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Information

1.1

The meter has different display menus, and menu activation is done by using a magnet. The magnet could be the optical IR interface head.

It is important to make sure that the meter is installed with the best possible radio performance to achieve maximum battery lifetime on the meter. If the meter is installed in poor radio conditions, the meter battery lifetime is reduced.

There are 2 ways to activate the meter radio:
1 Activation with water flow
2 Activation with in-display menu

Installation of the external antenna

2.1

The NB-IoT antenna is delivered with the meter. It must be installed before meter commissioning.

Push the antenna into the meter

Push the sealing clasps into the meter

Antenna is mounted

Installation of the external antenna

2.2

Make sure that there is no gap between the antenna and the blue ring, and that the antenna clicks into place.

Click

Click

Radio activation with water flow

3.1

Meter radio activation with water flow

Display with no flow

Radio activation with water flow

3.2

When water runs through the meter, the radio automatically turns ON.

Afterwards the meter automatically performs a network "CALL". This network "CALL" may take up to one minute. The meter writes "done" in the lower left corner if the connection is successful.

If "done" is not written in the display, see "Network performance check".

Radio activation with in-display menu

3.3

1 - 2 - 3 sec

Activate the menu by holding a magnet over the meter's optical IR interface for 3 seconds. When activated, all the segments in the display are shown.



Radio activation with in-display menu

3.4

Navigation icons

Navigate to **"dont CALL"** by placing the magnet on the meter's optical IR interface for 1 second.

"dont CALL" starts flashing after 5 seconds.

1 second

Activate **"do CALL"** by placing the magnet over the optical IR interface for 1 second.

1 second

Radio activation with in-display menu

3.5

Navigation icons

The meter returns to the legal volume display and performs a network call.

This can take several minutes.

5 sec

The meter shows **"done"** in the lower left corner when the connection is successful.

Network performance check

4.1

Navigation icons

During meter commissioning, it is important to check the network performance by following these steps:

If the meter display does not write "done" in display during commissioning: check the communication status in the in-display menu **"no49"**.

Network performance check

4.2

Navigation icons

Typical status codes during installation:

- 255: No call/connection tried yet
- 0: Transmission success
- 1: Awaiting registration on network
- 3: Awaiting acknowledgment
- 7: Transmission success, but not all data delivered
- 10: Transmission pending
- 33: Connection pending

Network performance check

4.3

Navigation icons

Check the radio link quality status in menu **"no47"**.

The second last digit [9] shows the network connection:

- 9: Connected to the NB-IoT network
- 0: Not connected to the NB-IoT network

Network performance check

4.4

Navigation icons

The last digit shows the quality of the connection if the connection is achievable:

- 0: Poor
- 1: Weak
- 2: Medium
- 3: Good
- 4: Excellent

If the last digit is 1 or lower = Connection is NOT OK.

4 = Excellent	} Acceptable
3 = Good	
2 = Medium	
1 = Weak	} Unacceptable, check antenna connection
0 = Poor	

NB-IoT network performance

5.1

Navigation icons

It is possible to check the meter's network performance in the meter display. Kamstrup recommends to always check the meter radio performance and to make sure that the performance is at least medium.

It is important to make sure, that the meter is installed with the best possible radio performance to achieve maximum battery lifetime on the meter. If the meter is installed in poor radio conditions, e.g. in a meter well, it is recommended to check the network performance status.