N°1 digital Output , 1250 Hz, 100mA, 30 Vdc ❑ N°2 digital Outputs , 1250 Hz, 100mA, 30 Vdc
Analog Output	❑ n° 1 Analogue output 0/4...20/22 mA (Hart optional) ❑ n° 2 Analogue outputs 0/4...20/22 mA (Hart optional over Out.1)
Communication Gateway	❑ RS 485 ❑ Wi-Fi (for programming)
Data Logger	❑ MicroSD Memory Card 4...32 GBytes
Protocols	❑ Modbus over RS 485 ❑ HART (Available on analog output n° 1) ❑ MeterBus
MID Certifications	❑ MI-001 ❑ MI-004

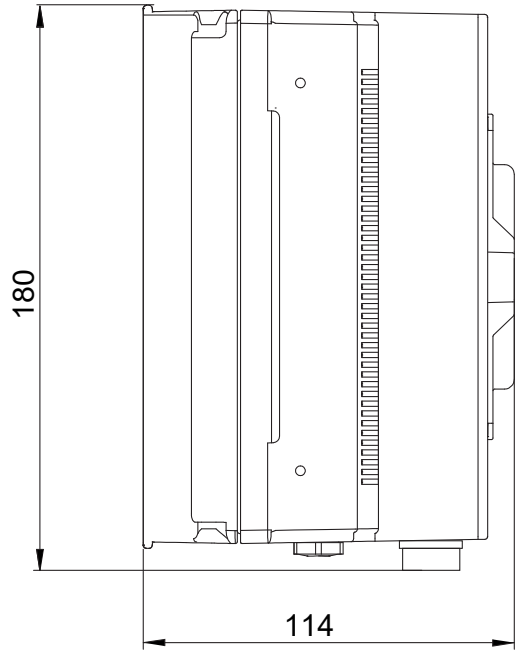
ACCURACY	
Accuracy (Whole System Converter+Sensor)	❑ See table below

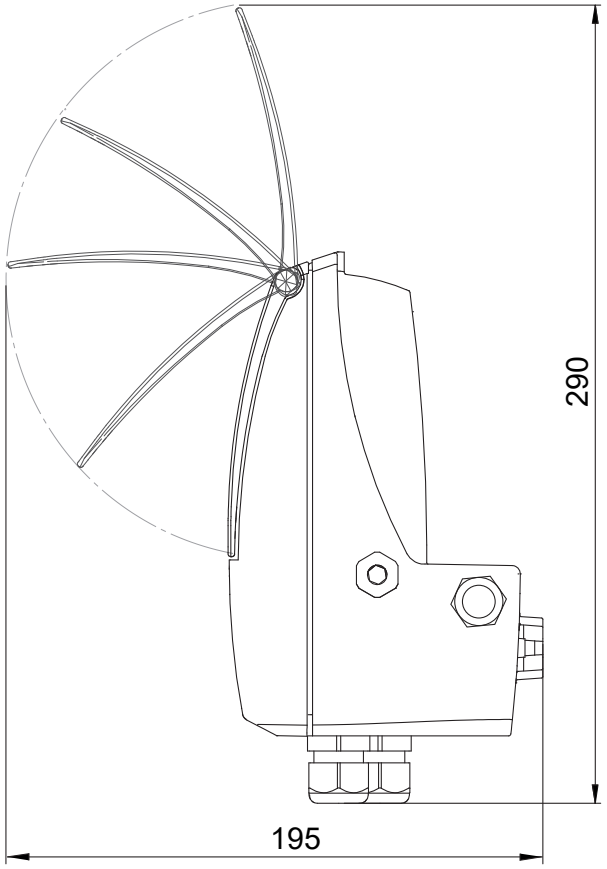
OVERALL DIMENSIONS

Compact version

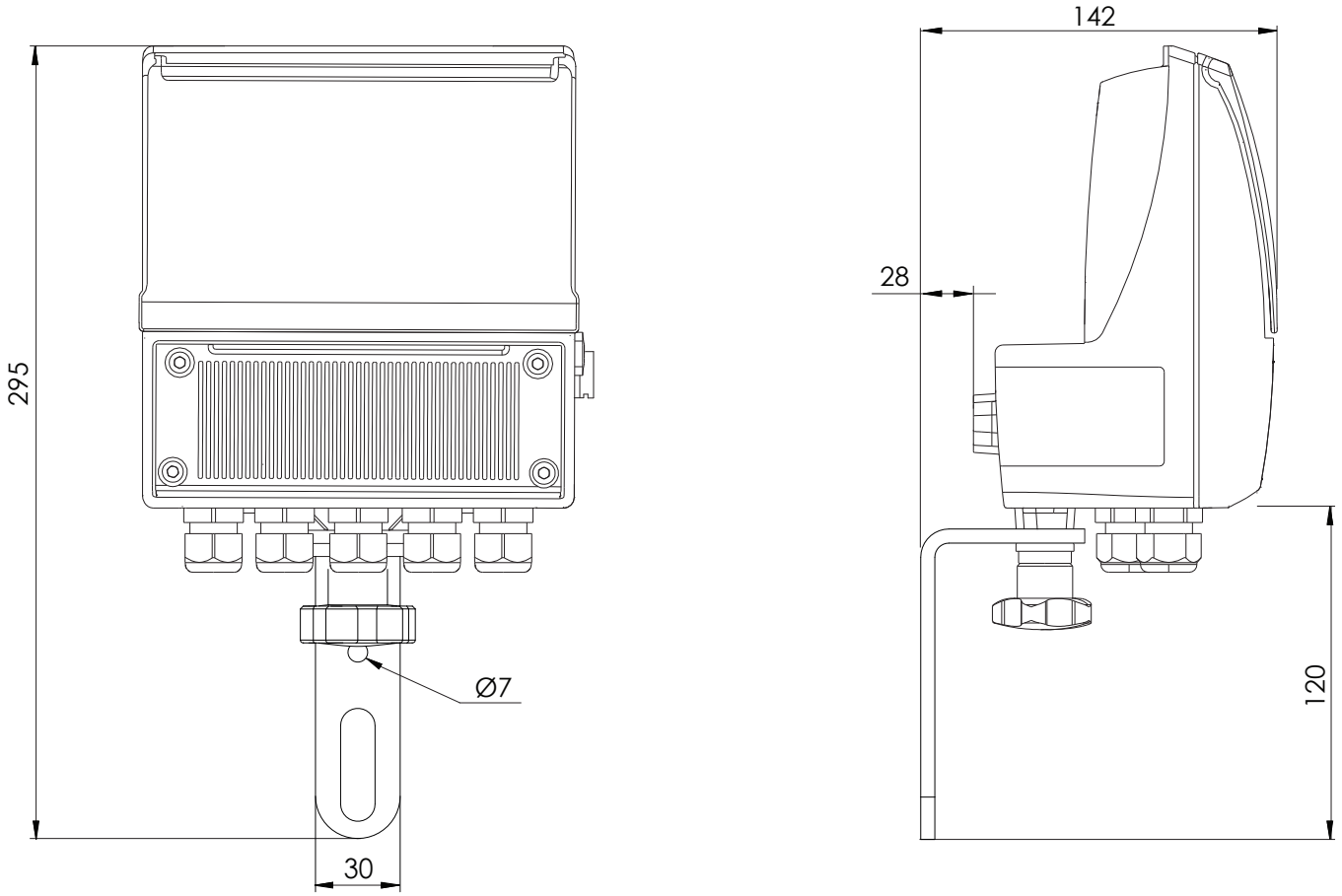




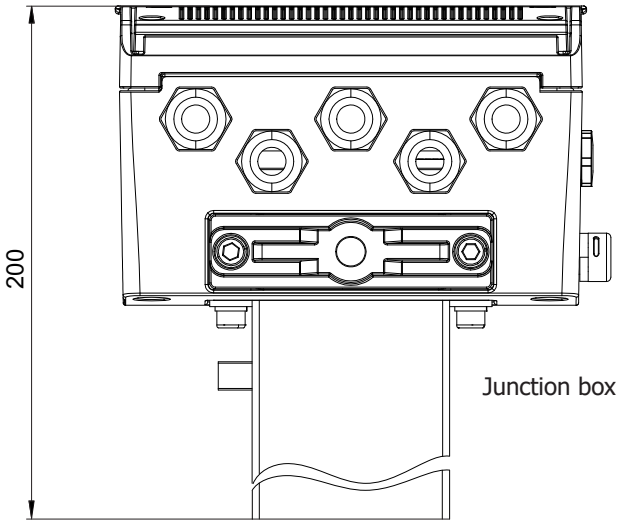


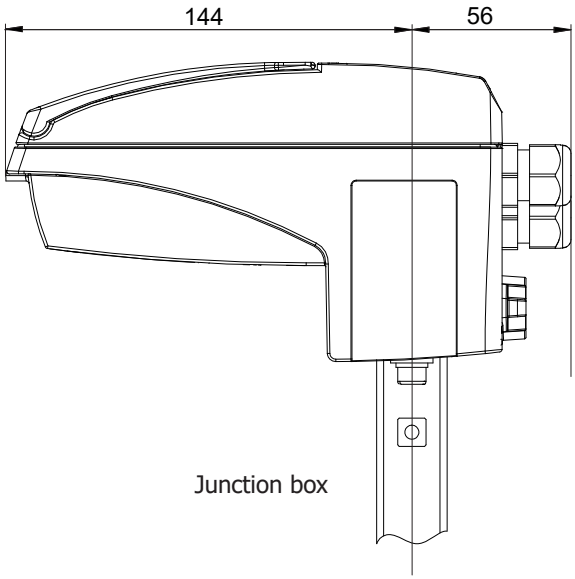


Separate (wall) version

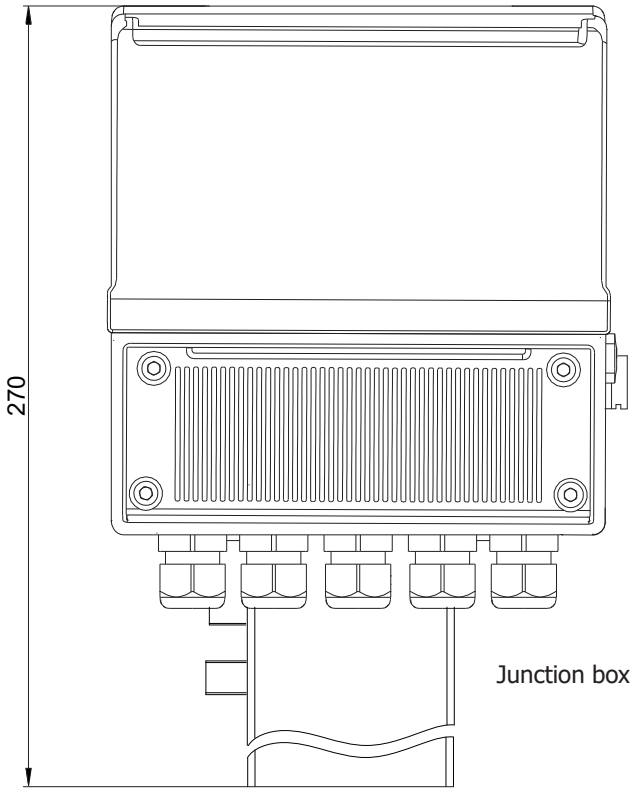


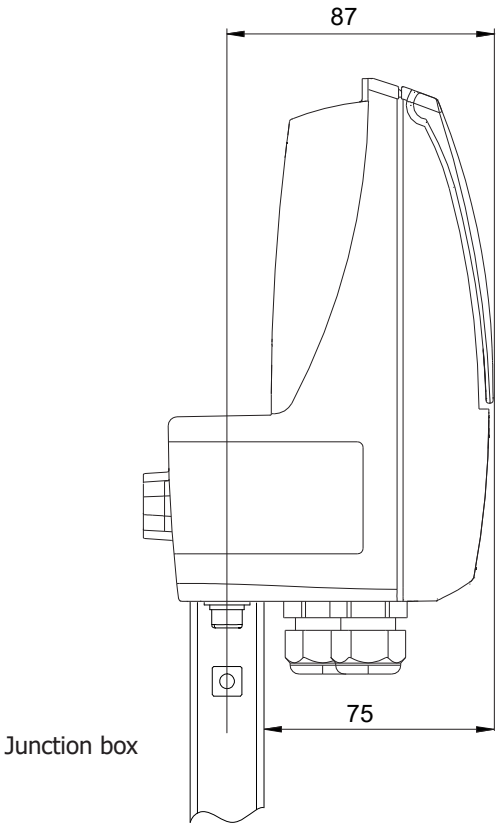
Horizontal version





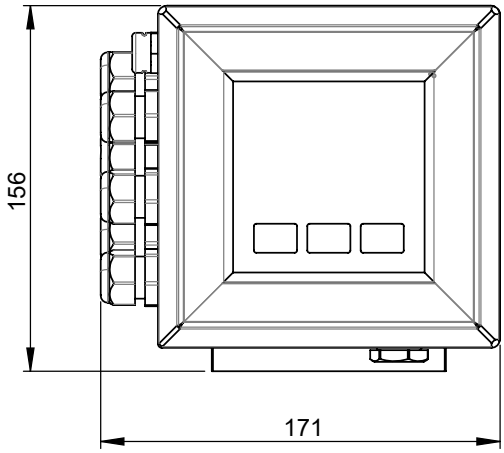
Vertical version

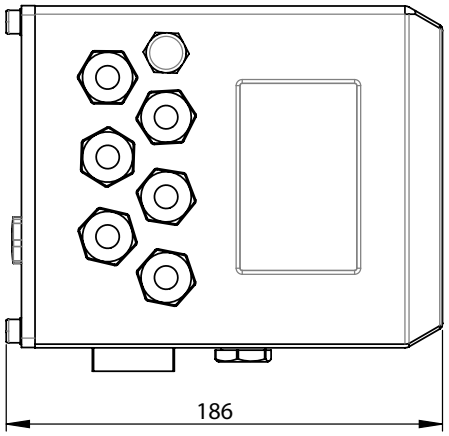


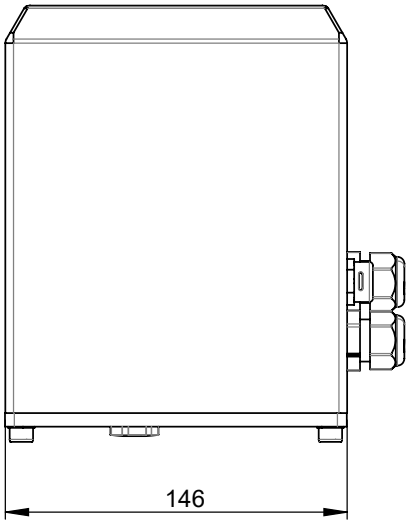


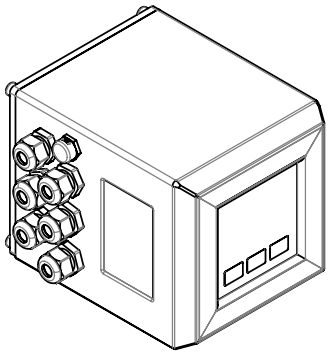
OVERALL DIMENSIONS (STAINLESS STEEL VERSION)

Compact Version

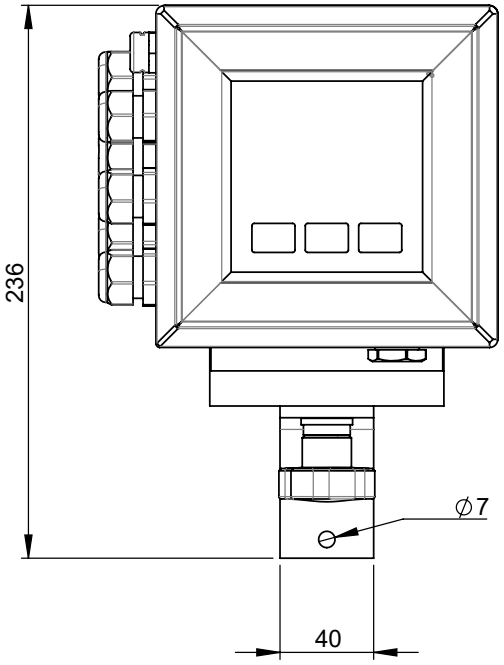


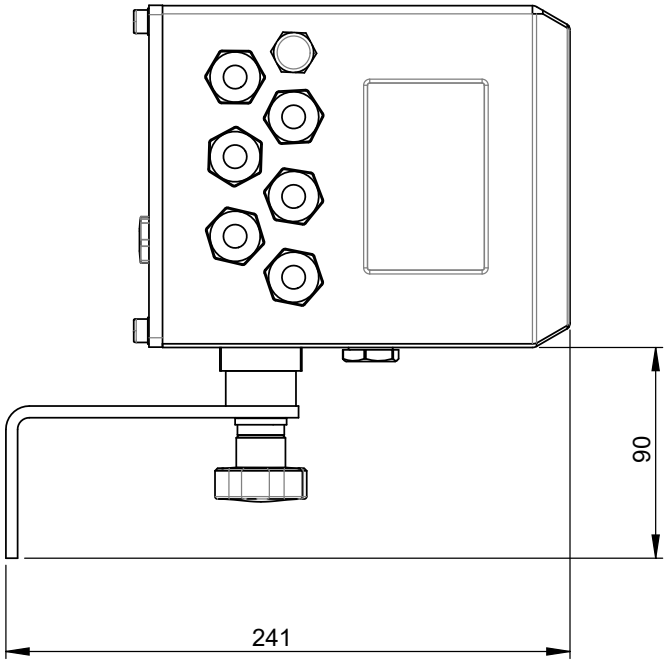


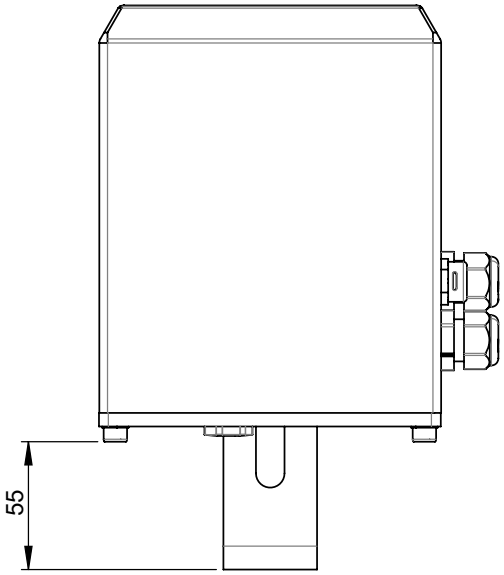


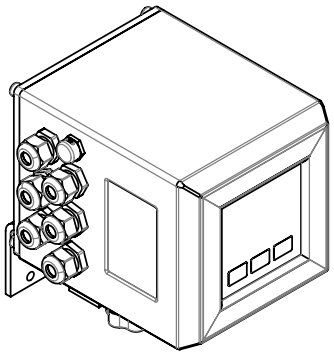


Separate Version



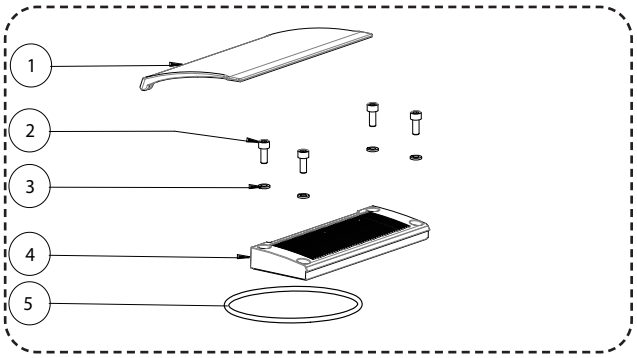




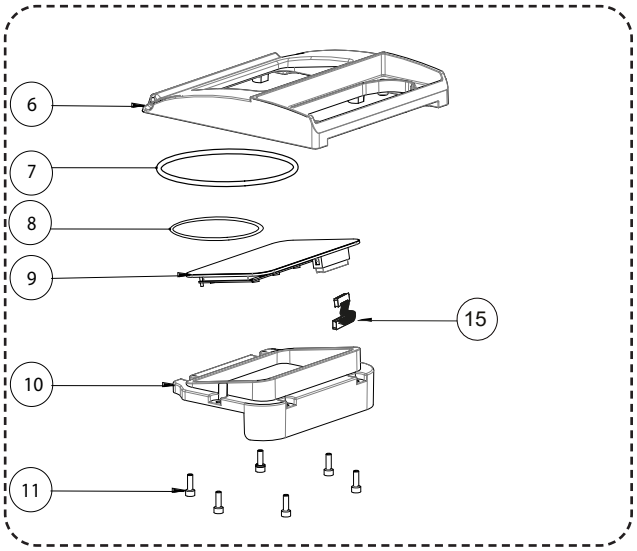


MV110 EXPLODED LAYOUT

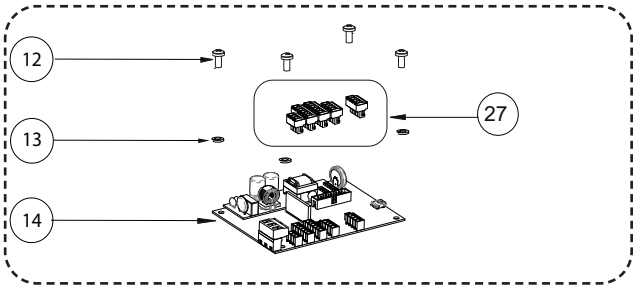
Terminal block cover



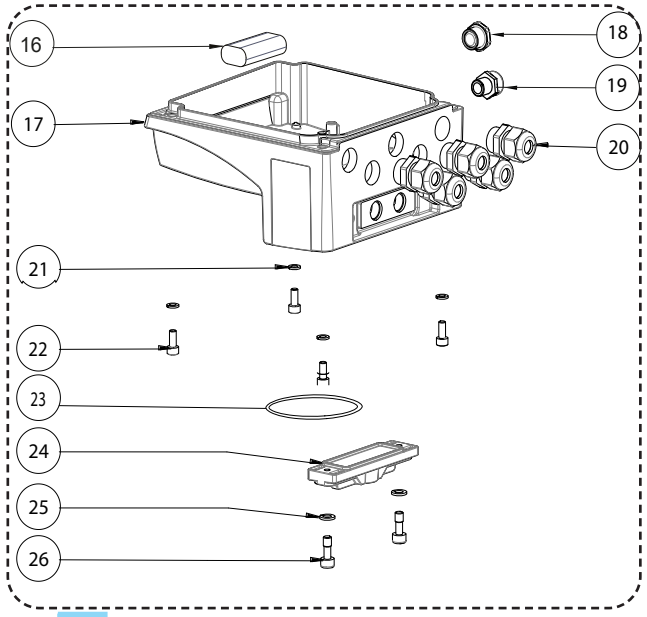
Main housing cover



PCB MV210

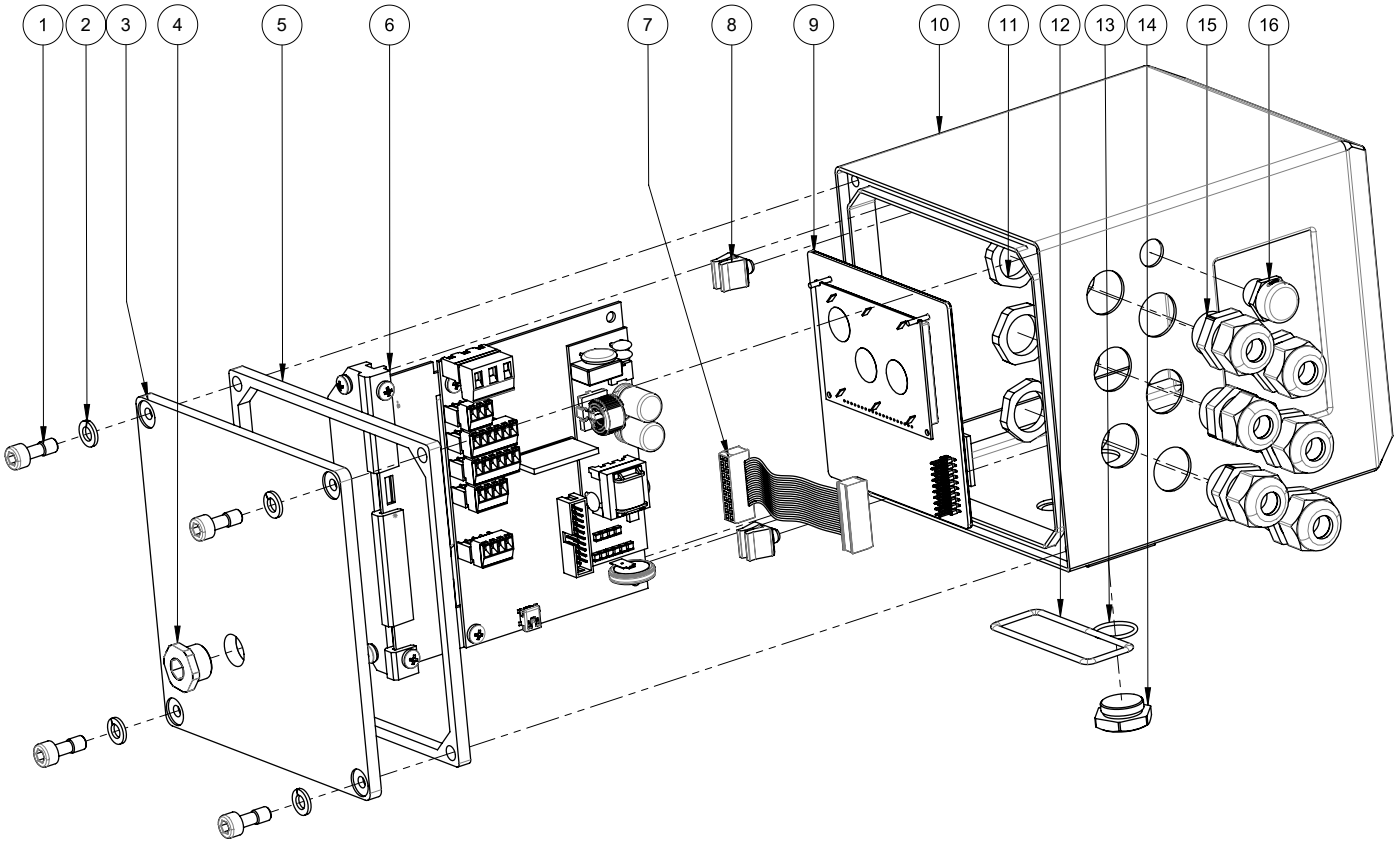


Main housing



POS.	DESCRIPTION	
	PA6 VERSION	ALLUMINIUM VERSION
1	PROTECTION COVER	
2	VITE M4x12	VITE M5x12
3	GROWER Ø4	GROWER Ø5
4	TERMINAL COVER	TERMINAL COVER
5	O-RING-4400	
6	HOUSING COVER	HOUSING COVER
7	O-RING-4700 (HOUSING COVER)	
8	O-RING-117x3 (DISPLAY)	
9	DISPLAY	
10	FIXING DISPLAY FRAME (MATERIAL PA06)	
11	SELF-TAPPING SCREW 4x10	TRILOBO SCREW 4x10
12	SELF-TAPPING SCREW 4x10	TRILOBO SCREW 4x10
13	GROWER Ø4	SPRING WASHER Ø4
14	PCB MV210	
15	FLAT CABLE	
16	LITHIUM BATTERY	
17	PA6 MAIN HOUSING	ALUMINIUM MAIN HOUSING
18	PG9 CAP	
19	PRESSURE COMPENSATION PLUG	
20	PG11 CABLE GLAND CABLE DIAMETER: Ø5-Ø10mm	
21	GROWER Ø4	SPRING WASHER Ø5
22	SCREW M4x12	SCREW M5x12
23	O-RING-155	
24	VERSION CAP (MATERIAL PA06)	
25	GROWER Ø6	
26	SCREW M6x16	
27	TERMINAL BLOCK SOLID WIRE: 26-16 AWG / 0.129-1.31 mm² STRANDED WIRE: 26-16 AWG / 0.129-1.31 mm² TORQUE: 3.0 Lb.In / 0.34 Nm	

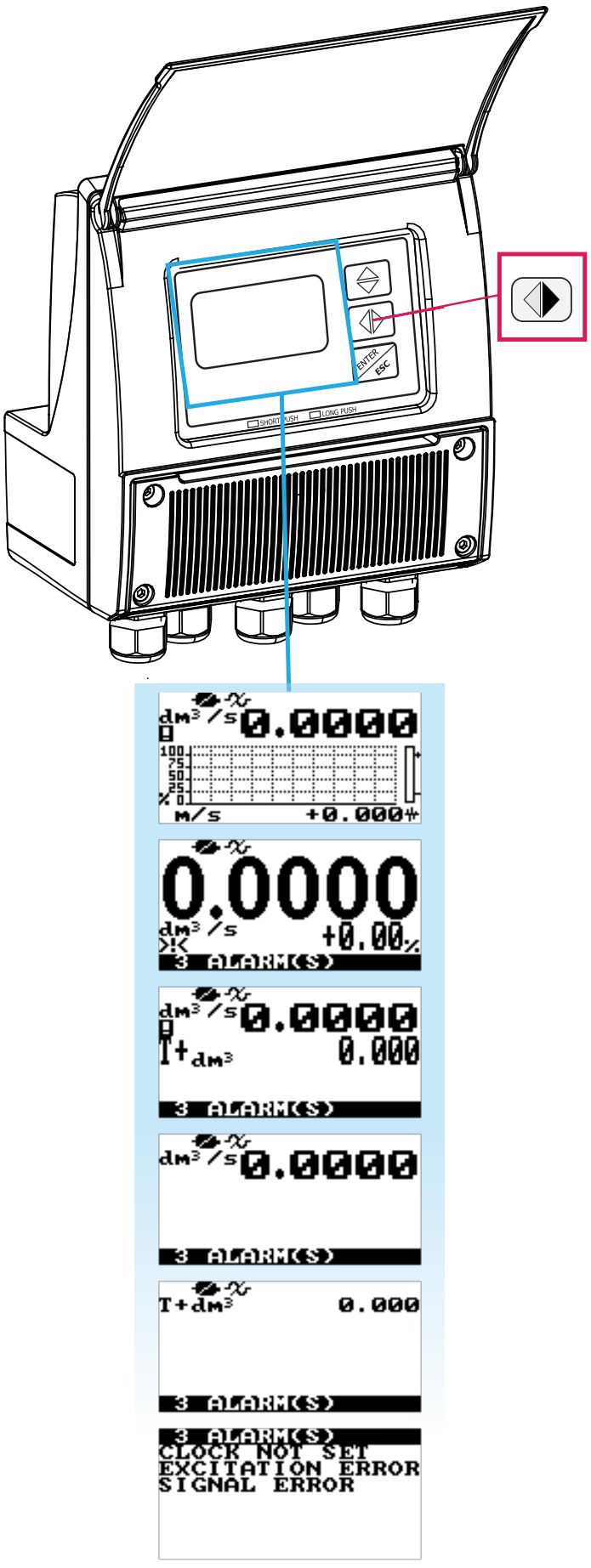
MV110 CONSTRUCTION (STAINLESS STEEL VERSION)



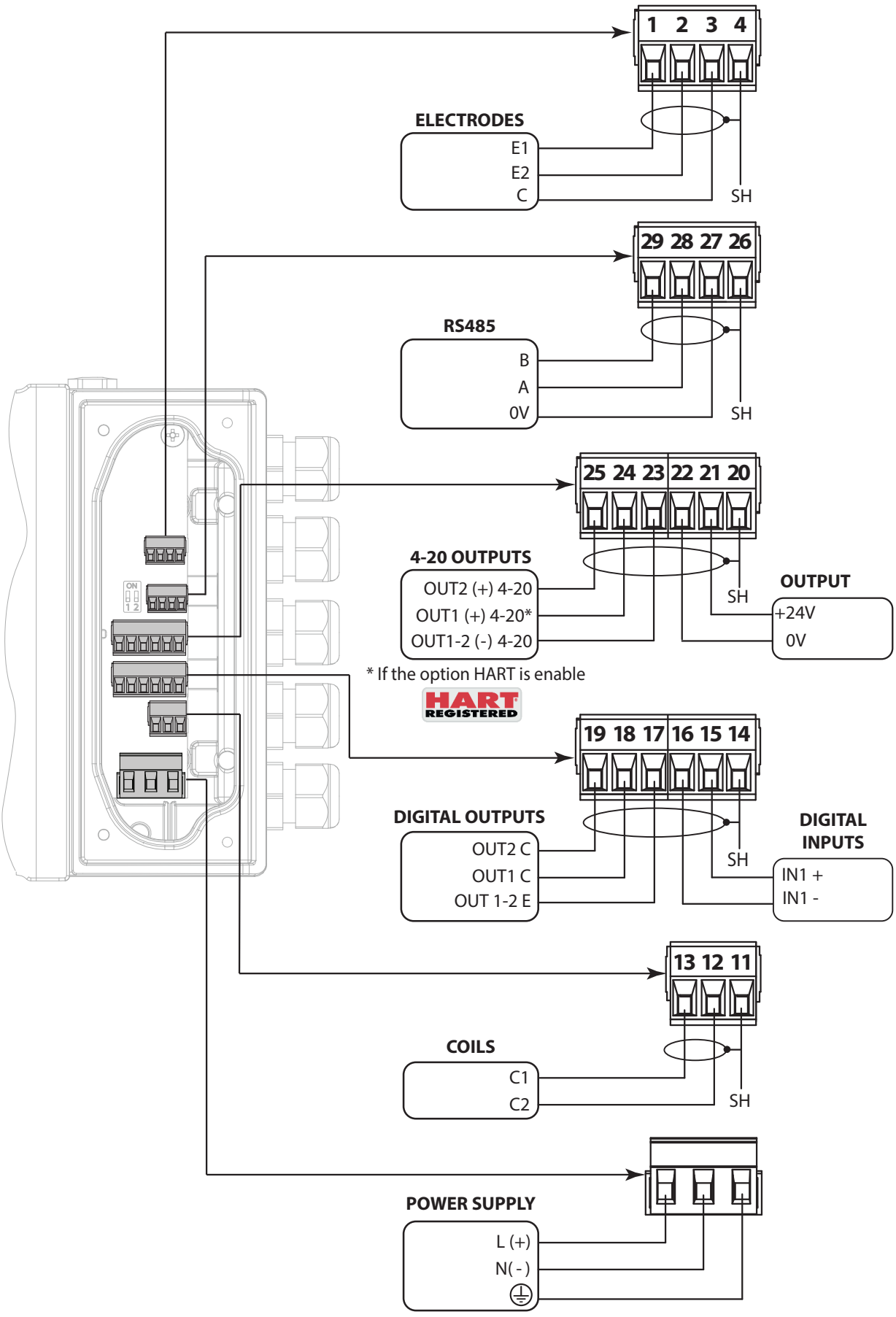
POS.	DESCRIPTION
1	SCREW M6X16
2	GROWER Ø 6
3	POLISHED COVER
4	PG9 CAP IP68
5	GASKET FOR STAINLESS STEEL HOUSING
6	BOARD FRAME M3C
7	FLAT CABLE
8	BOARD FIXING CLIPS
9	DISPLAY/BLIND
10	POLISHED STAINLESS STEEL HOUSING
11	PG11 NUT
12	FLAT GASKET O-RING 155
13	O-RING ORM 0160-15 Ø16X1.5
14	STAINLESS STEEL CAP M18X0.75
15	PG11 CABLE GLANDS
16	ANTICONDENSATION CAP

MAIN PAGES VISUALISATION

Different visualization possibilities by simply pressing of a key.

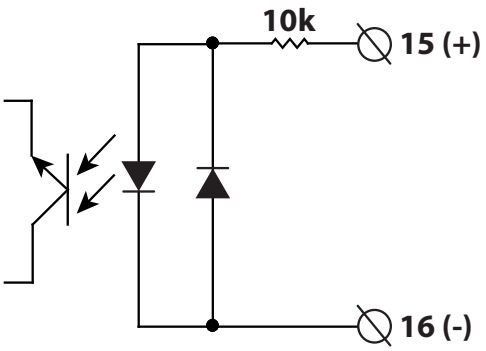


ELECTRICAL CONNECTIONS

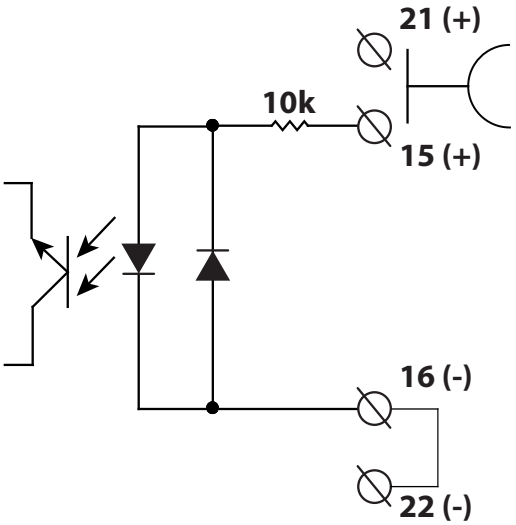


DIGITAL INPUT

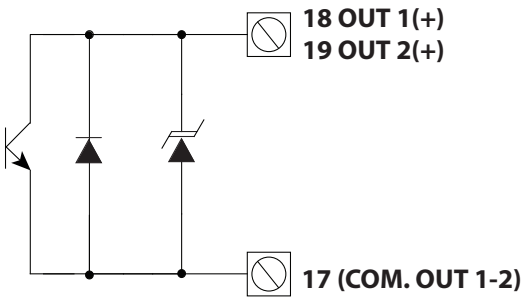
on/off input
(external power supply)



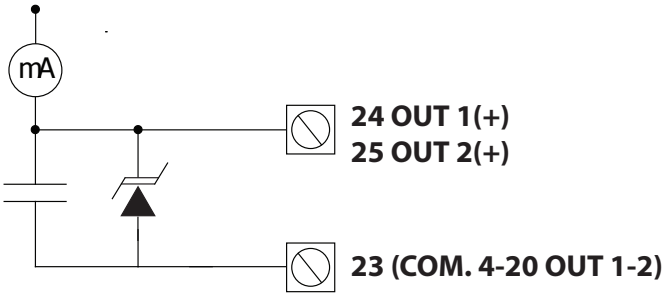
on/off input
(internal power supply)



DIGITAL OUTPUTS



ANALOG OUTPUTS



FUNCTIONS MENU

SENSOR

```
MAIN MENU
1-Sensor
2-Units
3-SENSOR
4-S. model =                    0
5-Lining =                  UNSPEC.
6-S. type =                 FULLBORE
7-u. type =                   METRIC
8-Diam                mm    00025.0
9-KA =                     +00.9637
10-KA- =                   -04.4904
11-KZ=                   +0000000
12-KD=                   +0000000
13-Ins. position=               0
   KP Dinamic=                OFF
   Ki=                     01.8727
   Kp=                     01.0000
   KC=                     1.00000
   C.curr =                  025.0
   C.Reg.PB=                 004
   C.Reg.DK=                 008
   S. Freq.= Hz               50
   Preamplif.                 OFF
   E.P Detect=                ON
   R max= kohm              0500
   El. Cleaning=              OFF
   S. cable=              m   000
   S. err. delay=            010
   Sens. verify=              OFF
   Zero point cal.
   KL                00.00000000
```

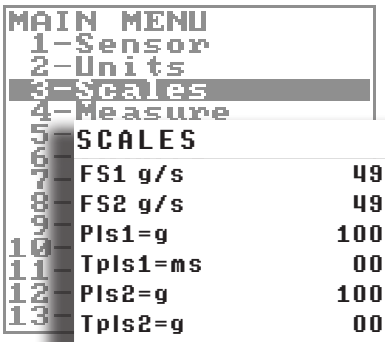
1.1	Sensors model: Enter the first two characters of the serial number of the sensor
1.2	Flow sensor lining material type
1.3	Type of sensor: fullbore or insertion
1.4	Type of measure units for sensor parameter: metric or imperial
1.5	Insert ND of sensor (0-2500)
1.6	Calibration data of sensor visualized on sensor's label
1.7	Sensor coefficient KZ (zero point)
1.8	Sensor coefficient KD
1.9	Insertion position
1.10	KP dynamic, coefficient for insertion
1.11	Sensor coefficient Ki
1.12	Sensor coefficient Kp
1.13	Sensor coefficient KC
1.14	CW volume total. decimal point position
1.15	Current regulator proportional band
1.16	Current regulator derivation constant
1.17	Measure sampling frequency
1.18	Enables the preamplifier
1.19	Enables the empty pipe detection feature
1.20	Empty pipe detection threshold
1.21	Electrode cleaning
1.22	Sensor connecting cable length
1.23	Signal error delay (n. sample)
1.24	Automatic sensor verify enable
1.25	Pipe hydraulic zero calibration
1.27	Coefficient KL values

UNITS

```
MAIN MENU
1-Sensor
2-Units
3-Testing
4-UNITS
5-Diam.                        mm
6-S.cable                       m
7-FR.unit                  METRIC
8-PI1 unit                 METRIC
9-PI2 unit                 METRIC
10-T+ unit                 METRIC
11-T+ unit                      g
12-T+ D.P                       3
13-P+ unit                 METRIC
   P+ unit                      g
   P+ D.P                       3
   T- unit                METRIC
   T- unit                      g
   T- D.P                       3
   P- unit                METRIC
   P- unit                      g
   P- D.P                       3
   Temp.unit                   °C
   Mass units                 ON
   Sg=kg/dm3             1.0000
```

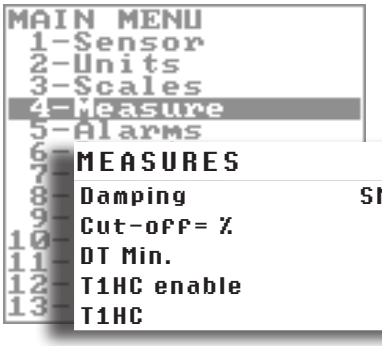
2.1	Nominal diameter measure unit
2.2	Cable length on separate version
2.3	Flowrate type measure unit: metric or not metric
2.4	Pulse 1 type measure unit: metric or not metric
2.5	Pulse 2 type measure unit: metric or not metric
2.6	Total direct totalizer measure unit type: metric or not metric
2.7	Total direct totalizer measure unit
2.8	Total direct totalizer decimal point position
2.9	Partial direct totalizer measure unit type: metric or not metric
2.10	Partial direct totalizer measure unit
2.11	Partial direct totalizer decimal point position
2.12	Total reverse totalizer measure unit type: metric or not metric
2.13	Total reverse totalizer measure unit
2.14	Total reverse totalizer decimal point position
2.15	Partial reverse totalizer measure unit type: metric or not metric
2.16	Partial reverse totalizer measure unit
2.17	Partial reverse totalizer decimal point position
2.18	Temperature measure unit
2.19	Enable/disable the selection of mass units on full scale set
2.20	Specific gravity coefficient

SCALES



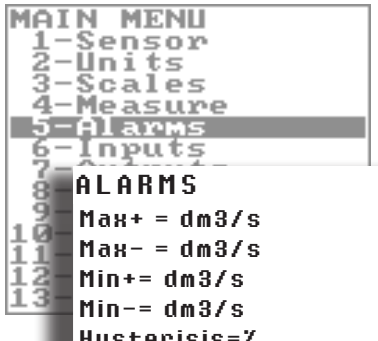
3.1	Full scale flow rate 1
3.2	Full scale flow rate 2
3.3	Pulse value on channel 1
3.4	Duration of the pulse generated on channel 1
3.5	Pulse value on channel 2
3.6	Duration of the pulse generated on channel 2
3.7	Full scale frequency for channel 1 (0.1Hz-1000.0Hz)
3.8	Full scale frequency for channel 2 (0.1Hz-1000.0Hz)

MEASURES



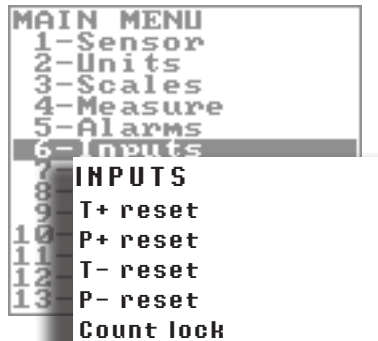
4.1	Measure filter
4.2	Low flow zero threshold: 0-25% of full scale value
4.3	Automatic calibration verify
4.4	Automatic change of measurement range
4.5	High immunity inputs

ALARMS



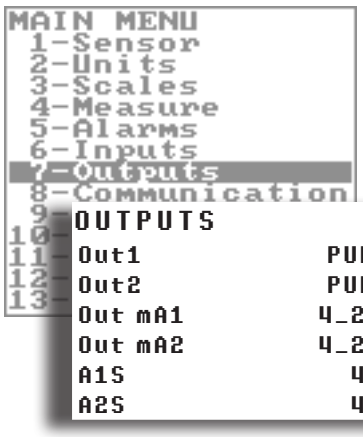
5.1	Maximum value alarm set for direct flow rate
5.2	Maximum value alarm set for reverse flow rate
5.3	Minimum value alarm set for direct flow rate
5.4	Minimum value alarm set for reverse flow rate
5.5	Hysteresis threshold set for the minimum and maximum flow rate alarms
5.6	Current output value in case of failure
5.7	Frequency output value in case of alarms

INPUTS



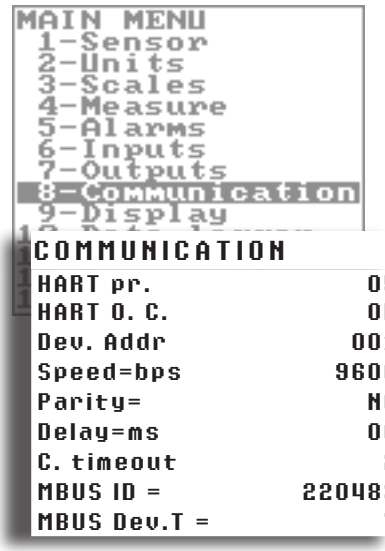
6.1	Total direct (positive) flow totalizer reset enable
6.2	Partial direct (positive) flow totalizer reset enable
6.3	Total reverse (negative) flow totalizer reset enable
6.4	Partial reverse (negative) flow totalizer reset enable
6.5	Totalizer counting lock command
6.6	Measure zero lock command
6.7	Calibration external command
6.8	Range change external command

OUTPUTS



7.1	Output 1 functions
7.2	Output 2 functions
7.3	Choice of the function and the range of current output n.1
7.4	Choice of the function and the range of current output n.2
7.5	Full Scale value for analog out1
7.6	Full Scale value for analog out2

COMM.



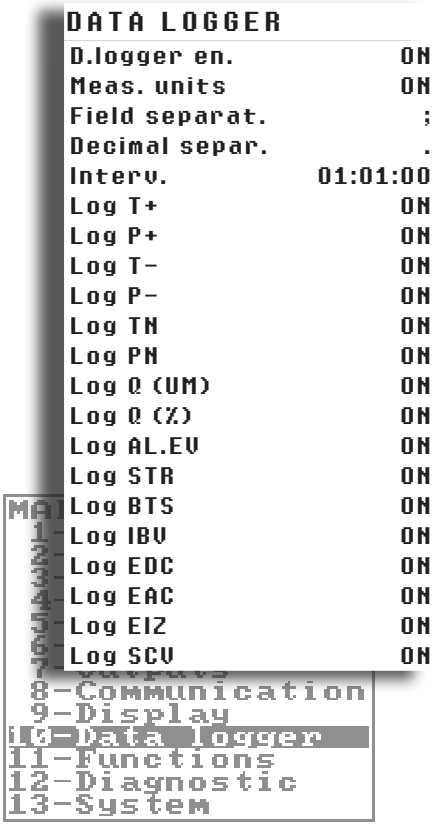
8.1	HART packet byte preambles
8.2	HART bus output control
8.3	Device communication address number
8.4	MODBUS link speed
8.5	MODBUS link parity
8.6	MODBUS reply delay
8.7	Maximum delay between chars (frames)
8.8	MeterBus Id.Number (Second.Add.)
8.9	MeterBus Device Type (Media)

HART REGISTERED

DISPLAY

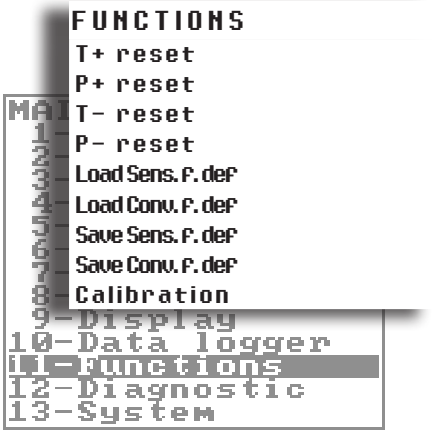
9.1	Choice of the language
9.2	Display contrast
9.3	Display/keyboard inactivity time
9.4	Display updating frequency: 1-2-5-10 Hz
9.5	Display function number
9.6	Display function selection lock
9.7	Partial totalizer enable
9.8	Negative totalizer enable
9.9	Net totalizer enable
9.10	Time and date display enable
9.11	Quick start menu visualization

DATA LOGGER



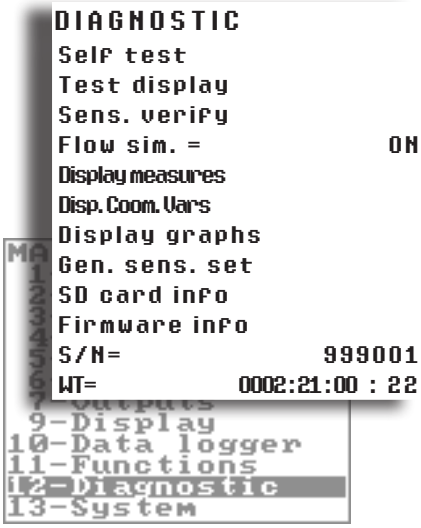
10.1	Data logger enabling
10.2	Measure units recording enable
10.3	Field separator character
10.4	Decimal separator character
10.5	Sampling interval
10.6	Enable logging of total direct totalizer
10.7	Enable logging of partial direct totalizer
10.8	Enable logging of total reverse totalizer
10.9	Enable logging of partial reverse totalizer
10.10	Enable logging of total net totalizer
10.11	Enable logging of partial net totalizer
10.12	Enable logging of flow rate in measure unit
10.13	Enable logging of flow rate in percentage
10.14	Enable logging of alarm events
10.15	Enable logging of sensor test results
10.16	Enable logging of board temperature
10.17	Enable logging of internal board voltage
10.18	Enable logging of electrodes DC voltage
10.19	Enable logging of electrodes AC voltage
10.20	Enable logging of electrodes impedance
10.21	Enable logging of sensor coils value

FUNCTIONS



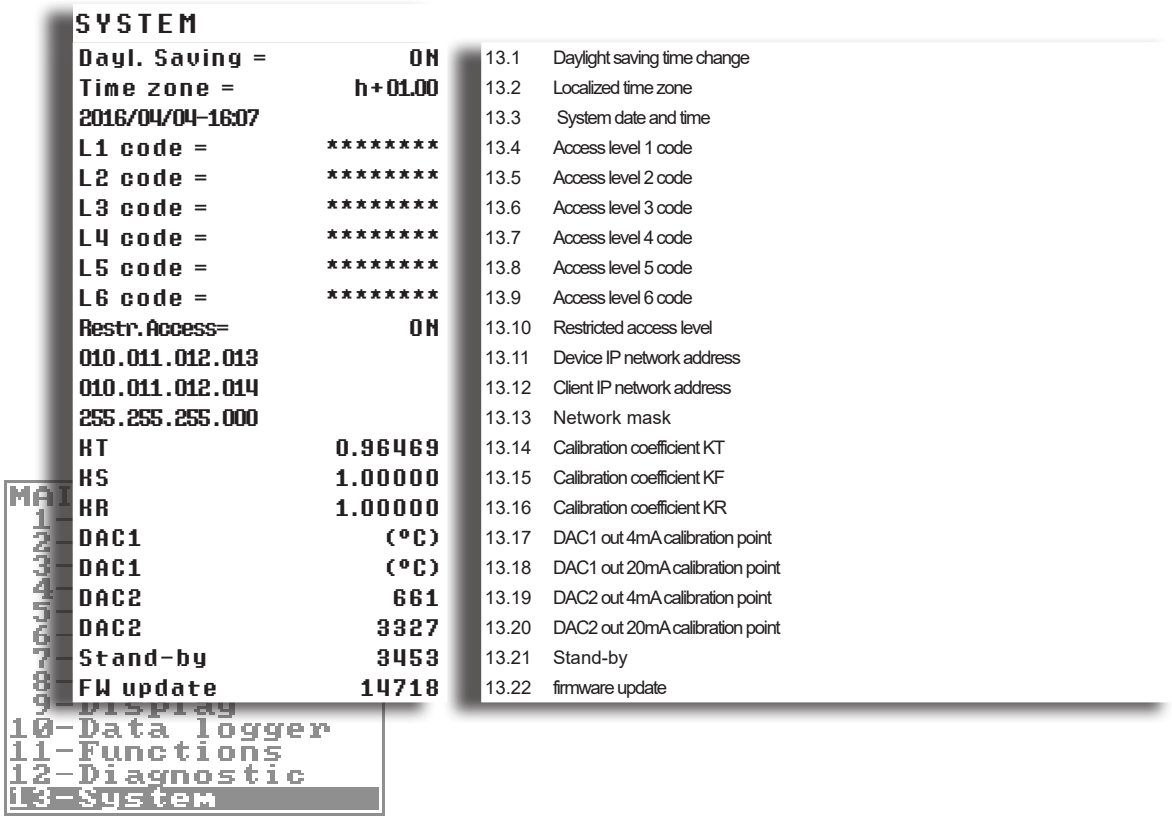
11.1	Execute immediate reset of total direct totalizer
11.2	Execute immediate reset of partial direct totalizer
11.3	Execute immediate reset of total reverse totalizer
11.4	Execute immediate reset of partial reverse totalizer
11.5	Load sensor factory default
11.6	Load converter factory default
11.7	Save sensor factory default values
11.8	Save converter factory default values
11.9	Execute immediate internal circuit calibration

DIAGNOSTIC

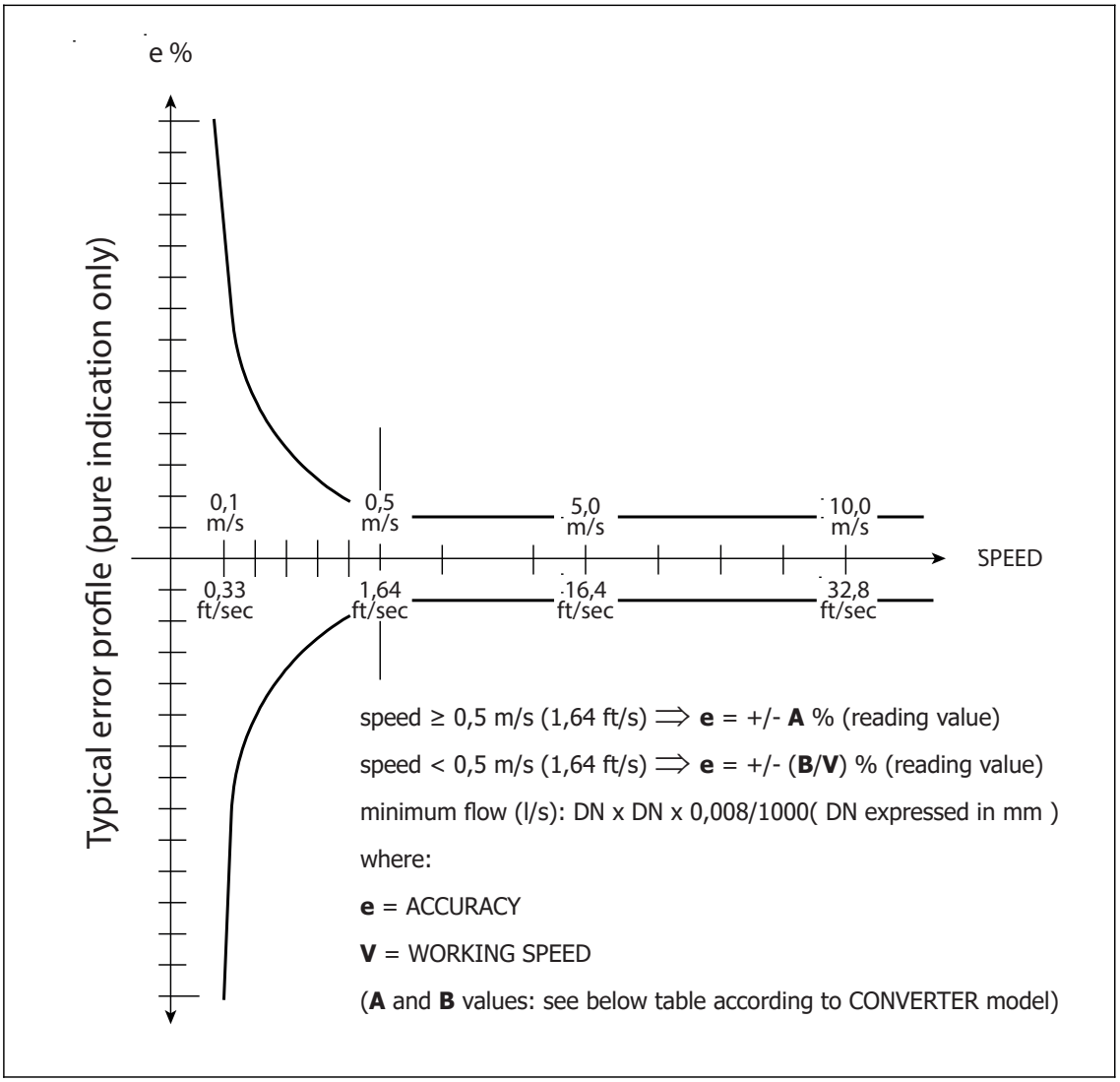


12.1	Self test diagnostic function
12.2	Function tests physical display
12.3	Sensor verify diagnostic function
12.4	Flow rate simulation enabling
12.5	Display internal measured value
12.6	Display comm. diagnostic values
12.7	Display measure as graphs
12.8	Generic sensor parameters set
12.9	Sd card status informations
12.10	Firmware version/revision
12.11	Board serial number
12.12	Total working time

SYSTEM



ACCURACY



Full bore Sensor

MS501/MS1000/MS2410/MS2500			MS600			MS5000		
A	**B(m/s)**	**B(ft/s)**	**A**	**B(m/s)**	**B(ft/s)**	**A**	**B(m/s)**	**B(ft/s)**
0,8*	0,4**	1,31**	0,8*	0,4**	1,31**	2	1	3,28

* = 0,4 (special)
**= 0,2(m/s) ; 0,66(ft/s) - special

Insertion sensor

See sensor 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 %

OIML R49

The sensor **MS2500** diameters below, coupled with **MV110** are certified in accordance with OIML R49:2013

CLASS 1

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.10	0.064	
32	1 ¼	25	0.16	0.10	
40	1 ½	40	0.26	0.16	
50	2	63	0.40	0.25	
65	2 ½	100	0.64	0.40	
80	3	160	1.0	0.64	
100	4	250	1.6	1.0	
125	5	400	2.6	1.6	
150	6	630	4.0	2.5	**250**
200	8	1000	6.4	4.0	
250	10	1600	10	6.4	
300	12	2500	16	10	
350	14	2500	16	10	
400	16	4000	26	16	
450	18	4000	26	16	
500	20	6300	40	25	
600	24	10000	64	40	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.26	0.16	
32	1 ¼	25	0.4	0.25	
40	1 ½	40	0.64	0.4	
50	2	63	1.01	0.63	
65	2 ½	100	1.6	1	
80	3	160	2.6	1.6	
100	4	250	4	2.5	
125	5	400	6.4	4	
150	6	630	10.1	6.3	**100**
200	8	1000	16	10	
250	10	1600	26	16	
300	12	2500	40	25	
350	14	2500	40	25	
400	16	4000	64	40	
450	18	4000	64	40	
500	20	6300	101	63	
600	24	10000	160	100	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.32	0.2	
32	1 ¼	25	0.5	0.31	
40	1 ½	40	0.8	0.5	
50	2	63	1.3	0.79	
65	2 ½	100	2	1.25	
80	3	160	3.2	2	
100	4	250	5	3.13	
125	5	400	8	5	
150	6	630	13	7.88	**80**
200	8	1000	20	12.5	
250	10	1600	32	20	
300	12	2500	50	31.25	
350	14	2500	50	31.25	
400	16	4000	80	50	
450	18	4000	80	50	
500	20	6300	126	78.75	
600	24	10000	200	125	

CLASS 2

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.064	0.040	400
32	1 ¼	25	0.10	0.063	
40	1 ½	40	0.16	0.10	
50	2	63	0.25	0.16	
65	2 ½	100	0.40	0.25	
80	3	160	0.64	0.40	
100	4	250	1.0	0.63	
125	5	400	1.6	1.0	
150	6	630	2.5	1.6	
200	8	1000	4.0	2.5	
250	10	1600	6.4	4.0	
300	12	2500	10	6.3	
350	14	2500	10	6.3	
400	16	4000	16	10	
450	18	4000	16	10	
500	20	6300	25	16	
600	24	10000	40	25	
650	26	10000	40	25	
700	28	10000	64	40	250
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.10	0.064	250
32	1 ¼	25	0.16	0.10	
40	1 ½	40	0.26	0.16	
50	2	63	0.40	0.25	
65	2 ½	100	0.64	0.40	
80	3	160	1.0	0.64	
100	4	250	1.6	1.0	
125	5	400	2.6	1.6	
150	6	630	4.0	2.5	
200	8	1000	6.4	4.0	
250	10	1600	10	6.4	
300	12	2500	16	10	
350	14	2500	16	10	
400	16	4000	26	16	
450	18	4000	26	16	
500	20	6300	40	25	
600	24	10000	64	40	
650	26	10000	64	40	
700	28	10000	64	40	
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

CLASS 2

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.16	0.10	160
32	1 ¼	25	0.25	0.16	
40	1 ½	40	0.40	0.25	
50	2	63	0.63	0.40	
65	2 ½	100	1.0	0.63	
80	3	160	1.6	1.0	
100	4	250	2.5	1.6	
125	5	400	4.0	2.5	
150	6	630	6.3	4.0	
200	8	1000	10	6.3	
250	10	1600	16	10	
300	12	2500	25	16	
350	14	2500	25	16	
400	16	4000	40	25	
450	18	4000	40	25	
500	20	6300	63	40	
600	24	10000	100	63	
650	26	10000	100	63	
700	28	10000	100	63	
750	30	10000	160	100	
800	32	16000	160	100	
900	36	16000	160	100	
1000	42	16000	250	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

MI-001

The sensor **MS2500** diameters below, coupled with **MV110** are certified in accordance with European directive 2014/32/EU category MI-001

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.064	0.040	400
32	1 ¼	25	0.10	0.063	
40	1 ½	40	0.16	0.10	
50	2	63	0.25	0.16	
65	2 ½	100	0.40	0.25	
80	3	160	0.64	0.40	
100	4	250	1.0	0.63	
125	5	400	1.6	1.0	
150	6	630	2.5	1.6	
200	8	1000	4.0	2.5	
250	10	1600	6.4	4.0	
300	12	2500	10	6.3	
350	14	2500	10	6.3	
400	16	4000	16	10	
450	18	4000	16	10	
500	20	6300	25	16	
600	24	10000	40	25	
650	26	10000	40	25	
700	28	10000	64	40	250
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.10	0.064	250
32	1 ¼	25	0.16	0.10	
40	1 ½	40	0.26	0.16	
50	2	63	0.40	0.25	
65	2 ½	100	0.64	0.40	
80	3	160	1.0	0.64	
100	4	250	1.6	1.0	
125	5	400	2.6	1.6	
150	6	630	4.0	2.5	
200	8	1000	6.4	4.0	
250	10	1600	10	6.4	
300	12	2500	16	10	
350	14	2500	16	10	
400	16	4000	26	16	
450	18	4000	26	16	
500	20	6300	40	25	
600	24	10000	64	40	
650	26	10000	64	40	
700	28	10000	64	40	
750	30	10000	64	40	
800	32	16000	160	100	160
900	36	16000	160	100	
1000	42	16000	256	160	100
1200	48	16000	320	200	80
1400	56	16000	320	200	
1600	64	16000	320	200	
1800	72	16000	640	400	40
2000	80	16000	640	400	

The sensor **MS2500** diameters below, coupled with **MV110** are certified in accordance with European directive 2014/32/EU category MI-001

SIZE		Q3	Q2	Q1	R
mm	inch	m3/h			Q3/Q1
25	1	16	0.16	0.10	
32	1 ¼	25	0.25	0.16	
40	1 ½	40	0.40	0.25	
50	2	63	0.63	0.40	
65	2 ½	100	1.0	0.63	
80	3	160	1.6	1.0	
100	4	250	2.5	1.6	
125	5	400	4.0	2.5	
150	6	630	6.3	4.0	
200	8	1000	10	6.3	
250	10	1600	16	10	
300	12	2500	25	16	
350	14	2500	25	16	
400	16	4000	40	25	
450	18	4000	40	25	
500	20	6300	63	40	
600	24	10000	100	63	
650	26	10000	100	63	
700	28	10000	100	63	
750	30	10000	160	100	
800	32	16000	160	100	
900	36	16000	160	100	
1000	42	16000	250	160	**100**
1200	48	16000	320	200	
1400	56	16000	320	200	**80**
1600	64	16000	320	200	
1800	72	16000	640	400	
2000	80	16000	640	400	**40**

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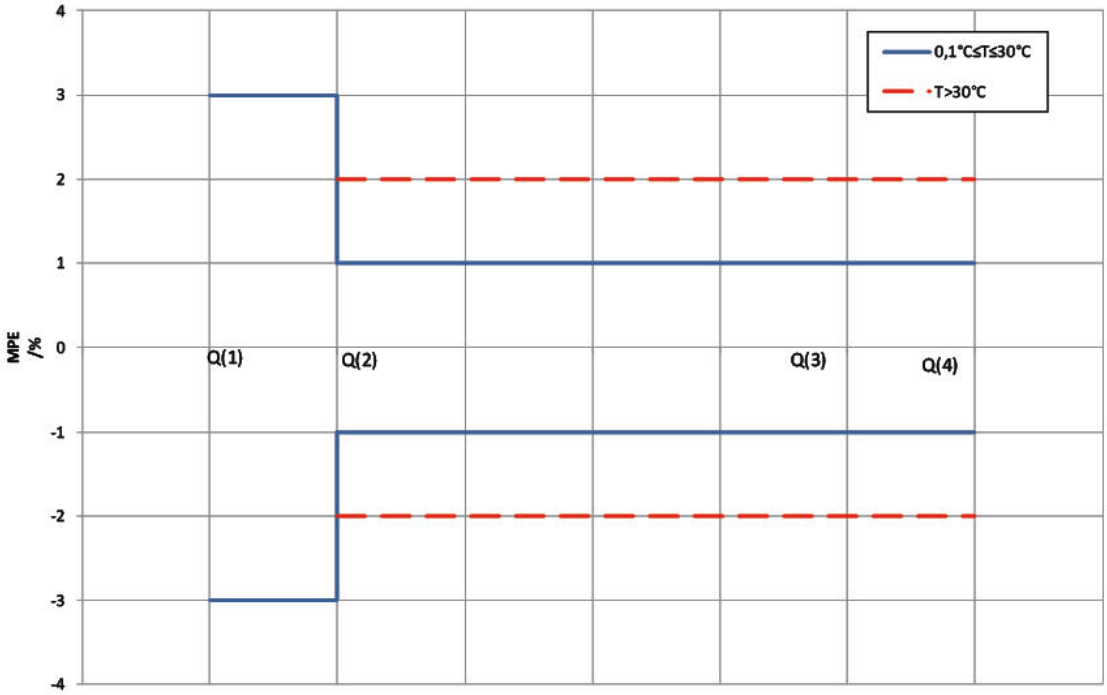
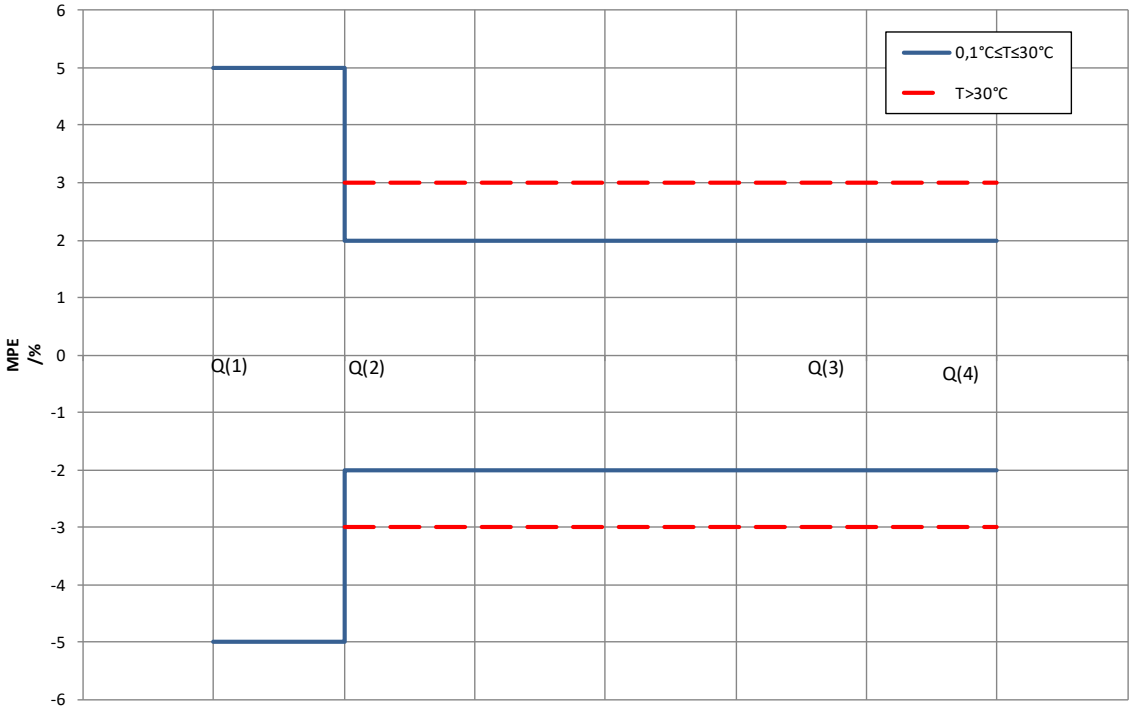
MPE - OIML R49 ACCURACY CLASS 1

(OIML R 49-1:2013 (E) - ISO4064-1:2017)



MPE - MI 001 - OIML R49 ACCURACY CLASS 2

(OIML R 49-1:2013 (E) - ISO4064-1:2017)



MI-004 OIML R75 CLASS1

The **MS2500** sensor's diameters listed below, coupled with **MV110** comply with the European directive:
DIRECTIVE 2014/32/EU (MID) ANNEX VI (MI-004) - OIML R75

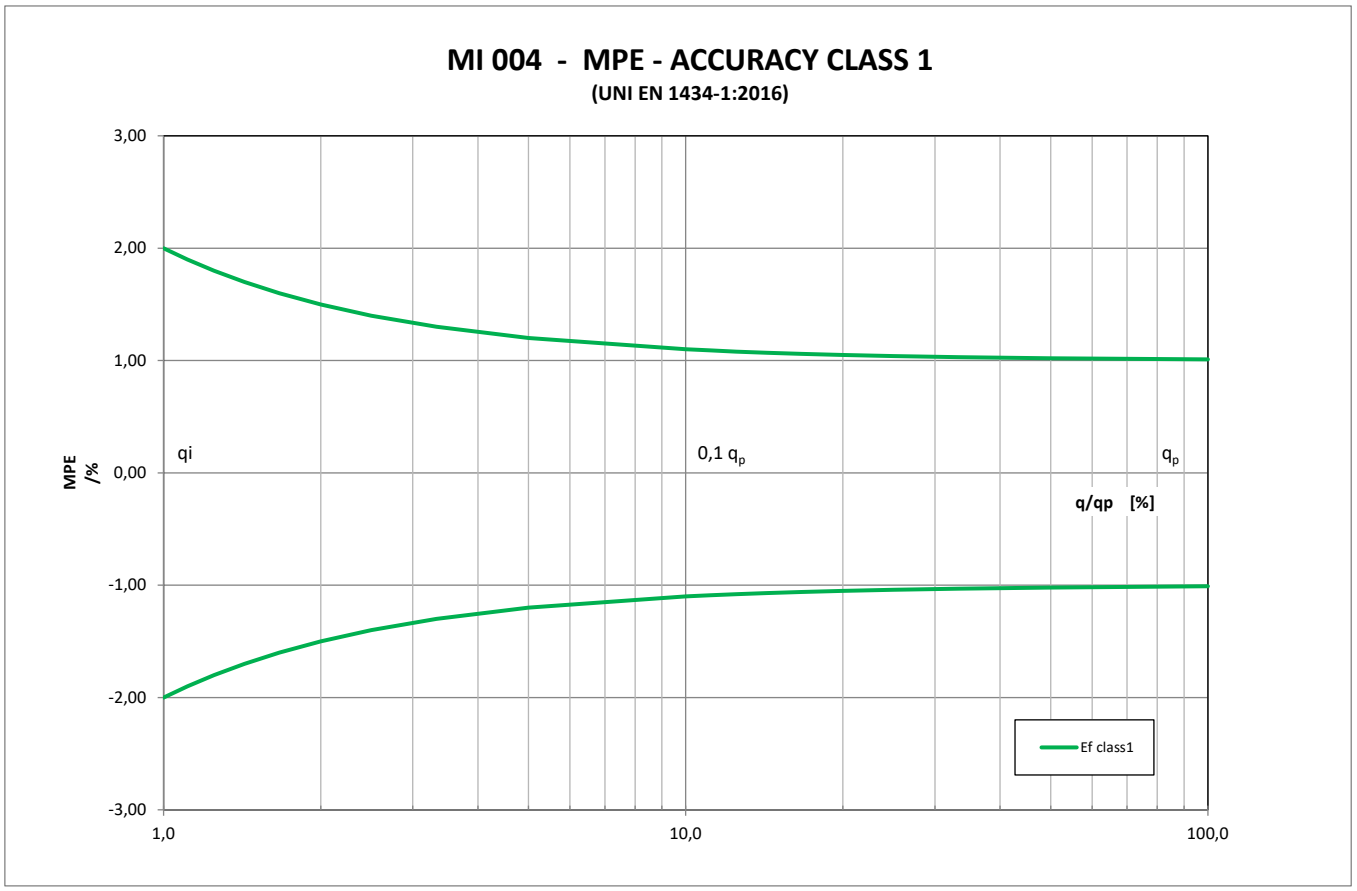
SIZE		q_p	q_s	0,1 q_p	q_i	MC
mm	inch	m3/h				q_p/q_i
25	1	16	16	1,6	0,16	100
32	1 ¼	25	25	2,5	0,25	
40	1 ½	40	40	4	0,40	
50	2	63	63	6,3	0,63	
65	2 ½	100	100	10	1,00	
80	3	160	160	16	1,60	
100	4	250	250	25	2,50	
125	5	400	400	40	4,0	
150	6	630	630	63	6,3	
200	8	1000	1000	100	10	
250	10	1600*	1600	160	20,00	80
300	12	2500*	2500	250	31,25	
350	14	2500*	2500	250	31,25	
400	16	4000*	4000	400	50,00	

SIZE		q_p	q_s	0,1 q_p	q_i	MC
mm	inch	m3/h				q_p/q_i
25	1	10	16	1	0,2	50
32	1 ¼	16	25	1,6	0,32	
40	1 ½	25	40	2,5	0,5	
50	2	40	63	4	0,8	
65	2 ½	63	100	6,3	1,26	
80	3	100	160	10	2	
100	4	160	250	16	3,2	
125	5	250	400	25	5	
150	6	400	630	40	8	
200	8	630	1000	63	12,6	
250	10	1000	1600	100	20	
300	12	1600*	2500	160	32	
350	14	2500*	2500	250	50	
400	16	2500*	4000	250	50	

SIZE		q_p	q_s	0,1 q_p	q_i	MC
mm	inch	m3/h				q_p/q_i
25	1	10	16	1	0,4	25
32	1 ¼	16	25	1,6	0,64	
40	1 ½	25	40	2,5	1	
50	2	40	63	4	1,6	
65	2 ½	63	100	6,3	2,52	
80	3	100	160	10	4	
100	4	160	250	16	6,4	
125	5	250	400	25	10	
150	6	400	630	40	16	
200	8	630	1000	63	25,2	
250	10	1000	1600	100	40	
300	12	1600*	2500	160	64	
350	14	2500*	2500	250	100	
400	16	2500*	4000	250	100	

SIZE		q_p	q_s	0,1 q_p	q_i	MC
mm	inch	m3/h				q_p/q_i
25	1	10	16	1	1	10
32	1 ¼	16	25	1,6	1,6	
40	1 ½	25	40	2,5	2,5	
50	2	40	63	4	4	
65	2 ½	63	100	6,3	6,3	
80	3	100	160	10	10	
100	4	160	250	16	16	
125	5	250	400	25	25	
150	6	400	630	40	40	
200	8	630	1000	63	63	
250	10	1000	1600	100	100	
300	12	1600*	2500	160	160	
350	14	2500*	2500	250	250	
400	16	2500*	4000	250	250	

(*) : Flow rates reduced to the limits of the system



ISOIL INDUSTRIA S.p.A.

HEAD OFFICE	SERVICE
Via Fratelli Gracchi, 27 20092 Cinisello Balsamo (MI) Tel +39 02 66027.1 sales@isoil.it	service@isoil.it

If you want to find the complete list of our distributors access at the following link:
http://www.isoil.it/en

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