Installation & Maintenance Instructions

Precision Meter VDEW

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1. Safety- and installation tips

The meters are to be used exclusively for measuring electrical energy and must only be operated within the specified technical data.

When installing or changing the meter, the conductor to which the meter is connected must be de-energized. Contact of parts under voltage is extremely dangerous.

Therefore the relevant back-up fuse is to be removed and stored so that other people cannot insert this unnoticed.

Before opening the meter the secondary circuit to the current transformer must definately be short circuited. The high voltage on the current transformer is extremely dangerous and destroys the current transformer.

The local standards, guide lines, regulations and instructions are to be obeyed. Only authorized personnel are permitted to install the electricity meters.

Meters for direct connection are to be fused against short circuits with a back-up fuse of 63A or 100A and meters with a transformer connection in the voltage circuit with ‹ 10A.

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2. Operating elements

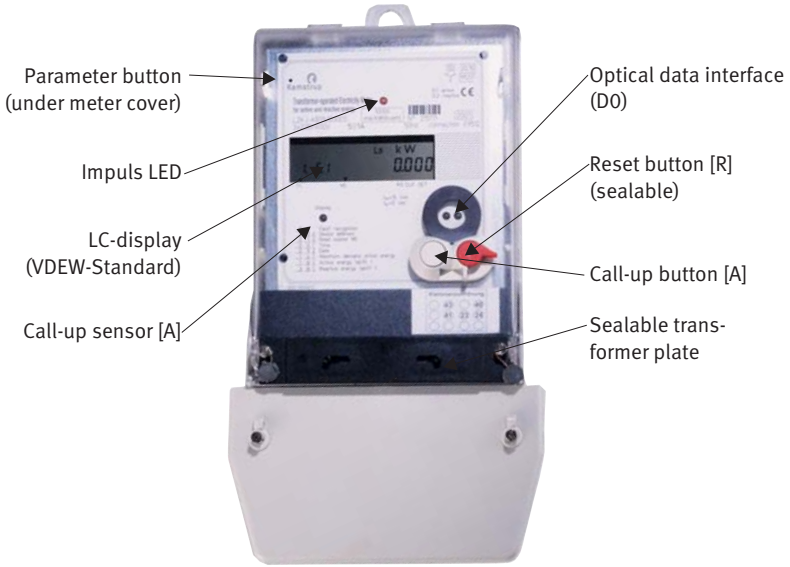
Operation of the meter takes place via the mechanical buttons:

Impuls-LED:
continuously lit-up = no energy consumption or incorrect current flow direction

The call-up sensor/button [A]
is used to activate the display mode and to retrieve specific billing data and the load profile.

The reset button [R]
is used for maximum resetting and also for activating service functions. Since this function is only for the energy supplier this sensor is protected with a sliding cover.

The seals may only be broken by authorized personnel!



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3. LC-Display

The *operating display* represents the current energy import as it was measured from the meter (inductive/capacitive reactive power).

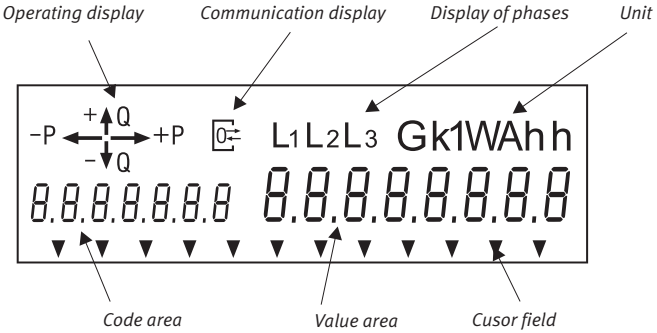
The *communication display* appears when there is communication with the meter via data interfaces (optical, electrical).

The *display of the phases* signalizes the connection of the individual phase voltages. With an incorrect rotating field all of the three symbols flash.

In the *code area* the measuring values are shown on the basis of the EDIS-code.

In the *value area* the measuring values are represented with the corresponding units.

In the *cursor field* the operating conditions of the meters are represented.



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4. EDIS (Energy-Data-Identification-System)

The Energy-Data-Identifications-System EDIS is an identification system, which was primary developed for electricity purposes and is described in the DIN 43863-3. It serves to identify measured values and data which through this are clearly identifiable independent of the device and producer. In the following list common codes are described which are often used with EMH electricity meters.

Measured variables

1. Active consumption + (import)

2. Active consumption - (export)

3. Reactive consumption + (import)

4. Reactive consumption - (export)

5. Reactive consumption Q I

..

8. Reactive consumption Q IV

Measured types

x. 2. Cumulative
(sum of the reset maxima)

x. 4. Runtime measured period + average power of current measured period

x. 5. Average power of the last measured period (load profile value)

x. 6. Maximum + Time stamp
(time, date, season)

x. 8. Energy

Tariffs

x. x. n. Tariff, n= 0 .. 4

Pre-values

x. x. x. n. Pre-values, n= 0 .. 99
(referring to the reset counter/register)

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5. Operating the display

For operating the display the following is valid:

Call-up button [A]:

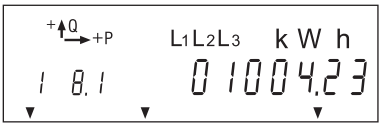
Pressing ‹ 2s:	Switch over to the next value in the list or menu option
Pressing › 2s and ‹ 5s:	Activating the displayed menu option or skipping of pre-values
Pressing › 5s:	Return to the operating mode (scrolling dislpay) from every condition of the display

Reset button [R]:
Except in the set- and display test mode pressing › 2s and ‹ 5s always initiates a reset. An arbitrary long pressing in the set mode always initiates a transfer of the edited digit or value.

5.1. Choose display menu

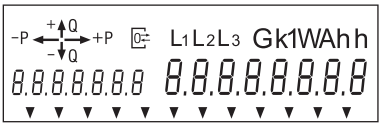
The EDIS-codes represented in the following illustrations and also the information in the value area are examples.

5.1.1. Operation display (scrolling)



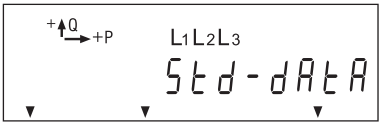
[A] - button short

5.1.2. Display test mode



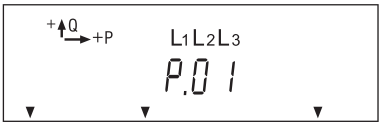
[A] - button short
[R] - button short (cont. the service menu)

5.1.3. Menu option: Call-up list



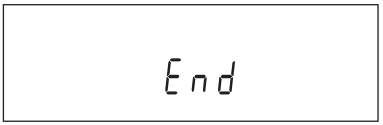
[A] - button short
[A] - button long (cont. in the call-up list)

5.1.4. Menu option: Load profile



[A] - button short
[A] - button long (cont. in the load profile list)

5.1.5. Menu option: End



[A] - button short

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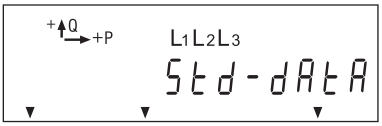
5.2. Menu option call-up list

Tip: *Operation of the [R] - button in the call-up list and the load profile list activates a reset.*

5.2.1. Menu option: Call-up list

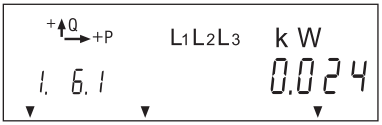


[A] - button long

5.2.2. First register

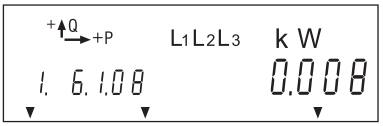
[A] - button short

5.2.3. Next register



[A] - button short

5.2.4. Pre-value

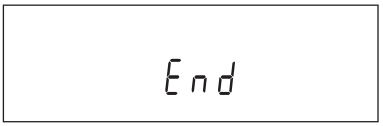


[A] - button short

5.2.5 Repeat position 3 + 4 for all desired values

[A] - button long for the next register
[A] - button short for registers and pre-values

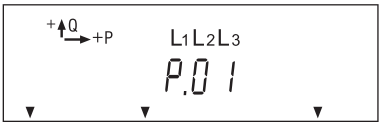
5.2.6. End of the call-up list



[A] - button long (to the operat. display)
[A] - button short (cont. in position. 2)

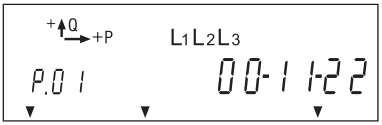
5.3. Menu option load profile list

5.3.1. Menu option: Load profile list



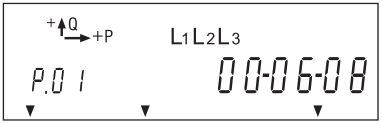
[A] - button long

5.3.2. Last date



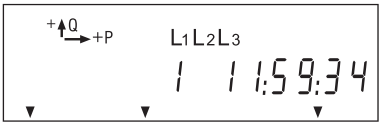
[A] - button short

5.3.3. Date of the previous day



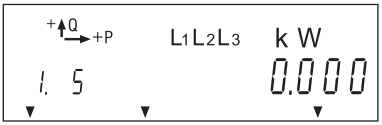
[A] - button long

5.3.4. Time of the first entry



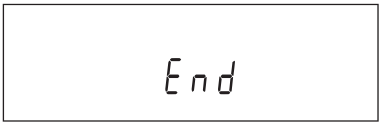
[A] - button short

5.3.5. Next value



[A] - button short

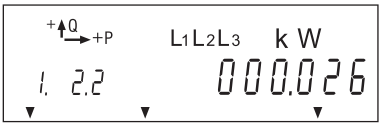
5.3.6. End of the load profile list



[A] - button short (cont. in position 4)
[A] - button long

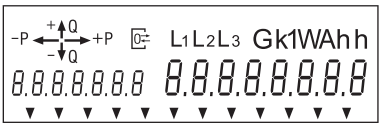
5.4. Choose service menu

5.4.1. Operating display



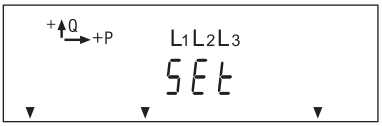
[A] - button

5.4.2. Display test mode



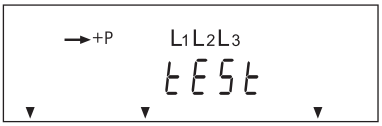
[R] - button short

5.4.3. Menu option: Set mode



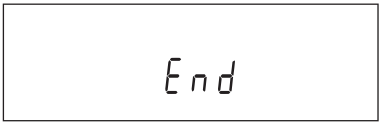
[A] - button short
[A] - button long (cont. in the set mode)

5.4.4. Menu option: Test mode



[A] - button short
[A] - button long (cont. in the test mode)

5.4.5. Menu option: End



[A] - button short

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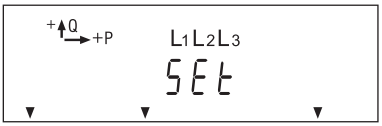
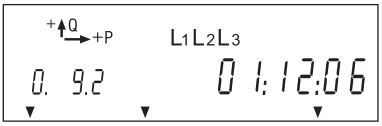
5.5. Menu option set mode

5.5.1. Menu option: Set mode



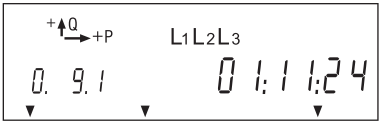
[A] - button long

5.5.2. First set value



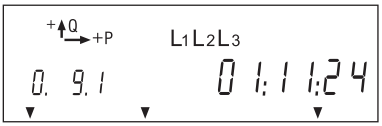
[A] - button short

5.5.3. Next value



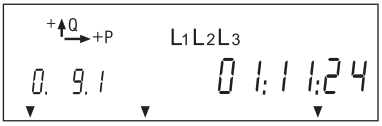
[A] - button short

5.5.4. First digit flashes



[A] - button short

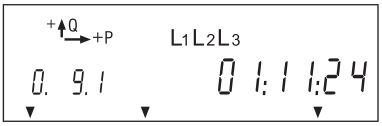
5.5.5. Increase digit by 1



[A] - button short

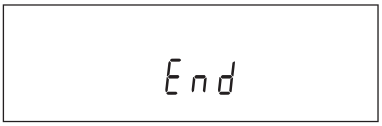
5.5.6. Repeat positions 4 + 5 for further digits

5.5.7. All digit flash



[A] - button short (maintain old data)
[R] - button long (save new value)

5.5.8. End of the set mode

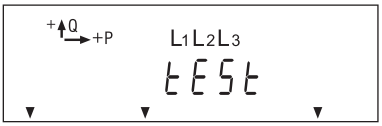


[A] - button short (cont. in position 2)
[A] - button long (to the operat. display)

5.6. Menu option test mode

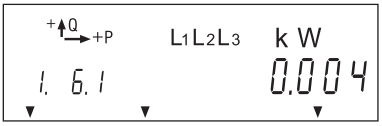
Tip: *In the test mode the energy registers are displayed with a higher digitness.*

5.6.1. Menu option: Test mode



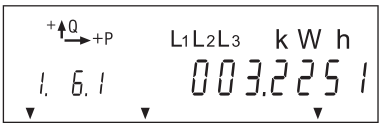
[A] - button long

5.6.2. First value



[A] - button short

5.6.3. Next values



[A] - button short

5.6.4. Repeat postition 3 for desired values

Repeat postition 3 for desired values

6. Wiring diagrams

You will find the valid wiring diagram on the inside of the terminal cover and also on the delivery documents.

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7. Contact

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