FM500

Transmitter

Data Sheet

Benefits

- Volume, velocity and wight measurement in one device
- Compact or remote options available
- Direct sensor configuration
- Battery powered option available
- Low conductivity >5µS/cm

DN25 up to DN1000
Temperature Range: -20°C to +60°C (-4°F to 140°F)
Accuracy: 0.4%
Flexible power device

Typical Applications

- Water / wastewater
- Cooling systems
- Water treatment / filtration
- Pump control
- Leveling
- Water consumption
- Leakage detection

Contents

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
Humidity Range	0÷100%

Standard Features	
Version	• Compact • Separate
Housing materials	Painted Aluminium die casting
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 Function	Yes
Empty Pipe Detection	Yes
CE Certification	Yes

Optional Features (For more details, see 'How to Order' on last page)	
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/Alarm	• 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
Data Logger	MicroSD Memory Card 4...32 GBytes
Protocols	• Modbus over RS 485 • HART (Available on analog output n° 1) **HART** REGISTERED • MeterBus M-Bus EN13757

Accuracy	
Accuracy (Whole System Transmitter+Sensor)	See table below

Overall Dimensions (Compact Version)

200

114
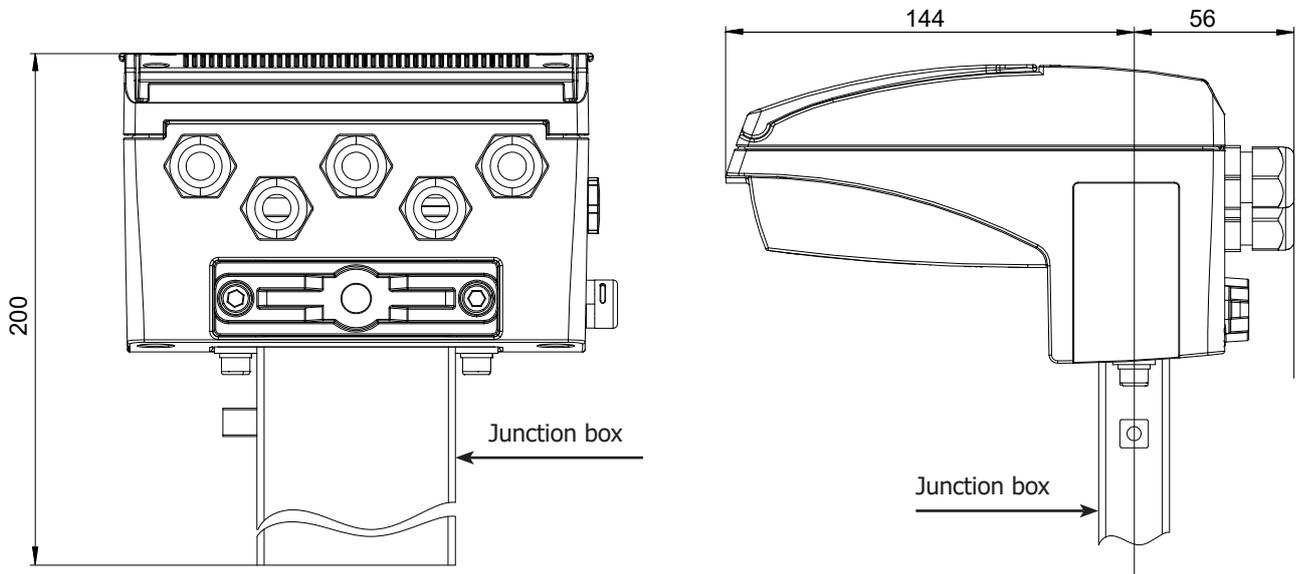
167

164

180

114

290

195

![STS global.sensor.excellence]
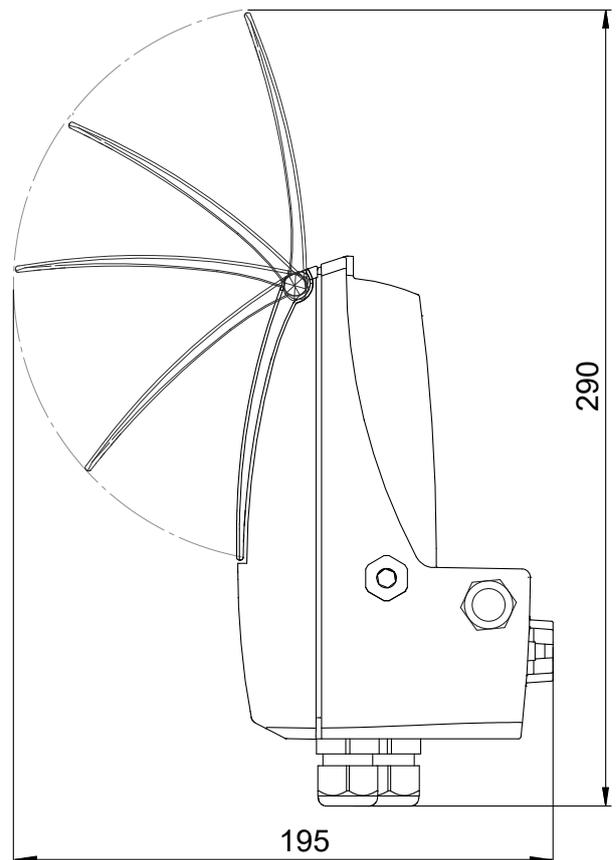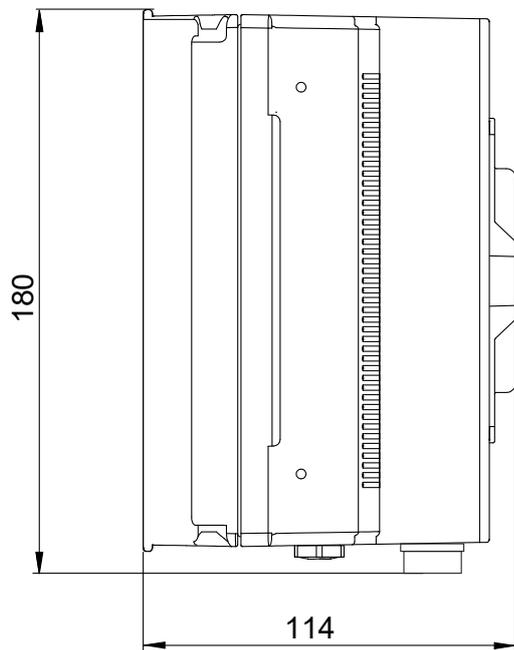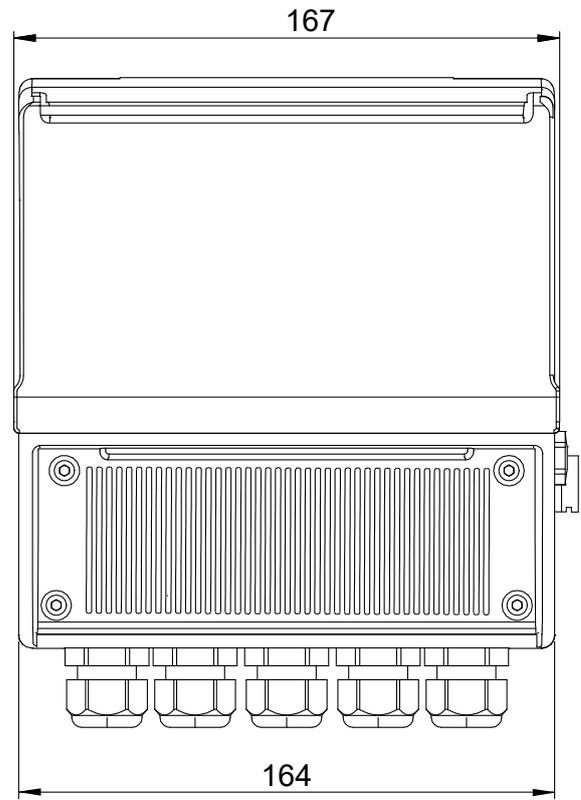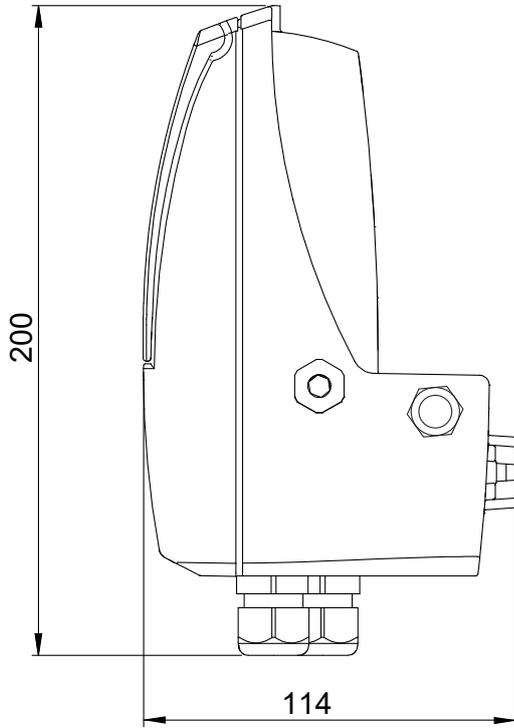
Separate (Wall Version)
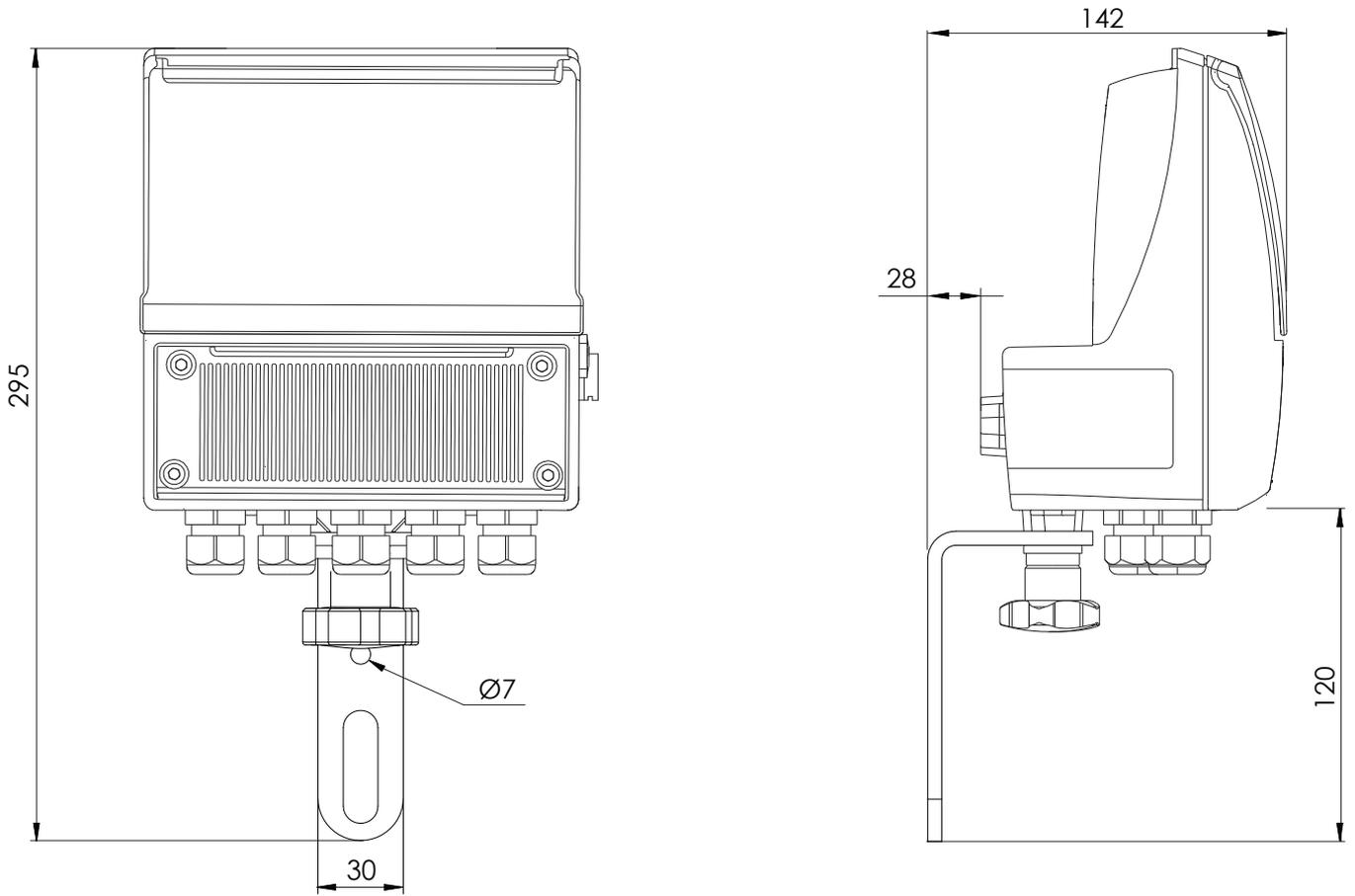
Horizontal Version

Horizontal version

144   56

200

Junction box

Junction box

Vertical version

87

270

75

Junction box

Junction box

![STS global.sensor.excellence logo]

FM500 Exploded Layout

Terminal Block Cover

Main Housing Cover

PCB MV210

Main Housing
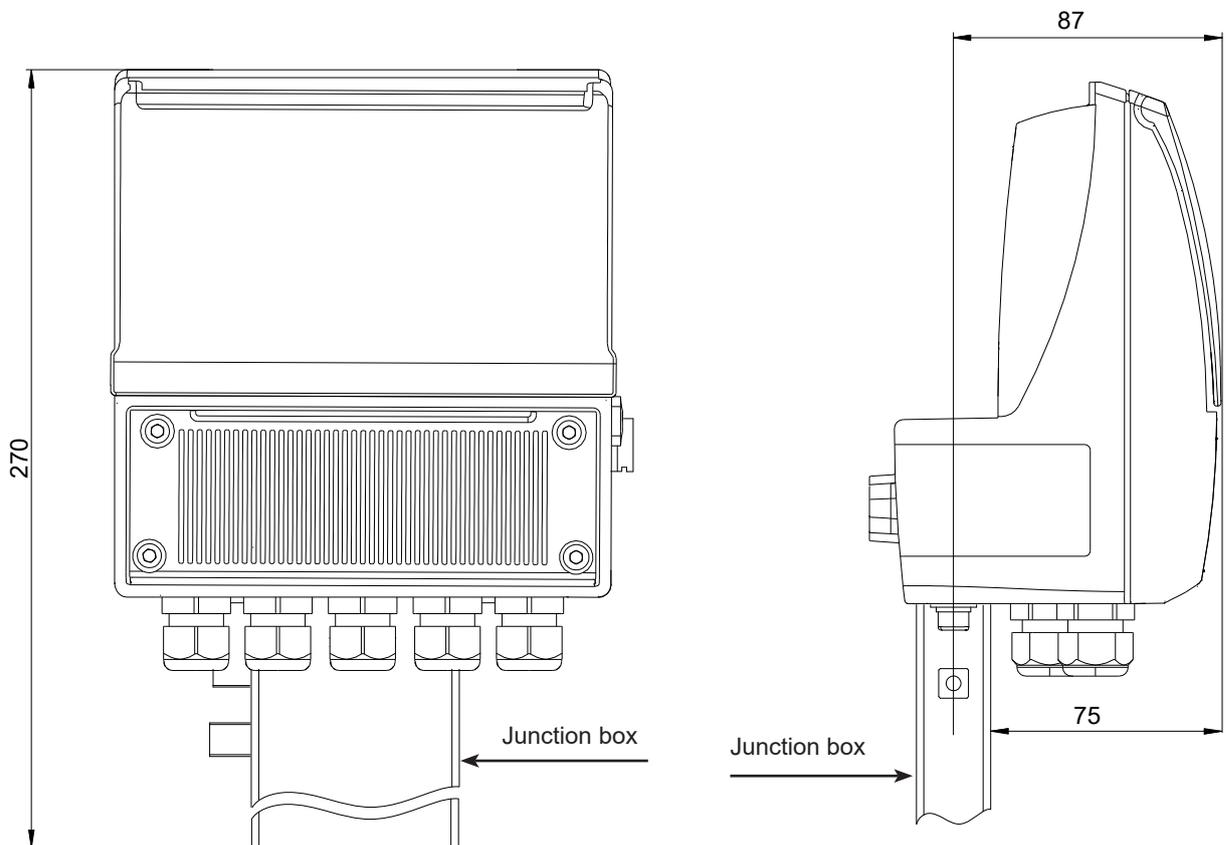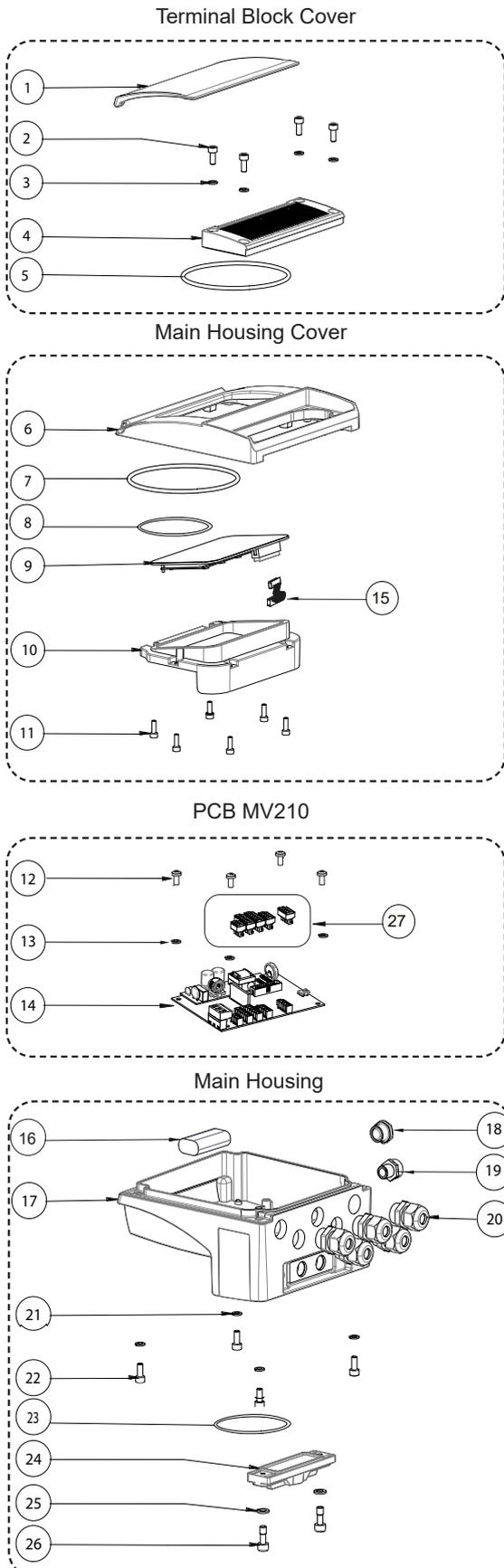
POS.	DESCRIPTION	
	PA6 VERSION	**ALLUMINIUM VERSION**
1	Protection Cover	
2	Vite M4x12	Vite M5x12
3	Grower Ø4	Grower Ø5
4	Terminal Cover	Terminal Cover
5	O-RING-4400	
6	Housing Cover	Housing Cover
7	O-RING-4700 (Housing Cover)	
8	O-RING-117x3 (Display)	
9	Display	
10	Fixing Display Frame (Material PA06)	
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	

Main Pages Visualization

Different visualization possibilities by simply pressing of a key.
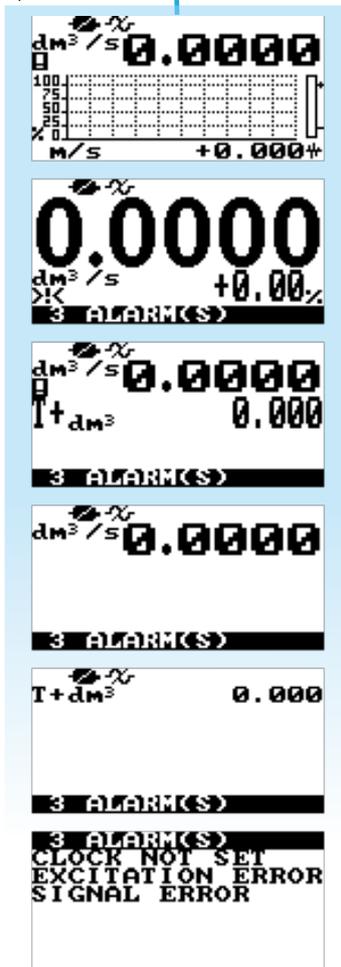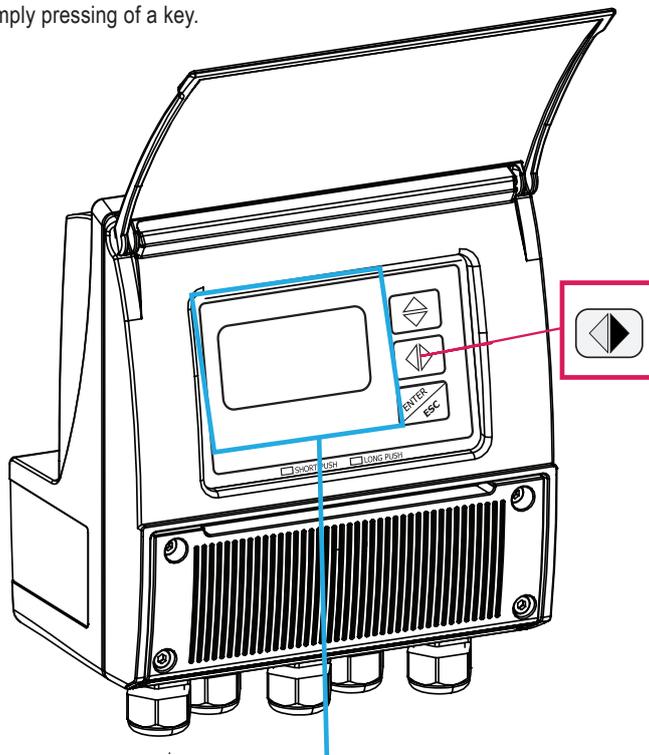
Electrical Connections

ELECTRODES

| 1 | 2 | 3 | 4 |

E1
E2
C
SH

RS485

| 29 | 28 | 27 | 26 |

B
A
0V
SH

4-20 OUTPUTS

| 25 | 24 | 23 | 22 | 21 | 20 |

OUT2 (+) 4-20
OUT1 (+) 4-20*
OUT1-2 (-) 4-20
SH

OUTPUT
+24V
0V

* If the option HART is enable

HART REGISTERED

DIGITAL OUTPUTS

| 19 | 18 | 17 | 16 | 15 | 14 |

OUT2 C
OUT1 C
OUT 1-2 E
SH

DIGITAL INPUTS
IN1 +
IN1 -

COILS

| 13 | 12 | 11 |

C1
C2
SH

POWER SUPPLY
L (+)
N(-)

ON
1 2
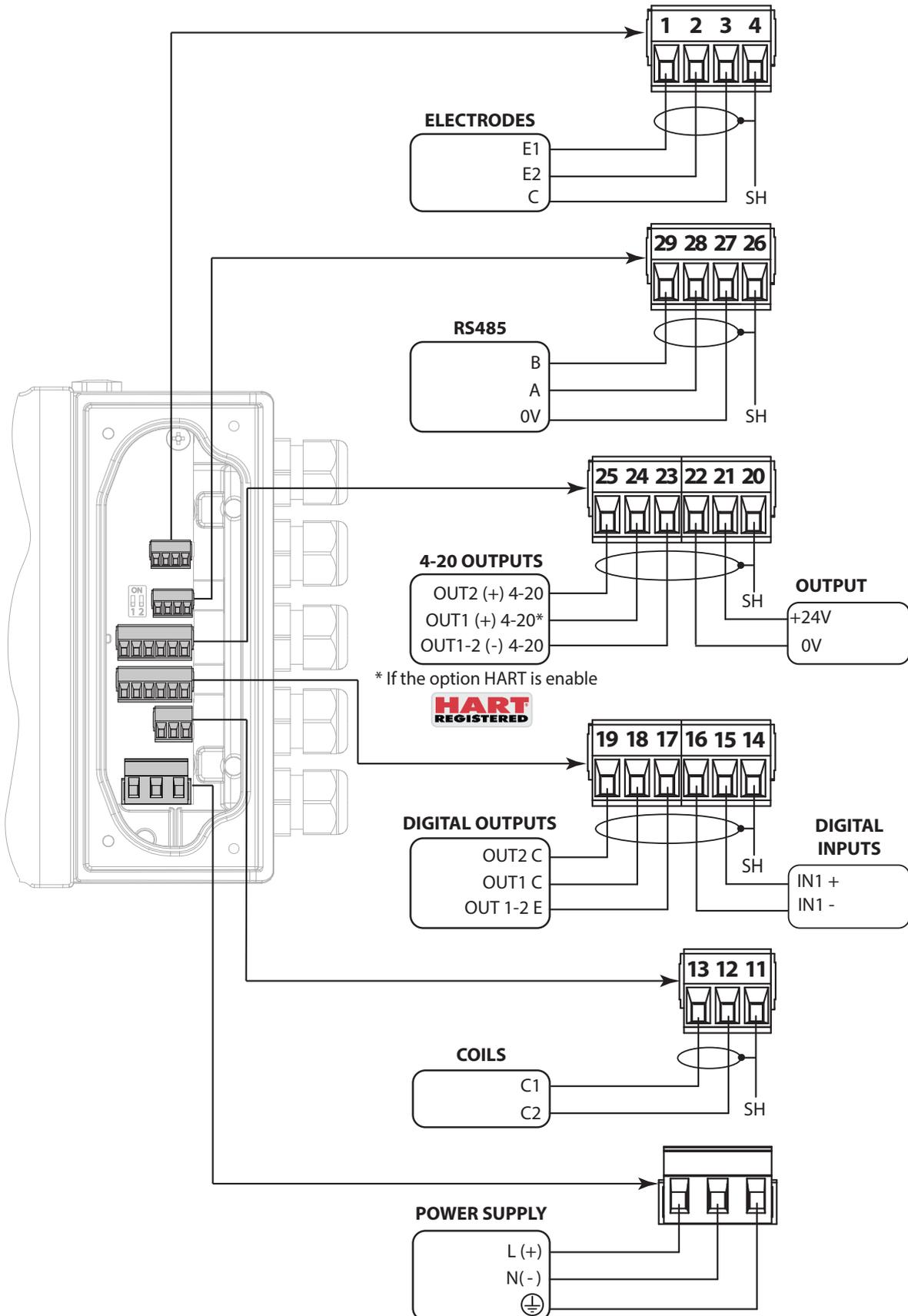
Digital Inputs

on/off input
(external power supply)

10k

15 (+)

16 (-)
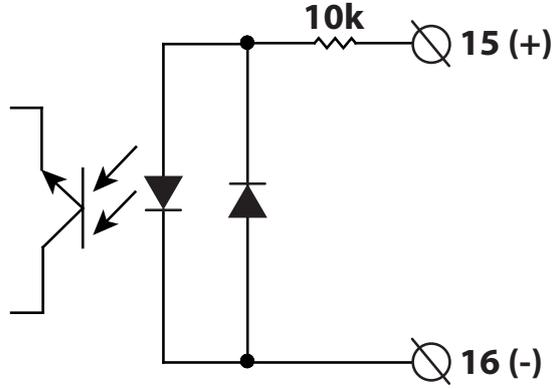
on/off input
(internal power supply)

10k

15 (+)

16 (-)

22 (-)

Digital Outputs

18 OUT 1(+)
19 OUT 2(+)

17 (COM. OUT 1-2)

Analog Outputs

24 OUT 1(+)
25 OUT 2(+)

23 (COM. 4-20 OUT 1-2)
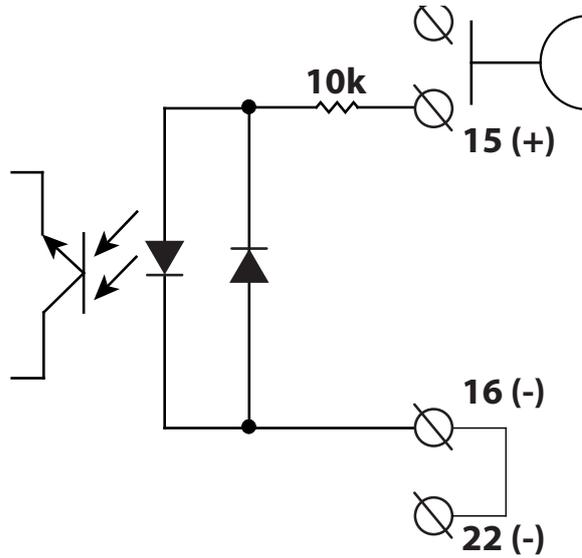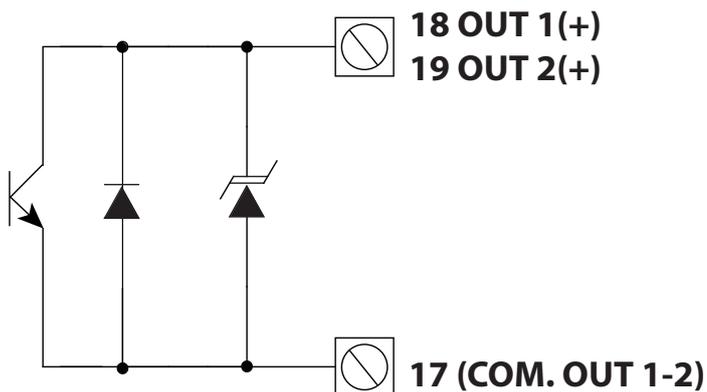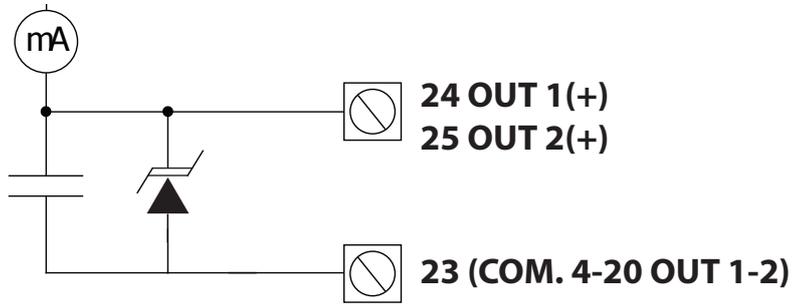
Functions Menu

Sensor

```
MAIN MENU
1-Sensor
2-Units
3-
```

SENSOR				
S. model =		0	1.1	Sensors model: Enter the first two characters of the serial number of the sensor
Lining =		UNSPEC.	1.2	Flow sensor lining material type
S. type =		FULL BORE	1.3	Type of sensor: fullbore or insertion
u. type =		METRIC	1.4	Type of measure units for sensor parameter: metric or imperial
Diam	mm	00025.0	1.5	Insert ND of sensor (0-2500)
KA =		+00.9637	1.6	Calibration data of sensor visualized on sensor's label
KA- =		-04.4904		
KZ =		+0000000	1.7	Sensor coefficient KZ (zero point)
KD =		+0000000	1.8	Sensor coefficient KD
Ins. position =		0	1.9	Insertion position
KP Dinamic =		OFF	1.10	KP dynamic, coefficient for insertion
Ki =		01.8727	1.11	Sensor coefficient Ki
Kp =		01.0000	1.12	Sensor coefficient Kp
KC =		1.00000	1.13	Sensor coefficient KC
C.curr =		025.0	1.14	CW volume total. decimal point position
C.Reg.PB =		004	1.15	Current regulator proportional band
C.Reg.DK =		008	1.16	Current regulator derivation constant
S. Freq.= Hz		50	1.17	Measure sampling frequency
Preamplif.		OFF	1.18	Enables the preamplifier
E.P Detect =		ON	1.19	Enables the empty pipe detection feature
R max= kohm		0500	1.20	Empty pipe detection threshold
El. Cleaning =		OFF	1.21	Electrode cleaning
S. cable =	m	000	1.22	Sensor connecting cable length
S. err. delay =		010	1.23	Signal error delay (n. sample)
Sens. verify =		OFF	1.24	Automatic sensor verify enable
Zero point cal.			1.25	Pipe hydraulic zero calibration
KL		00.00000000	1.27	Coefficient KL values

Units

```
MAIN MENU
1-Sensor
2-Units
3-Scales
```

UNITS				
Diam.	mm		2.1	Nominal diameter measure unit
S.cable	m		2.2	Cable length on separate version
FR.unit	METRIC		2.3	Flowrate type measure unit: metric or not metric
PI1 unit	METRIC		2.4	Pulse 1 type measure unit: metric or not metric
PI2 unit	METRIC		2.5	Pulse 2 type measure unit: metric or not metric
T+ unit	METRIC		2.6	Total direct totalizer measure unit type: metric or not metric
T+ unit	g		2.7	Total direct totalizer measure unit
T+ D.P	3		2.8	Total direct totalizer decimal point position
P+ unit	METRIC		2.9	Partial direct totalizer measure unit type: metric or not metric
P+ unit	g		2.10	Partial direct totalizer measure unit
P+ D.P	3		2.11	Partial direct totalizer decimal point position
T- unit	METRIC		2.12	Total reverse totalizer measure unit type: metric or not metric
T- unit	g		2.13	Total reverse totalizer measure unit
T- D.P	3		2.14	Total reverse totalizer decimal point position
P- unit	METRIC		2.15	Partial reverse totalizer measure unit type: metric or not metric
P- unit	g		2.16	Partial reverse totalizer measure unit
P- D.P	3		2.17	Partial reverse totalizer decimal point position
Temp.unit	°C		2.18	Temperature measure unit
Mass units	ON		2.19	Enable/disable the selection of mass units on full scale set
Sg=kg/dm3	1.0000		2.20	Specific gravity coefficient

Scales

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-
```

SCALES			
FS1 g/s	4908.7	3.1	Full scale flow rate 1
FS2 g/s	4908.7	3.2	Full scale flow rate 2
Pls1=g	1000.00	3.3	Pulse value on channel 1
Tpls1=ms	0050.0	3.4	Duration of the pulse generated on channel 1
Pls2=g	1000.00	3.5	Pulse value on channel 2
Tpls2=g	0050.0	3.6	Duration of the pulse generated on channel 2
Frq1=Hz	1000.00	3.7	Full scale frequency for channel 1 (0.1Hz-1000.0Hz)
Frq2=Hz	1000.00	3.8	Full scale frequency for channel 2 (0.1Hz-1000.0Hz)

Measures

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
```

MEASURES			
Damping	SMART	4.1	Measure filter
Cut-off= %	00.1	4.2	Low flow zero threshold: 0-25% of full scale value
DT Min.	ON	4.3	Automatic calibration verify
T1HC enable	ON	4.4	Automatic change of measurement range
T1HC	OFF	4.5	High immunity inputs

Alarms

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
 6-Inputs
```

ALARMS			
Max+ = dm3/s	OFF	5.1	Maximum value alarm set for direct flow rate
Max- = dm3/s	OFF	5.2	Maximum value alarm set for reverse flow rate
Min+= dm3/s	OFF	5.3	Minimum value alarm set for direct flow rate
Min-= dm3/s	OFF	5.4	Minimum value alarm set for reverse flow rate
Hysterisis=%	03	5.5	Hysteresis threshold set for the minimum and maximum flow rate alarms
mA v.alarm=%	000	5.6	Current output value in case of failure
Hz v.alarm=%	000	5.7	Frequency output value in case of alarms

Inputs

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
 6-Inputs
```

INPUTS			
T+ reset	OFF	6.1	Total direct (positive) flow totalizer reset enable
P+ reset	OFF	6.2	Partial direct (positive) flow totalizer reset enable
T- reset	OFF	6.3	Total reverse (negative) flow totalizer reset enable
P- reset	OFF	6.4	Partial reverse (negative) flow totalizer reset enable
Count lock	OFF	6.5	Totalizer counting lock command
Meas.lock	OFF	6.6	Measure zero lock command
Calibration	OFF	6.7	Calibration external command
Range change	OFF	6.8	Range change external command

Outputs

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
 6-Inputs
 7-Outputs
 8-Communication
 9-...
10-...
11-...
12-...
13-...
```

OUTPUTS			
Out1	PULSES+	7.1	Output 1 functions
Out2	PULSES-	7.2	Output 2 functions
Out mA1	4_22 +/-	7.3	Choice of the function and the range of current output n.1
Out mA2	4_22 +/-	7.4	Choice of the function and the range of current output n.2
A1S	4.9087	7.5	Full Scale value for analog out1
A2S	4.9087	7.6	Full Scale value for analog out2

Comm.

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
 6-Inputs
 7-Outputs
 8-Communication
 9-Display
10-Data logger
11-...
12-...
13-...
```

COMMUNICATION				
HART pr.	05	8.1	HART packet byte preambles	HART REGISTERED
HART O. C.	ON	8.2	HART bus output control	
Dev. Addr	001	8.3	Device communication address number	
Speed=bps	9600	8.4	MODBUS link speed	
Parity=	NO	8.5	MODBUS link parity	
Delay=ms	00	8.6	MODBUS reply delay	
C. timeout	2	8.7	Maximum delay between chars (frames)	
MBUS ID =	220483	8.8	MeterBus Id.Number (Second.Add.)	
MBUS Dev.T =	7	8.9	MeterBus Device Type (Media)	

Display

```
MAIN MENU
 1-Sensor
 2-Units
 3-Scales
 4-Measure
 5-Alarms
 6-Inputs
 7-Outputs
 8-Communication
 9-Display
10-Data logger
11-...
12-...
13-...
```

DISPLAY			
Language	EN	9.1	Choice of the language
Contrast	5	9.2	Display contrast
Disp.time=s	020	9.3	Display/keyboard inactivity time
D.rate=Hz	5	9.4	Display updating frequency: 1-2-5-10 Hz
Disp. Fn.	1	9.5	Display function number
Disp.lock	ON	9.6	Display function selection lock
Part. Tot	ON	9.7	Partial totalizer enable
Neg. Tot.	ON	9.8	Negative totalizer enable
Net tot.	ON	9.9	Net totalizer enable
Disp.date	ON	9.10	Time and date display enable
Quick start	ON	9.11	Quick start menu visualization

Data Logger

DATA LOGGER				
D.logger en.	ON	10.1	Data logger enabling
Meas. units	ON	10.2	Measure units recording enable
Field separat.	;	10.3	Field separator character
Decimal separ.	.	10.4	Decimal separator character
Interv.	01:01:00	10.5	Sampling interval
Log T+	ON	10.6	Enable logging of total direct totalizer
Log P+	ON	10.7	Enable logging of partial direct totalizer
Log T-	ON	10.8	Enable logging of total reverse totalizer
Log P-	ON	10.9	Enable logging of partial reverse totalizer
Log TN	ON	10.10	Enable logging of total net totalizer
Log PN	ON	10.11	Enable logging of partial net totalizer
Log Q (UM)	ON	10.12	Enable logging of flow rate in measure unit
Log Q (%)	ON	10.13	Enable logging of flow rate in percentage
Log AL.EV	ON	10.14	Enable logging of alarm events
Log STR	ON	10.15	Enable logging of sensor test results
Log BTS	ON	10.16	Enable logging of board temperature
Log IBV	ON	10.17	Enable logging of internal board voltage
Log EDC	ON	10.18	Enable logging of electrodes DC voltage
Log EAC	ON	10.19	Enable logging of electrodes AC voltage
Log EIZ	ON	10.20	Enable logging of electrodes impedance
Log SCV	ON	10.21	Enable logging of sensor coils value

```
MAIN
 1-S
 2-
 3-
 4-
 5-
 6-
 7-
 8-Communication
 9-Display
10-Data logger
11-Functions
12-Diagnostic
13-System
```

Functions

FUNCTIONS			
T+ reset		11.1	Execute immediate reset of total direct totalizer
P+ reset		11.2	Execute immediate reset of partial direct totalizer
T- reset		11.3	Execute immediate reset of total reverse totalizer
P- reset		11.4	Execute immediate reset of partial reverse totalizer
Load Sens. f. def		11.5	Load sensor factory default
Load Conv. f. def		11.6	Load transmitter factory default
Save Sens. f. def		11.7	Save sensor factory default values
Save Conv. f. def		11.8	Save transmitter factory default values
Calibration		11.9	Execute immediate internal circuit calibration

```
MAIN
 1-
 2-
 3-
 4-
 5-
 6-
 7-
 8-
 9-Display
10-Data logger
11-Functions
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13-System
```

Diagnostic

DIAGNOSTIC			
Self test		12.1	Self test diagnostic function
Test display		12.2	Function tests physical display
Sens. verify		12.3	Sensor verify diagnostic function
Flow sim. =	ON	12.4	Flow rate simulation enabling
Display measures		12.5	Display internal measured value
Disp. Coom. Vars		12.6	Display comm. diagnostic values
Display graphs		12.7	Display measure as graphs
Gen. sens. set		12.8	Generic sensor parameters set
SD card info		12.9	Sd card status informations
Firmware info		12.10	Firmware version/revision
S/N =	999001	12.11	Board serial number
WT=	0002:21:00 : 22	12.12	Total working time

```
MAIN
 1-
 2-
 3-
 4-
 5-
 6-
 7-
 9-
10-Data logger
11-Functions
12-Diagnostic
13-System
```

SYSTEM			
Dayl. Saving =	ON	13.1	Daylight saving time change
Time zone =	h + 01.00	13.2	Localized time zone
2016/04/04-16:07		13.3	System date and time
L1 code =	********	13.4	Access level 1 code
L2 code =	********	13.5	Access level 2 code
L3 code =	********	13.6	Access level 3 code
L4 code =	********	13.7	Access level 4 code
L5 code =	********	13.8	Access level 5 code
L6 code =	********	13.9	Access level 6 code
Restr. Access=	ON	13.10	Restricted access level
010.011.012.013		13.11	Device IP network address
010.011.012.014		13.12	Client IP network address
255.255.255.000		13.13	Network mask
KT	0.96469	13.14	Calibration coefficient KT
KS	1.00000	13.15	Calibration coefficient KF
KR	1.00000	13.16	Calibration coefficient KR
DAC1	(°C)	13.17	DAC1 out 4mA calibration point
DAC1	(°C)	13.18	DAC1 out 20mA calibration point
DAC2	661	13.19	DAC2 out 4mA calibration point
DAC2	3327	13.20	DAC2 out 20mA calibration point
Stand-by	3453	13.21	Stand-by
FW update	14718	13.22	firmware update

MAI
1-
2-
3-
4-
5-
6-
7-
8-
9-
10-
11-functions
12-Diagnostic
13-System

Accuracy

Typical error profile (pure indication only)

e %

| 0,1 m/s | 0,5 m/s | 5,0 m/s | 10,0 m/s |
| 0,33 ft/sec | 1,64 ft/sec | 16,4 ft/sec | 32,8 ft/sec |

SPEED

speed ≥ 0,5 m/s (1,64 ft/s) $\Longrightarrow$ **e** = +/- **A** % (reading value)

speed < 0,5 m/s (1,64 ft/s) $\Longrightarrow$ **e** = +/- (**B/V**) % (reading value)

minimum flow (l/s): DN x DN x 0,008/1000(DN expressed in mm)

where:

e = ACCURACY

V = WORKING SPEED

(**A** and **B** values: see below table according to TRANSMITTER model)
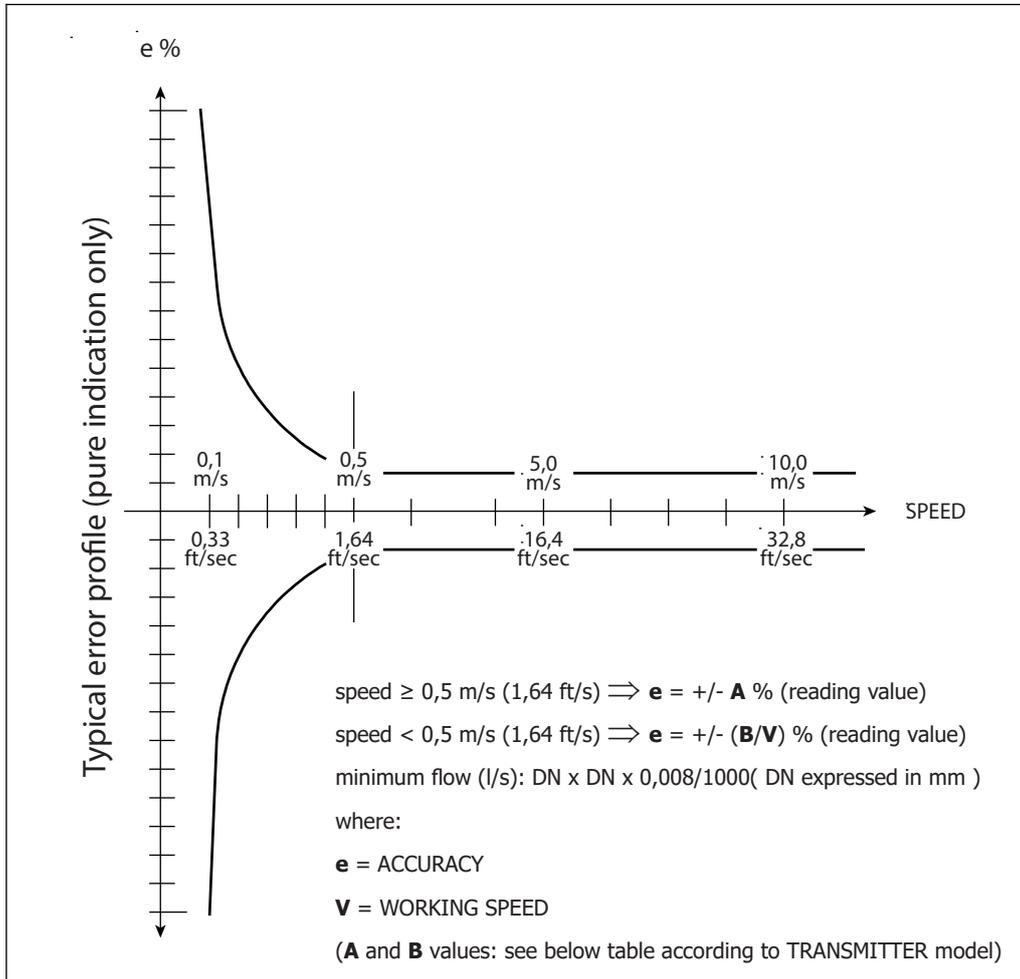
Full Bore Sensor

FM130/FM150/FM170		
A	B(m/s)	B(ft/s)
0,8*	0,4**	1,31**

* = 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 %

How to Order

CODE EXAMPLE		CODE/DESCRIPTION
Display		
A	A	Blind version (without display and programming keys, cable USB type A/USB MINI B is REQUIRED TO PROGRAMMING)
	B	Graphic LCD WSTN - B/W - back light display, point matrix 128 x 64, 8 line/16 characters and 3 programming keys (mandatory for MI001)
Housing material / Protection rate		
	1	Painted aluminum die casting, protection rate IP67
	2	Painted aluminum die casting, protection rate IP68 1,5 meters under water, Compact Version, n° 1 IP 68 MIL connector for power supply (CONNECTORS SUPPLIED: MALE + FEMALE)
	3	Painted aluminum die casting, protection rate IP68 1,5 meters under water, Compact Version, Complete of n° 1 of 10 poles IP68 MIL connector (outputs connections to be specified) and n° 1 IP 68 MIL connector for power supply (CONNECTORS SUPPLIED: MALE + FEMALE)
	7	Painted aluminum die casting, ONLY COMPACT, protection rate IP68 (NO CONNECTORS)
	8	Painted aluminum die casting, protection rate IP68 1,5 meters under water, Separate Version, Complete of n° 2 IP 68 MIL connectors for cable from the sensor, and n° 1 IP 68 MIL connector for power supply (CONNECTORS SUPPLIED: MALE + FEMALE)
	9	Painted aluminum die casting, protection rate IP68 1,5 meters under water, Separate Version, Complete of n° 2 IP 68 MIL connectors for cable from the sensor, n° 1 IP68 MIL connector (outputs connections to be specified) and n° 1 IP 68 MIL connector for power supply (CONNECTORS SUPPLIED: MALE + FEMALE)
Version		
A	A	Compact version with sensor FM.... (liquid maximum temperature 100 °C)
	B	Separate version (CABLE C014) for wall monting, complete with mounting accessories in Aluminum
	C	Compact version with display visibile from the top
	D	Separate version (CABLE C014) for wall monting, complete with mounting accessories in AISI 304
Power supply		
1	1	Power supply : 100 ... 240 VAC 44/66 Hz (NOT FOR MI001)
	2	Power supply : 24 … 36 VAC/VDC 0...44/66 Hz (NOT FOR MI001)
	3	Power supply : 12…48 VDC (NOT FOR MI001)
	4	Power supply : 100 ... 240 VAC 44/66 Hz + 1 Rechargeable back-up Battery (the use of battery supports only the measure UP TO 30 days; all the outputs are set to OFF) (NOT FOR MI001)
	5	Power supply : 24 … 36 VAC/VDC 0...44/66 Hz + 1 Rechargeable back-up Battery (the use of battery supports only the measure UP TO 30 days; all the outputs are set to OFF) (NOT FOR MI001)
	6	Power supply : 12…48 VDC + 1 Rechargeable back-up Battery (the use of battery supports only the measure UP TO 30 days; all the outputs are set to OFF) (NOT FOR MI001)
	7	Power supply : 100 ... 240 VAC 44/66 Hz + n° 1 SETTINGS FOR Rechargeable back-up Battery (the Rechargeable Battery is NOT included) (NOT FOR MI001)
	8	Power supply : 24 … 36 VAC/VDC 0...44/66 Hz + n° 1 SETTINGS FOR Rechargeable back-up Battery (the Rechargeable Battery is NOT included) (NOT FOR MI001)
	9	Power supply : 12…48 VDC + n° 1 SETTINGS FOR Rechargeable back-up Battery (the Rechargeable Battery is NOT included) (NOT FOR MI001)
	a	Power supply : 100 ... 240 VAC 44/66 Hz + 1 Pack of n° 2 SUPERCAP (the use of it supports only the measure UP TO 3 minutes; all the outputs are set to OFF) Suitable for MI001
	b	Power supply : 24 … 36 VAC/VDC 0...44/66 Hz + 1 Pack of n° 2 SUPERCAP (the use of battery supports only the measure UP TO 3 minutes; all the outputs are set to OFF) Suitable for MI0011
	c	Power supply : 12…48 VDC + 1 Pack of n° 2 SUPERCAP (the use of battery supports only the measure UP TO 3 minutes; all the outputs are set to OFF) Suitable for MI001
Analogue output		
A	A	Without Analogue output
	B	n° 1 Analogue output 0/4...20/22 mA (Hart optional)
	C	n° 2 Analogue outputs 0/4...20/22 mA (Hart optional over Out.1)
Digital Input/Output		
0	0	With Digital Input only
	1	With n° 1 PROGRAMMABLE Digital Output/n°1 Digital Input (mandatory for MI004)
	2	With n° 2 PROGRAMMABLE Digital output/n°1 Digital Input

How to Order

Communication Gateway		
A	A	Without Gateway
	B	RS485 port - Protocol MODBUS required
	C	Hart (4/20 mA/ Analog OUT n° 1 is required)
	E	M-Bus Module
	Z	Others

Protocols		
0	0	Without Protocol
	1	Modbus (over RS485) requires RS485 port
	2	BACnet MS-TP (RS485)

Accuracy		
A	A	Standard accuracy 0,8 %
	B	Special accuracy 0,4 %
	C	Special accuracy (to be defined)

Data Logger		
0	0	Without Data Logger
	1	MicroSD Memory 4 GB : Data Logger + RTC (Real Time Clock)
	2	MicroSD Memory 4 GB : Data Logger + RTC (Real Time Clock) + BIV (Built In Verificator)
	3	MicroSD Memory 4 GB : Data Logger + RTC (Real Time Clock) + Meter Data (Real Time Transmitter & Sensor Data on SD Memory)
	4	MicroSD Memory 4 GB : Data Logger + RTC (Real Time Clock) + BIV + Meter Data

Special Features		
A	A	NONE
	B	WITH ANTICONDENSE CAP
	C	n° 5 CABLE GLAND 1/2" NPT - Nickel plated brass CODE 1.609.1200.70 (CABLE 6 - 12 mm)
	D	n° 5 HOLES FOR CABLE GLAND 1/2" NPT (WITHOUT CABLE GLAND)
	E	For SANITARY sensor (FM170) In COMPACT Version

MID Approval		
0	0	NONE

Complete code example for order → FM500-A0A1A0A0A0A0