



Electronic detection

compact dimension

13 monthly energy values M-BUS

Integral-V MaXX

Compact heat meter Qn 0,6 / 1,5 / 2,5

The Actaris Compact heat meter Integral-V MaXX for allocation and billing is a high performance response to the markets needs.

Compact dimensions and high flexibility of options are strengths of Integral-MK MaXX.

Class C approved flow sensor

The flow sensor is approved in PTB class C and meets all requirements of AGFW (German association of district heating companies) in terms of accuracy and durability.

Proven electronic turbine detection

The patented electronic detection system guarantees a reactionless transmission of volume pulses to the calculator.

Advanced functions

The calculator is ASIC controlled and displays all actual and fixed date related data, ergonomically operated by one push button.

Pre-equipped for future communication

All Integral-V MaXX meters are pre-equipped to be connected to several types of option connectors, such as an option plug for M-BUS communication

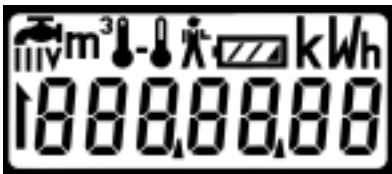
- Pre-equipped for connection of water meters with pulse output
- Pre-equipped for energy and volume repetition output



► Integral-V MaXX

LCD

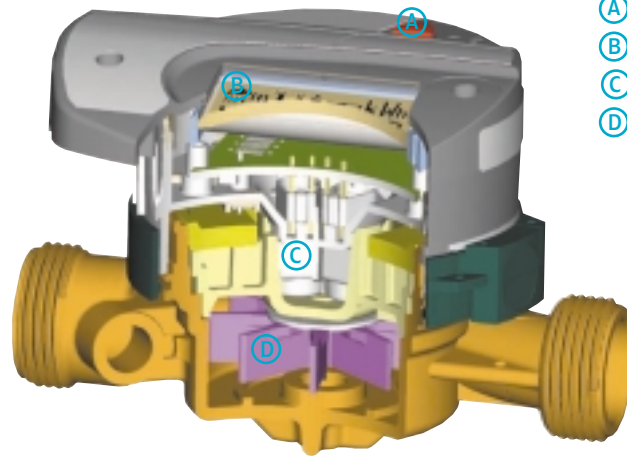
The different displays can be selected by one single push button. Keeping the push button pressed (appr. 3s) the LCD switches into 2nd LCD level. Additional displays are available after connection of option connectors.



Multifunctional Display
for visualisation of relevant data:

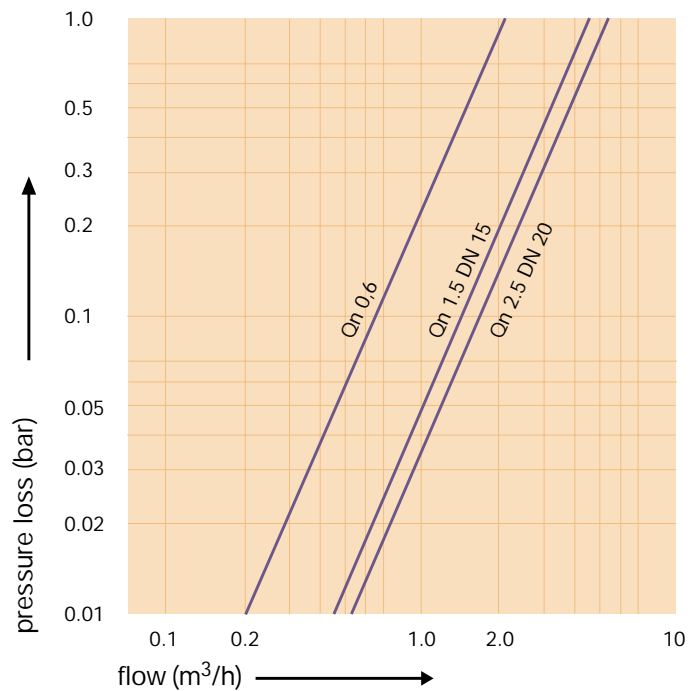
- ▶ Level 1
 - Energy
 - Volume
 - LCD test
 - Energy and date of past 13 months
- ▶ Level 2
 - Actual flow
 - Temperature difference
 - Supply temperature
 - Return temperature
 - Time in error (hours)
 - Operation time (Years, days)
 - Firmware version
- ▶ Optional
 - Primary address (M-Bus)
 - Secondary address (M-Bus)
 - Volume of connected water meters
 - Fixed date values of water meters

Integral-V MaXX

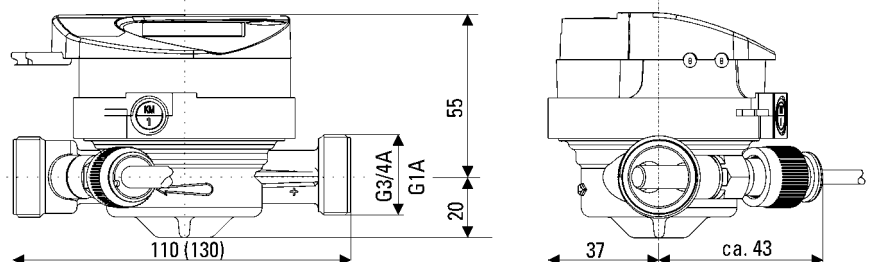


- Ⓐ push button
- Ⓑ LCD
- Ⓒ coils for turbine detection
- Ⓓ turbine

Pressure loss



Dimensions



Technical data

Type		INTEGRAL-V MaXX Qn 0,6	INTEGRAL-V MaXX Qn 1,5	INTEGRAL-V MaXX Qn 2,5
Labels in English	Reference	4051223037	4055223037	4056223037
Labels in German	Reference	4051221037	4055221037	4056221037

Calculator

Temperatur range T	°C	20..90 20..140 (option)	20..90 20..140 (option)	20..90 20..140 (option)
Temperature difference dT:	°C	3..70 3..120 (option)	3..70 3..120 (option)	3..70 3..120 (option)
Resolution of LCD	KWh m³	0..9999999 0..99999,99	0..9999999 0..99999,99	0..9999999 0..99999,99
Lithium Battery	Voltage V Lifetime	3,6 10 years	3,6 10 years	3,6 10 years
Protection Class	IP	54	54	54
Environmental Class	EN1434	C	C	C

Flow Sensor

Nominal Size DN	mm	15	15	20
Nominal Flow rate Qn	m³/h	0,6	1,5	2,5
Dynamic range	PTB	C-H / B-V	C-H/V	C-H/V
Max. Flow (short time) Qmax	m³/h	1,5	2,5	3,75
Transitional Flow rate Qt	l/h	36	90	150
Minimum Flow rate Qmin	l/h	6	15	25
Temperature range Tvmt	°C	20-90°C	20-90°C	20-90°C
Operating pressure PN	bar	16	16	16
Connection		G 3/4 A	G 3/4 A	G 1 A
Length	mm	110	110	130
Weight	kg	0,55	0,55	0,65

Temperature Sensor

Technology		PT100	PT100	PT100
Type	Pocket	Ø 6mm x 50mm	Ø 6mm x 50mm	Ø 6mm x 50mm
Type of Connection		2-wires	2-wires	2-wires
Cable length	Spiral cable	1,2m	1,2m	1,2m

Other sensors on request.

Installation Kits

Type		EBS-3/4"-K	EBS-1"-K	EBS-3/4"-KH	EBS-1"-KH
Reference		2434000006	2422000006	2433000006	2423000006
Length without valves	mm	110	130	110	130
Length incl. valves	mm	No valves	No valves	200	230
T-pipe for supply sensor		3/4" x 40mm	1" x 50mm	3/4" x 40mm	1" x 50mm

Installation kits for direct immersion sensor on request



The M-Bus option allows the remote reading of all relevant data according to the European heat meter standard EN1434-3. Up to 250 meters can be connected to a concentrator or repeater. The data can be transferred through standardized serial interface (RS232) to the processing unit (e.g. Windows PC). In addition it is possible to connect the concentrator to a modem for remote reading via telephone network.

Up to 4 water meters with pulse output can be connected to Integral MaXX. This allows the reading of actual and fixed date consumption values of the connected water meters on LCD or through M-Bus.

The pulse output option transmits energy and volume proportional pulses to a counting unit.

Options

All Integral MaXX meters are prepared to be connected to different types of option connectors. The meter detects automatically the connected option and provides the additional functions. Option connectors can be plugged even on site without breaking metrological seals.

Type	Option connector M-BUS & 4 water meters
Reference	4097000037
M-Bus specification	
Protocol	EN1434-3, variable protocol low byte first.
Baudrate	300 or 2400 Baud (programmable by M-Bus).
Data (standard frame)	energy, volume, flow, temperatures (supply, return, delta), time in error, operating time, date & time, volume of connected water meters 1...4, version of firmware.
Data (13 monthly fixed date frames)	Energy of the heat meter, volume of all connected water meters and date of the fixed date. 13 different frames (13 lpast month) selectable by M-Bus.
Water meters pulse input specification (for reed switches or equivalent switches)	
Pulse weight	10 liter or 100 liter per pulse (programmable by M-Bus or push button)
Detection voltage	typical 3V
Pulse detection	Contact closed $R \leq 500 \Omega$ Contact open $R \geq 100 k\Omega$ Pulse/pause ratio: ≥ 3 sec.
Maximum wire length	30m
Type	Option connector Repetition energy and volume
Reference	4098000037
Max. detection voltage	30 V
Max. current	20mA
Max. output resistance R on	100 Ω (during repetition pulse)
Pulse width	500ms
Pulse weight	Energy: 1 kWh Volume: 10 L

For further information please contact your local agency.



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