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GENERAL INSTRUCTIONS

Measuring capsule heat meter UltraMaXX
Screw-in heat meter UltraLite

These instructions apply to the following UltraMaXX models:
NX / MX / M4WX / 4WX / EVX / MP2X / RRX / RF24

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NOTES

IMPORTANT BEFORE INSTALLATION

Hot water networks operate at high temperatures and high pressures, which can cause serious bodily injury if handled improperly. Therefore the measuring devices may only be installed by qualified and trained personnel. The pipes must be earthed. The installation of a heat meter must be carried out in accordance with the recognised technical regulations (e.g. EN 1434-6) in such a way that a correct measurement value can be recorded. The reading must be possible without any additional aids, and trouble-free deinstallation of the individual components must be possible after the validity of the calibration has expired!

Small calculator unit

IN ADDITION, THE FOLLOWING MUST BE OBSERVED

• Permissible ambient temperature (from 5° C to 55° C)
• Sealing the flow sensor itself and the temperature sensor is important and prevents unauthorised deinstallation.
• Flush the pipe system thoroughly before installing the flow sensor.
• According to EN 1434-6, the calculator/flow sensor/signal cables (e.g. sensor cables) must not be installed/routed near live mains cables and/or sources of electromagnetic interference (min. 50 mm distance).
• Caution: Special care is required in the case of particularly strong sources of electromagnetic interference, e.g. machines, frequency converters, power inverters, circuit breakers, high-voltage pumps and neon tubes, and the distance to the signal cables of the heat meter must be increased to 50 cm.
• ESD compliant installation for external cables according to EN 61340-5.
• Environmental class C according to EN 1434-1 as well as E1 and M1 according to directive 2014/32/EU.
• The flow sensor must never be lifted or transported using the connection cable!
• Do not route cables along hot pipes.
• Big arithmetic unit
• The heat meter has protection class IP54 as standard. In the model with the large casing, the heat meter has protection class IP20 in the area of the connection terminals.
• Opening a security seal will result in loss of the compliance and guarantee.
• Cleaning the casing must only be carried out from the outside with a soft, slightly moistened cloth - do not use cleaning agents.
• Do not carry out welding anywhere near the meter.
• The meter should remain in the original packaging until all connection, insulation, painting and flushing work is completed.
• Always install the meter according to the mounting position printed on the serial plate (supply or return).
• The flow sensor can be installed either horizontally or vertically in any mounting position.
• The heat meter must be protected against damage caused by shocks or vibrations that may occur in the installation location. During commissioning, the shut-off valves must be opened slowly.
• Threaded connections on the meter must correspond with the respective counterparts of the pipe in nominal diameter DN and nominal pressure PN (according to EN 1092). Do not expose the meter to excessive stresses caused by pipes or fittings. The pipes of the heating system must be sufficiently anchored in front of and behind the heat meter. All screws, nuts and seals used must be designed for the rated values DN, pressure rating PN, maximum temperature and maximum permitted pressure.

Big calculator unit

⚠ INSTALLATION NOTE

The use of the heat meter temperature sensor is only permitted in conjunction with corresponding temperature sensor measuring points approved for the sensor. Both measuring points of a heat meter must be designed in the same way. A combination of immersion sleeve and direct measurement is forbidden.

PROPER DISPOSAL

⚠ INFORMATION ON THE APPROPRIATE DISPOSAL OF PRODUCTS

The crossed out wheelie bin symbol on the product or on its packaging indicates that the used product should be recycled separately from household waste, so that it can be properly treated and disposed of. Check with your local authorities about the location of recycling centres, so that the product can be recycled appropriately. If an equivalent new device is purchased, the seller must take back the used device for recycling. The product is not potentially harmful to human health and the environment, but if it is disposed of illegally in the environment, it has a negative impact on the ecosystem. Illegal disposal of the device in the environment is a punishable offence.

LITHIUM BATTERIES IN EQUIPMENT

⚠ NOTE ON LITHIUM BATTERIES

The device contains non-replaceable lithium-ion batteries. Do not charge the batteries, do not expose them to mechanical stresses or temperatures above 100° C. In the event that replacing the batteries is possible, then this is explicitly described in the installation instructions and/or instruction manual. There are transport regulations which must be observed for lithium batteries. The certificates required for transport can be requested from the manufacturer.

INSTALLATION INSTRUCTIONS

# Flow rate sensor screw-in heat meter CF-UltraMaXX

PACKAGE CONTENTS

- Compact heat meter
- Sealing material
- Wall mounting
- General instructions

Possibly accessories pack for temperature sensor installation:

- A hinged screw fitting (light grey) for immersion sleeve Ø 5.0 and 5.2
- Two brass screw fittings with O-ring and auxiliary tool for direct measurement. Accessories pack with direct measuring adapter and copper seal. Two information signs for direct measurement.
- Identification plates for immersion sleeves

DEVICE DIMENSIONS
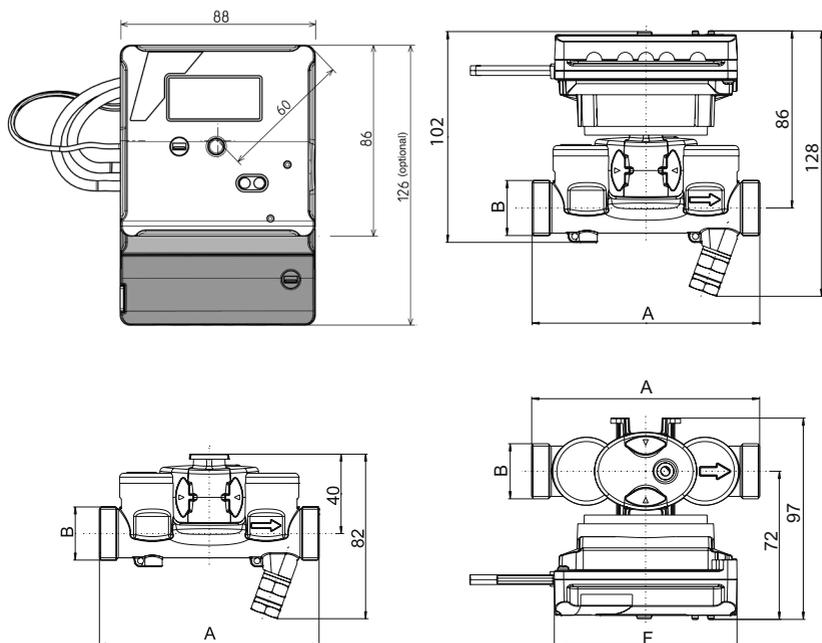
INSTALLATION (FIG. 1)

Turn off the heating circulation pump and close the ball valves. Check the installation location (return / supply) to make sure this corresponds with the print on the unit. Remove the distance piece and the seals, and if necessary, clean the sealing surfaces.

Replacement:

- Turn off the circulation pump
- Close the shut-off valves and release pressure in the pipe
- Break open the seals and unscrew the temperature sensor from the supply T-piece or from the supply ball valve
- Remove the old heat meter and the seals, and if necessary, clean the sealing surfaces.

A	B
130 mm	1"
or	or
110 mm	3/4"
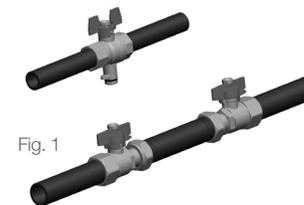
Fig. 1

INSTALLATION OF A HEAT METER (FIG. 2)

Install the compact heat meter with new seals in the direction of the flow (follow the flow direction arrows on the casing).

⚠ **Caution: the cable must not be cut, squashed or damaged when removing the unit and during installation!**

Caution: ensure tension-free installation - if necessary, ensure that the pipes are sufficiently anchored in front of and behind the heat meter.
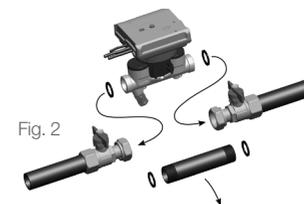
Fig. 2

INSTALLATION INSTRUCTIONS

Temperature sensor

INFORMATION ON IDENTIFICATION OF IMMERSION SLEEVES

When installing the heat meter, the following applies:

- both temperature sensor measuring points must be the same (e.g. 2 x TH6)
- immersion sleeve and direct measurement must not be combined
- temperature sensors must be approved for the relevant measuring point (see marking of the measuring point)

If the existing measuring points are not marked, they must be determined and marked. Usually, the internal diameter (use sensor gauge part no. 14883), insertion depth and key width of the hexagon must be measured.

A determination can then be made using the following tables:

Example of a measuring point marking for immersion sleeves:

Bestandstauchhülse nach Bauartschlüssel:

TH009

Type of key	G	Key width (SW)	Insertion depth (E) mm
for TH 6 mm with M 12 external thread			
TH009		SW 14	50
TH010		SW 22	50
TH011		SW 19	50
TH012		SW 22	50
for TH 5.0 mm with clamping screw			
TH013	¼	SW17	49
TH015	³⁄₈	SW17	60
TH017	³⁄₈	SW22	56
TH018	½	SW22	60
TH020	³⁄₈	SW22	49
TH021	½	SW22	49
TH029	M10x1	SW14	47
TH033	M10x1	SW14	56
TH035	M10x1	SW14	47
TH047	M10x1	SW17	46
TH051	¼	SW17	49
TH055	M10x1	SW17	49
TH083	M10x1	SW13	39
TH084	¼"	SW17	40
TH085	½"	SW27	40
TH086	³⁄₈	SW22	40
TH087	M10x1	SW17	40
TH088	¼"	SW17	40
TH090	M10x1	SW14	46

Bauart-schlüssel	G	Key width (SW)	Insertion depth (E) mm
TH 5.2 mm with clamping screw			
TH001	½	SW24	42
TH002	³⁄₈	SW24	42
TH003	½	SW24	56
TH004	½	SW24	53
TH005	½	SW 30	52
TH040	½	SW24	46
TH043	³⁄₈	SW24	57
TH044	½	SW24	57
TH046	M10x1	SW17	46
TH048	¼	SW17	49
TH054	M10x1	SW17	49
TH067	¼	SW17	59
TH068	¼	SW17	69
TH077	M10x1	SW13	39
TH079	½	SW24	39
TH081	³⁄₈	SW17	39
TH089	³⁄₈	SW22	53
TH091	M10x1	SW14	46

IDENTIFICATION OF THE MEASURING POINT TYPE

Immersion sleeves with M12 external threads

for TH 6
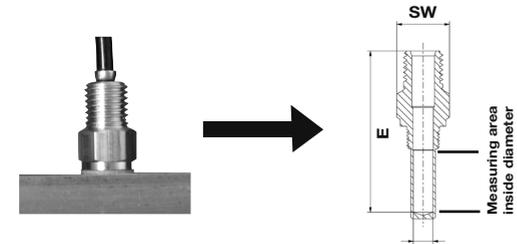
Immersion sleeves with clamping screw

for TH 5,2/TH 5,0
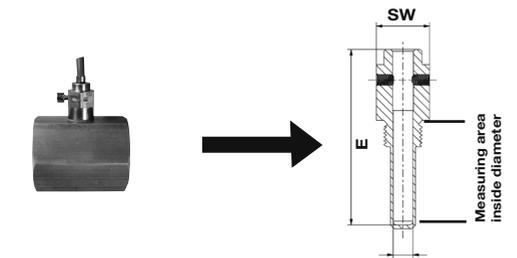
Measuring point type	G	Key width (SW)	Insertion depth (E) mm
DS 6	6,2 mm	SW 14 *	> 51
EN 1434	3/8	SW 14 *	< 46 (up to DN 25)

*Hexagon only on flow sensor

For comparison:

Representation of two direct measuring points of type DS6 or according to EN1434 (always with supply ball valve)

M12x1,5

M10x1

ø5,6 $^{+0,5}_{-0,0}$
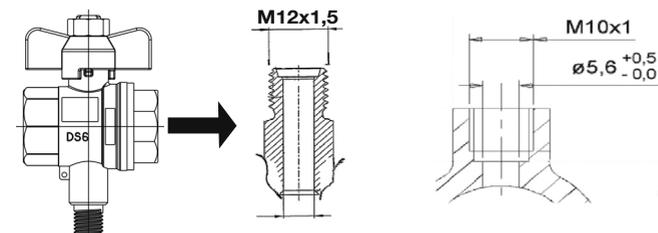
INSTALLATION INSTRUCTIONS
Temperature sensor DS 6

INSTALLATION NOTE

The use of the heat meter temperature sensor is only permitted in conjunction with corresponding temperature sensor measuring points approved for the sensor. Both measuring points of a heat meter must be designed in the same way. A combination of immersion sleeve and direct measurement is forbidden.

INSTALLATION OF A TEMPERATURE SENSOR
For heat/combi meters:
Insert the temperature sensor (red) into the supply measuring point and the temperature sensor (blue) into the return measuring point on the EAT.

For cold meters:
Insert the temperature sensor (blue) into the supply measuring point (cold pipe) and the temperature sensor (red) into the return measuring point on the EAT.

TEMPERATURE SENSOR IN IMMERSION SLEEVE (FIG. 1)

• Check the immersion sleeve according to the installation and handover report, and mark with the supplied label (also see document in inner section).
• Insert the temperature sensor completely into the immersion sleeve, screw in and tighten by hand.

DIRECT MEASUREMENT TEMPERATURE SENSOR DS 6 (FIG. 2)
Unscrew the dummy caps of the temperature sensor measuring points (make sure that the ball valves are closed) and remove them along with seals.

• Screw in the temperature sensor and tighten to 5-8 Nm.

Fig. 1

Fig. 2

INSTALLATION INSTRUCTIONS
Temperature sensor AGFW according to EN 1434

INSTALLATION NOTE

See installation note above (temperature sensor DS 6)

INSTALLATION OF A TEMPERATURE SENSOR

For heat/combi meters:
Insert the temperature sensor (red) into the supply measuring point and the temperature sensor (blue) into the return measuring point.

For cold meters:
Insert the temperature sensor (blue) into the supply measuring point (cold pipe) and the temperature sensor (red) into the return measuring point.

DIRECT MEASUREMENT TEMPERATURE SENSOR AGFW EN 1434 (FIG. 1)

Unscrew the dummy plugs of the temperature sensor measuring points (make sure that the ball valves are closed) and remove them along with seals.

• Insert the temperature sensor into the measuring points as described above with a new seal.
• Screw in the temperature sensor and tighten to 10 Nm.
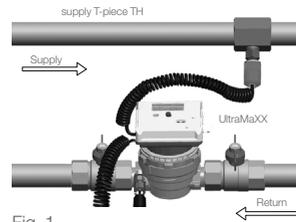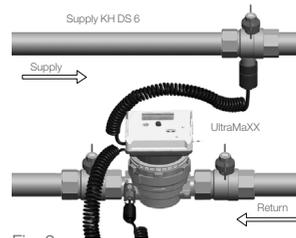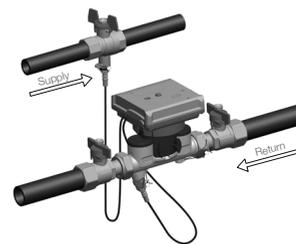
Fig. 1

INSTALLATION INSTRUCTIONS
Temperature sensor Ø 5,0 or 5,2 mm

INSTALLATION NOTE

The use of the heat meter temperature sensor is only permitted in conjunction with corresponding temperature sensor measuring points approved for the sensor. Both measuring points of a heat meter must be designed in the same way. A combination of immersion sleeve and direct measurement is forbidden.

INSTALLATION OF A TEMPERATURE SENSOR

For heat/combi meters:
Insert the temperature sensor (red) into the supply measuring point and the temperature sensor (blue) into the return measuring point.

For cold meters:
Insert the temperature sensor (blue) into the supply measuring point (cold pipe) and the temperature sensor (red) into the return measuring point.

TEMPERATURE SENSOR IN IMMERSION SLEEVE

• Check the conformity of the nominal diameters of the temperature sensor and immersion sleeves.
• Check the immersion sleeve according to the installation and handover report, and mark with the supplied label (also see document in inner section).
• Attach the temperature sensor in the supply and return lines according to the respective attachment type.

Immersion sleeves with capstan screws for sensors Ø 5.0 and 5.2 mm (Fig. 1)
• Insert the sensor completely into the immersion sleeve
• Tighten the capstan screw by hand.

Immersion sleeve with M 10x1 internal thread for sensors Ø 5.0 and 5.2 mm (Fig. 2)
• 1. Insert the sensor into the plastic screw-in connection (light grey), place the two upper flanges of the sensor in the two ribs of the screw-in connection
• 2. Close the screw-in connection
• 3. Tighten the sensor with screw-in connection in the immersion sleeve by hand.

DIRECT MEASUREMENT TEMPERATURE SENSOR
ACCORDING TO EN 1434, CONVERSION OF INTEGRAL-V ULTRALITE Ø 5.2 MM TO DIRECT MEASUREMENT (FIG. 3)

⚠ **Caution:**
Before conversion, block off the installation point, release pressure and drain.
• 1. Unscrew the immersion sleeve from the Integral-V and remove it along with the seal.
• 2. Screw in the direct measuring adapter with the Cu seal supplied and tighten to 13 Nm.
• 3. Attach information signs for direct measurement (red) to both sensors.

Fig. 1

Fig. 2

Fig. 3

Installing the sensors (Fig. 4)

⚠ **Caution:** : Before installing the sensors, block off the installation point, release pressure and drain.
• 1. Attach an O-ring from the set supplied to the installation aid.
• 2. Insert the O-ring using the installation aid into the installation point location according to DIN EN 1434 with a twisting motion.
• 3. Use the other end of the installation aid to finally position the O-ring in the installation point.
• 4. Position the brass screw-in connection correctly on the temperature sensor using the loosely inserted grooved pin.
• 5. Place the end of the installation aid over the temperature sensor sleeve and insert this as far as it will go (to determine the sensor installation length). Align the brass screw-in connection flush with the installation aid and press in the grooved pin (e.g. with a pair of pliers) to lock the temperature sensor sleeve.
• 6. Push the temperature sensor with the screw-in connection through the O-ring into the installation point right up to the gasket and tighten by hand. Tightening torque 3 to 5 Nm.
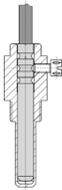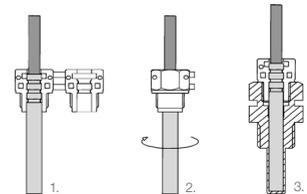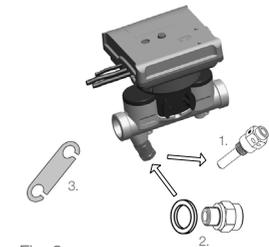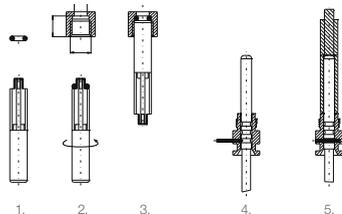
Fig. 4

COMMISSIONING AND SEALING

COMMISSIONING (FIG. 1)

Open the ball valves / shut-off valves. Switch on the circulation pump. Check for leaks.

PLAUSIBILITY CHECK (FIG. 1)

Activate the unit display by pressing the push-button. Perform the LCD test. Check the values for flow rate, supply temperature and return temperature for plausibility, check the error display (see operating instructions).

Attention: To document the plausibility check, please fill in the installation handover report (removable page in inner section).

SEALING MK (FIG. 2)

Secure the head ring with a red plug-in seal (barb to the centre of the housing) and the supply and return temperature sensors with a sealing sleeve, to prevent unauthorised deinstallation. Alternatively, the temperature sensors can be secured with the supplied wire and metal snap-on seal. If necessary in the event of incorrect installation, break open the seal with a screwdriver, and secure again with a metal snap-on seal after the installation has been corrected.

SEALING V (FIG. 3)

Secure the screw-in connection of the meter and the supply and return temperature sensor with wire and metal snap-on seal, to prevent unauthorised deinstallation.

UNIT INSTALLATION (FIG. 4)

Place the unit on the flow rate sensor/wall mounting bracket and press down until it locks into place.
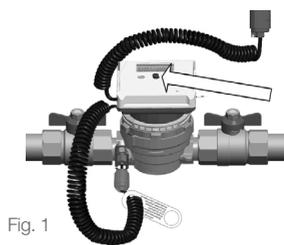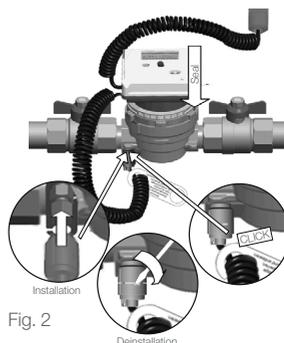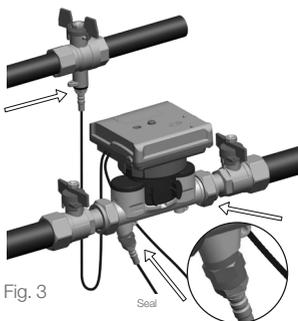
Length of connecting cable for flow rate sensor/unit: 0.5 m

Fig. 1

Fig. 2

Installation
Deinstallation
CLICK
Seal

Fig. 3
Seal

Fig. 4
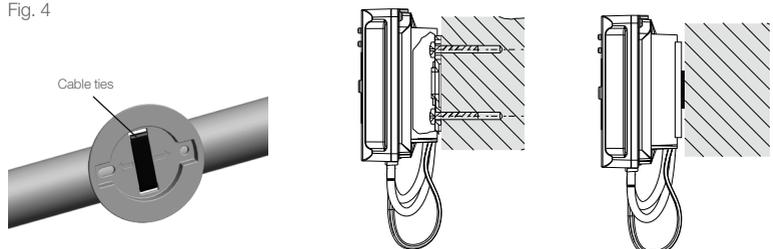
Cable ties
Wall mounting bracket on a pipe

Unit on the wall mounting bracket on the wall

Unit on wall mounting bracket with magnet in cabinet

CONNECTION DIAGRAM
Options

Small calculator

Large calculator

Remote display of energy / volume
M-BUS
blue white black red
white brown
V E
M-BUS

86 87 88 89 90 91 92 93 24 25
+ − + − + − + −
1 2 3 4
M-BUS
M-Bus 4 water meter

86 87 88 89 24 25
+ − + −
1 2
M-BUS
M-BUS with power supply 2 water meters
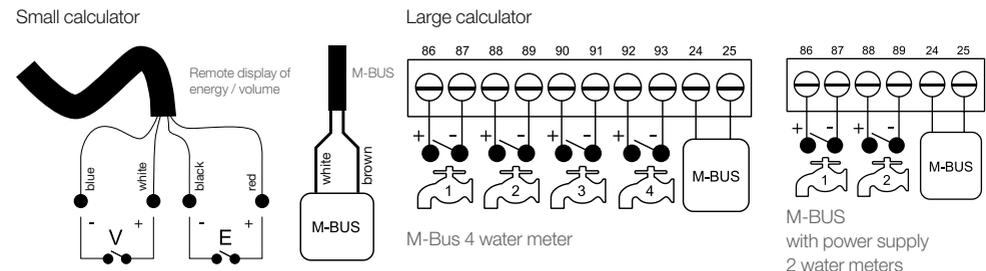
Large calculator:
Remove the user seal on the cover screw. Expose the screw terminals by opening the cover (screw). Connect the cable according to the diagram and secure strain-free. Break the corresponding cable holes out of the cover. Screw on the cover and secure the screw with a new user seal.

SPECIFICATIONS

Input specification for water meter	
Pulse value	1 / 2.5 / 10 / 25 / 100 or 250 l / pulse (programmable via push-button, same pulse value for all connected water meters)
Scanning voltage	typically 3 V
Pulse detection	Contact closed R < 500 Ω / contact open R > 1 MΩ
Pulse length/pause	> 3 s each
Cable length	max. 10 m

Specification of the M-Bus interface:	
Standard reference	EN 13757-3
Baud rate / Protocol	300 baud / 2.400 baud / variable Protocol, low-byte-first
Default data	Manufacturer number, energy, volume, power, flow rate, temperatures (supply, return, difference), operating time, date and time, optional volume water meter 1...4, firmware version, software version
18 key date data sets	Energy, volume, optional maximum values of power, flow rate and supply temperature with time stamp, volume of water meter 1...4

Specification for pulse output for energy and volume remote display*	
Scanning voltage	max. 30 V, min. 2,5 V
Max. permissible	20 mA
Max. internal resistance Ron	100 Ω (during remote display pulse)
Pulse width	120 ms
Pulse value	Energy: 1 KWh (or 10 MJ), Volume: 10 l
Pulse characteristics	Pull-Down circuit

*) In the factory option "Combi" for use in combined heat and cold systems, the pulse output labelled "V" is used as a cold energy pulse (1 kWh).

INSTRUCTION MANUAL

EXPLANATION OF THE DISPLAYS

1. LCD level consumption data

1.1 Cumulative energy in kWh, MWh or GJ

1.2 Cumulative volume in m3

1.3 Segment test (function test of all display segments)

2. LCD level key date values

The UltraMaXX stores the respective cumulative end-of-month values for energy and volume for the last 18 months. These values are shown in the 2nd LCD level. The display starts with the month-end value of the cumulative energy of the previous month in relation to the reading date, and then goes one month back into the past every 2 seconds until the 18th month value is reached.
From the 18th month value, the display then jumps back to the
1st display value (previous month).

Month — Year
Value — Unit

Month — Year
Value — Unit

2.1 / 2.1.1 Month-end value energy previous month
2.1.2 Month-end value volume previous month
2.2 / 2.2.1 Month-end value energy 2 months back
2.2.2 Month-end value volume 2 months back
2.3 / 2.3.1 Month-end value energy 3 months back
2.3.2 Month-end value volume 3 months back
2.4 - 2.17 see above
2.18 / 2.18.1 Month-end value energy 18 months back
2.18.2 Month-end value volume 18 months back

3. LCD level service data

3.1 current flow in m³/h.
3.2 current power in kW
3.3 current supply temperature in °C.
3.4 current return temperature in °C.
3.5 current temperature difference in °C.
3.6 Time in error state in hours (h)
3.7 Operating time
3.8 Time with excessive flow in hours (h)
3.9 Error code:

Years — Days (d)

1 - Error supply sensor >> Check supply sensor including cable for integrity and correct installation

2 - Error return sensor >> Check return sensor including cable for integrity and correct installation

3 - Temperature sensor reversed >> Check correct installation of temperature sensor

4 - Error A/D converter >> Replace device with new device

5 - Return flow in flow rate sensor >> Check correct installation (flow direction) of the flow rate sensor and/or the EATs

6 - Air in flow rate sensor >> Flush air from flow rate sensor with high flow or no communication with flow rate sensor. Cable damaged >> Replace device with new device

7 - Current flow rate above maximum flow rate >> Reduce flow rate in flow rate sensor

8 - Error electronics >> Replace device with new device

In the event of multiple errors, these are displayed simultaneously (e.g. 12---6--)

3.10 Firmware version

### OPTIONAL DISPLAYS (DEPENDING ON OPTIONS ORDERED)

1.4 Cumulative cold energy for combi meters, heat energy is displayed in 1.1
1.5 Energy year-end key date
1.6 Cold energy year-end key date for combi meters
1.7 Volume water meter 1
1.8 Volume water meter 2
1.9 Volume water meter 3
1.10 Volume water meter 4
1.11 Threshold value tariff 1
1.12 Energy above threshold value 1
1.13 Volume above threshold value 1
1.14 Threshold value tariff 2
1.15 Energy above threshold value 2
1.16 Volume above threshold
value 2 x = 1-18 months with key date function
2.x.3 Month-end value cold energy in combi meters x months back
2.x.4 Volume water meter 1 x months back
2.x.5 Volume water meter 2 x months back
2.x.6 Volume water meter 3 x months back
2.x.7 Volume water meter 4 x months back
2.x.8 Maximum value power x months back
2.x.8.1 Value
2.x.8.2 Time
2.x.8.3 Date
2.x.9 Maximum value flow rate x months back
2.x.9.1 Value
2.x.9.2 Time
2.x.9.3 Date
2.x.10 Maximum value temperature x months back
2.x.10.1 Value
2.x.10.2 Time
2.x.10.3 Date
3.11 Maximum value power
3.11.1 alue + time
3.11.2 Value + day
3.11.3 Value + year
3.12 Maximalwert des Durchflusses
3.12.1 Wert + Uhrzeit
3.12.2 Wert + Tag
3.12.3 Wert + Jahr
3.13 Maximum value of temperature
3.13.1 Value + time
3.13.2 Value + day
3.13.3 Value + year
3.14 Threshold value temperature difference for combi meter
3.15 Threshold value supply temperature for combi meter
3.16 Date and time
3.17 M-Bus primary address
3.18 M-Bus secondary address
3.19 Baud rate communication interfaces
3.20 Water meter pulse value
3.21 Water meter number

DISPLAY

A B C | D E | F | G
N →

M | L K | J | I | H
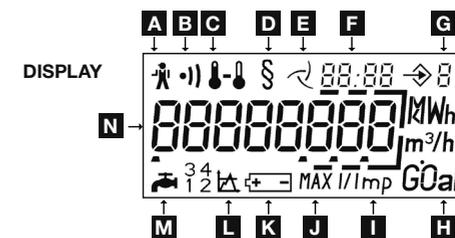
A Service figure:
- Energy measurement stopped

B Warning US signal level:
- Low signal level

C Temperatures:
- permanent: Tv, Tr or T
- flashing. error

D Metrology indicator:
- Display value for business traffic allowed (country dependent)

E Flow rate indicator:
- permanent: flow rate
- flashing: no flow

F Date and time stamp:
- e.g. key date values, max. values

G Display level:
- Currently selecte display level

H Units:
- Physical unit

I Pulse value:
- External water meters

J Maximum value:
- Power, flow rate, supply T

K Battery symbol:
- Check calibration validity

L Tariff function

M External water meters:
- Number of water meters connected

N Main display 8 digits:
- Digit size: 6.5 x 3.3 mm

POSSIBLE DISPLAYS IN THE EVENT OF MALFUNCTIONS

When the service figure is shown on the display, the energy calculation is interrupted. Possible errors are indicated in the warning messages display code (3.9).

Meter in unprogrammed state. Replace device with a new device.

No value for current flow rate (3.1). See warning message in the display 3.9.

No value for current power (3.2). See warning message in the display 3.9.

No value for current supply temperature, return temperature or temperature difference (3.3, 3.4 or 3.5). See warning message in the display 3.9.
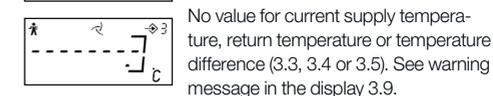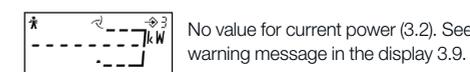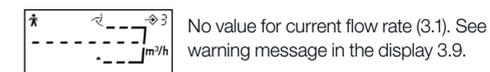
ARRANGEMENT AND OPERATION OF THE DISPLAY

3rd level: service data

2nd level: key date values

1. level: consumption data

Approx. 4 minutes after the last press of the button, the display of the meter switches off.
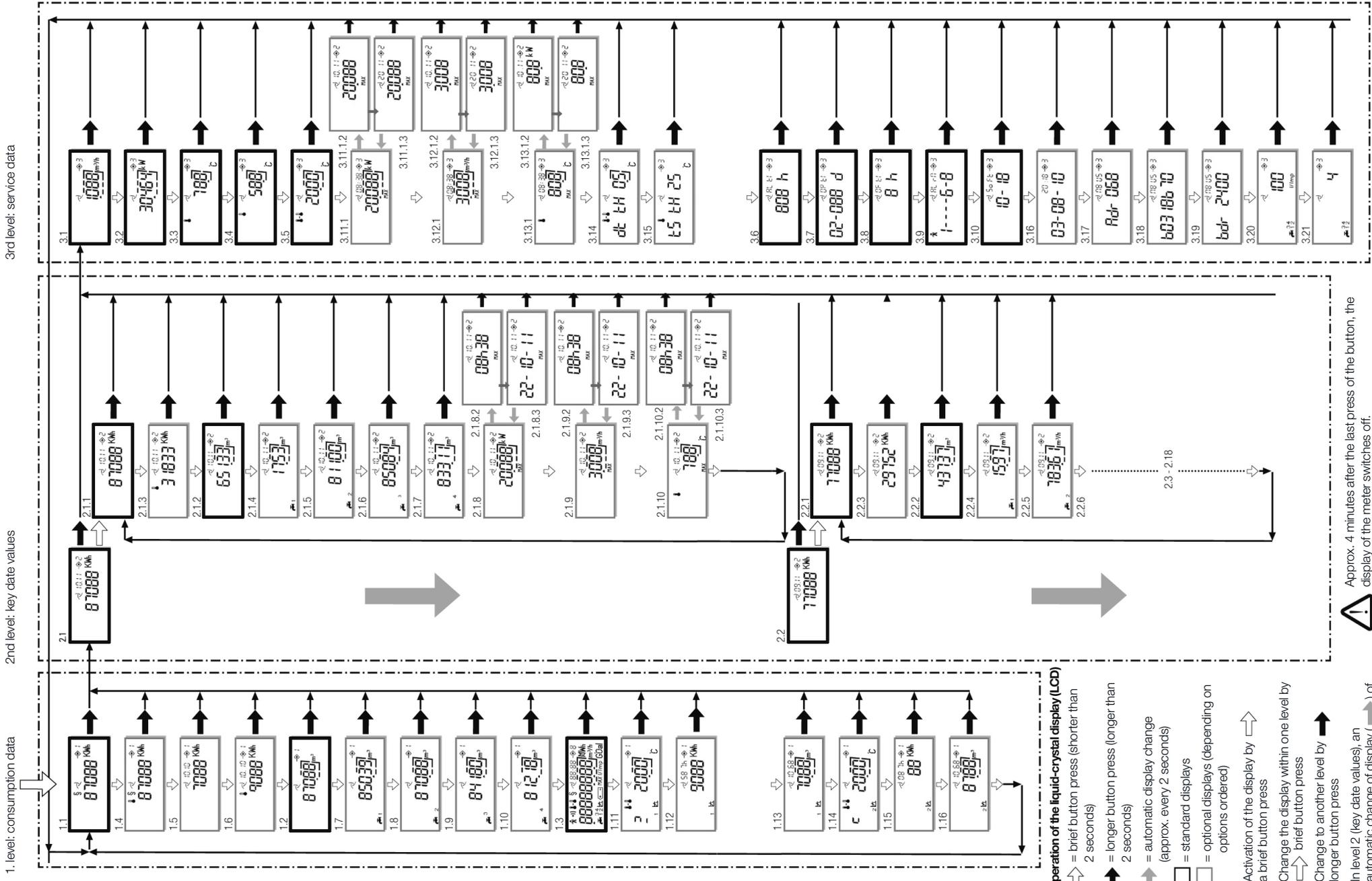
Operation of the liquid-crystal display (LCD)

⇧ = brief button press (shorter than 2 seconds)

⬆ = longer button press (longer than 2 seconds)

⬆ = automatic display change (approx. every 2 seconds)

☐☐ = standard displays

☐☐ = optional displays (depending on options ordered)

- Activation of the display by a brief button press

- Change the display within one level by ⇧ brief button press

- Change to another level by ⬆ longer button press

- In level 2 (key date values), an automatic change of display (⬆) of the key dates begins, starting with the energy value of the previous month.

A short button press ⇧ while a certain key date is displayed will display further values for that key date.

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OPTION M-BUS

The optional M-Bus option allows the UltraMaXX to be connected to a wired M-Bus remote reading system. The communication parameters primary address, secondary address and baud rate can be displayed via the liquid-crystal display (LCD). The parameters can be set by authorised service personnel using the service software via the optical interface / M-Bus option, or set directly via the buttons on the UltraMaXX.

Default factory setting:
Primary address: 0
Secondary address: Meter
number baud rate: 2400 baud

Setting the M-Bus parameters using the buttons on the device:

1) Remove the user seal above button 2
2) Use button 1 to display the value to be adjusted must then be selected
    Primary address: Display 3.17
    Secondary address: Display 3.18
    Baud rate: Display 3.19

Button 1

3) Press button 2 for longer than 2 seconds: The display or the right digit in the display flashes.

User seal

4) Set the desired value by pressing button
5) Press button 2: digit one position further to the left flashes (only for primary/secondary address).
6) Repeat procedure 4.) and 5.) until the desired value is set. Possible settings:
    Primary address: 1 - 250
    Secondary address: 00000001-99999999
    Baud rate: 300, 2400 baud
7) Press button 2 for longer than 2 seconds to exit the settings mode.
8) Secure button 2 against manipulation by means of a new user seal.

OPTION WATER METER INPUTS

The UltraMaXX offers the option of connecting up to 4 water meters with a remote indicator output at the unit. The meter readings of the water meters (displays 1.7 / 1.8 / 1.9 / 1.10), including the key date values (displays 2.X.4 / 2.X.5 / 2.X.6 / 2.X.7), can be read via the display, M-Bus or optical interface on the UltraMaXX. The meter readings, the number of water meters and the pulse value of the water meters can be set by authorised service personnel using the service software via the optical interface / M-Bus option, or set directly via the buttons on the UltraMaXX.

Programming water meter inputs:
1) Remove the user seal above button 2

Pulse value water meter
2) Use button 1 to select the water meter pulse value display (3.20)
3) Press button 2 for longer than 2 seconds >> display flashes
4) Use button 1 to set the desired value
5) Press button 2 for longer than 2 seconds to exit the settings mode.

Number of water meters
6) Use button 1 to select the number of water meters display (3.21)
7) Press button 2 for longer than 2 seconds >> display flashes.
8) Use button 1 to set the desired value (1- 4).
9) Press button 2 for longer than 2 seconds to exit the settings mode.

Meter reading of water meter
10) Use button 1 to select the volume display (1.7).
11) Press button 2 for longer than 2 seconds: the right digit in the display flashes.
12) Set the desired value by pressing button 1.
13) Press button 2: the digit one position further to the left flashes
14) Repeat procedure 12.) and 13.) until the desired value is set.
15) Press button 2 for longer than 2 seconds to exit the settings mode.
16) If required, repeat steps 10 to 15 for additional water meters.
    Water meter 2 >> display 1.8
    Water meter 3 >> display 1.9
    Water meter 4 >> display 1.10
17) Secure button 2 against manipulation by means of a new user seal.

OPTION MAXIMUM VALUES

These optional displays show the current monthly maximum values for power (3.11), flow rate (3.12) and supply temperature (3.13) with time stamp. 18 maximum monthly values are stored internally for each item, which can be read out via M-Bus, optical interface or the LCD display at the key date level (2.X.8 / 2.X.9 / 2.X.10). The period duration for determining the maximum values is 60 minutes. The period duration can be varied via M-Bus or the optical interface with the help of the service software, in a range from 1 min - 1440 min (= 1 day).

OPTION TARIFF FUNCTION (NOT AVAILABLE FOR COMBI METERS)

With the optional tariff function, the values for energy (1.12 / 1.14) and volume (1.13 / 1.14) are shown in additional displays, under previously defined operating conditions. These operating conditions can be defined via one of the following parameters:

- Temperature difference - Flow rate
- Supply temperature   - Power
- Return temperature   - Time window

These parameters are programmed in the factory, and can be changed by authorised service personnel using the service software via M-Bus or optical interface, if the displays are not marked with the § symbol. It is not possible to adjust the parameters using the buttons on the UltraMaXX.

DESCRIPTION OF THE DISPLAYS: THRESHOLD VAUE TARIFF 1/2

Temperature-type   Value

Condition

Tariff   Unit
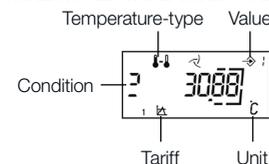
Temperature type:

⊥-⊥   Temperature difference
⊥   Supply temperature
⊥   Return temperature

Tariff:

1 ⊬   Tariff 1
2 ⊬   Tarfif 2

Unit:

°C   Temperature
m³/h   Flow rate
kW   Power

Bedingung:

⊏   less than
⊐   greater than / equal to
‾

TIME WINDOW

A time window can be selected as the tariff. The start time (St) end time (En) is represented as follows:

St 08h30   En 08h38

Energy above threshold value ½

Time above/below threshold value in hours (h)

Energy value above/below threshold value

Tariff (1 or 2)

Volume above threshold value ½

Time above/below threshold value in days

Volume value above/below threshold value

Tariff (1 or 2)

OPTION DATA LOGGER

The UltraMaXX offers the option of saving predetermined parameters at a fixed time interval via 4 parallel data registers. These saved values can be read out by authorised service personnel using the service software via the M-Bus option or via the optical interface. It is not possible to display the values via the LCD display.

Annual logger

For 16 years, up to 6 parameters are stored once a year at 24:00 on a defined day.

Monthly logger

For 48 months, up to 6 parameters are stored at 24:00 on the last day of the month.

Daily logger

For 460 days, up to 6 parameters are stored daily at 24:00.

Programmable logger

Up to 6 parameters are stored for 1500 steps, with a programmable time ranging from 1 minute up to 7 days. The time and the internal error messages are also saved for all loggers. If the maximum number of stored values of a logger is reached, the oldest value is discarded and the new value is stored (rolling circulation) for each subsequent scheduled storage.

Parameters that can be stored

- Volume water meter 1
- Volume water meter 2
- Volume water meter 3
- Volume water meter 4
- Volume
- Volume tariff 1
- Volume tariff 2
- Heat energy
- Cold energy
- Current maximum flow rate
- Time of current maximum flow rate
- Current maximum power
- Time of current maximum power
- Current maximum supply temperature
- Time of current maximum supply temperature
- Time tariff 1
- Time tariff 2
- Energy tariff 1
- Energy tariff 2
- Flow rate
- Return temperature
- Supply temperature
- Power

Each data logger can be assigned up to 6 parameters individually. The parameters are programmed by authorised service personnel using the service software via the M-Bus option or via the optical interface.

Itron

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Wasser | Wärme | Systeme