GARO GNM3T-RS485 as DLM meter

DLM = Dynamic Loadbalancing Meter

Installation and Programming Manual (EN)

TABLE OF CONTENT

IMPORTANT INFORMATION

All information in this guide is valid for GARO GNM3T-RS485 (GARO art nr 108740)

Programming of GARO MID-certified energymeter GNM3T-RS485 consists of two parts.
Part 1: System samt CT och UT Ratio settings.
This part is only done once, at the start-up time and the settings can then not be changed.
Part 2: Modbus settings
These settings can be changed as needed.

Warnings

⚠ Make sure the electrical power is off before start of installation process.

⚠ All electrical installation must be performed by an auhorized electrician.
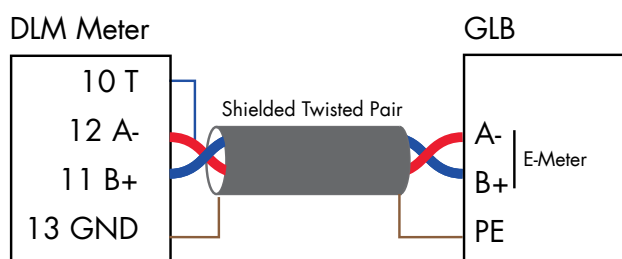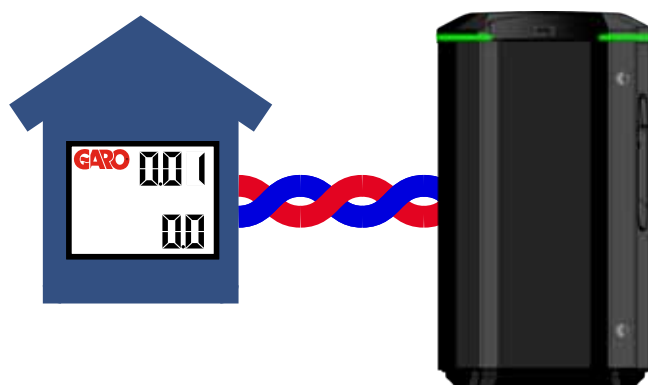
MODBUS CONNECTION

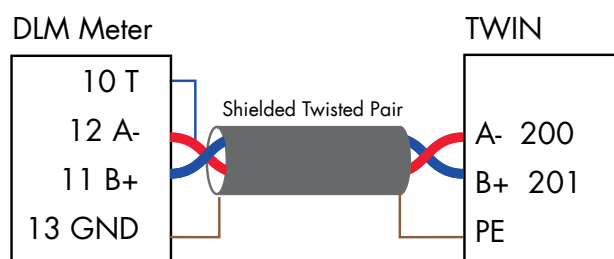Install the DLM meter in the mains cabinet you want to monitor.

Use shielded twisted pair cable between the DLM meter and the wallbox
Suitable cables:
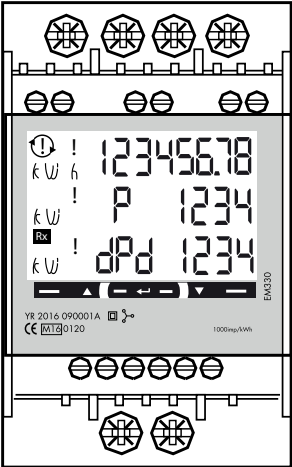CAT5 FTP, CAT5e FTP, CAT6 FTP, ELAKY-S, ELAQBY-S or similar.

DLM Meter		GLB
10 T	Shielded Twisted Pair	
12 A-		A-
11 B+		B+ | E-Meter
13 GND		PE

NOTE! JUMPER 10-12

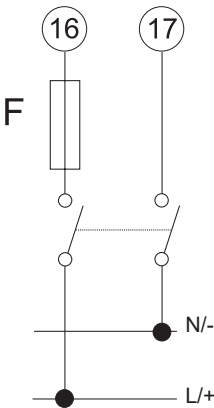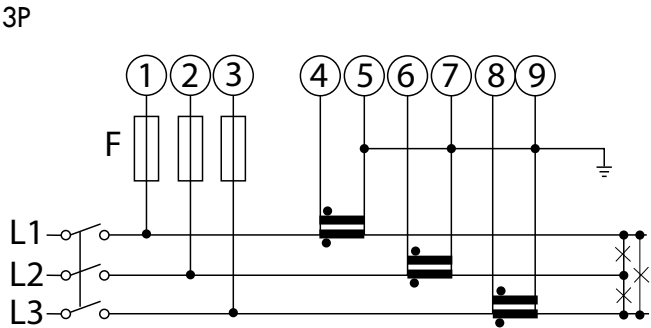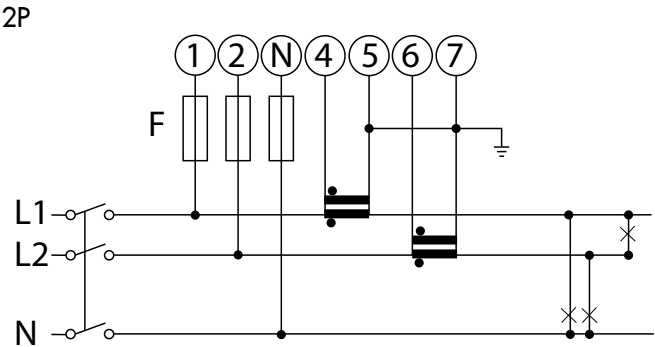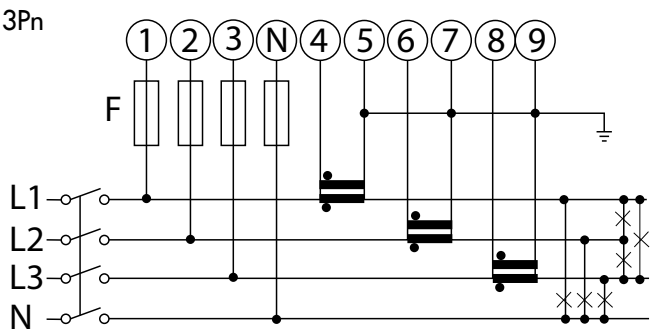| DLM Meter		TWIN
10 T	Shielded Twisted Pair	
12 A-		A- 200
11 B+		B+ 201
13 GND		PE

NOTE! JUMPER 10-12
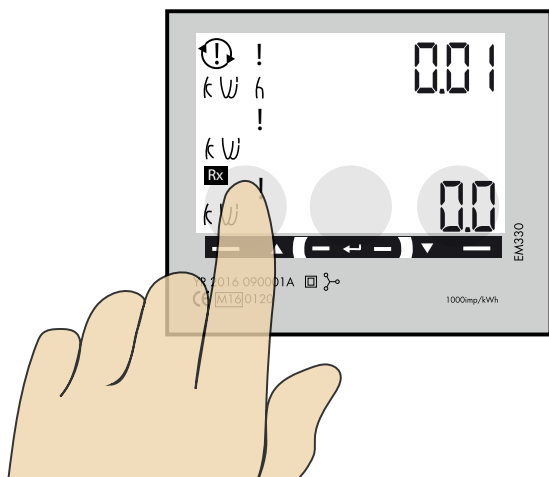
ELECTRICAL CONNECTION POWER CABLES

N, 1, 2, 3: section 4 mm², torque 0.6 Nm
4-17: section 1.5 mm², torque 0.4 Nm

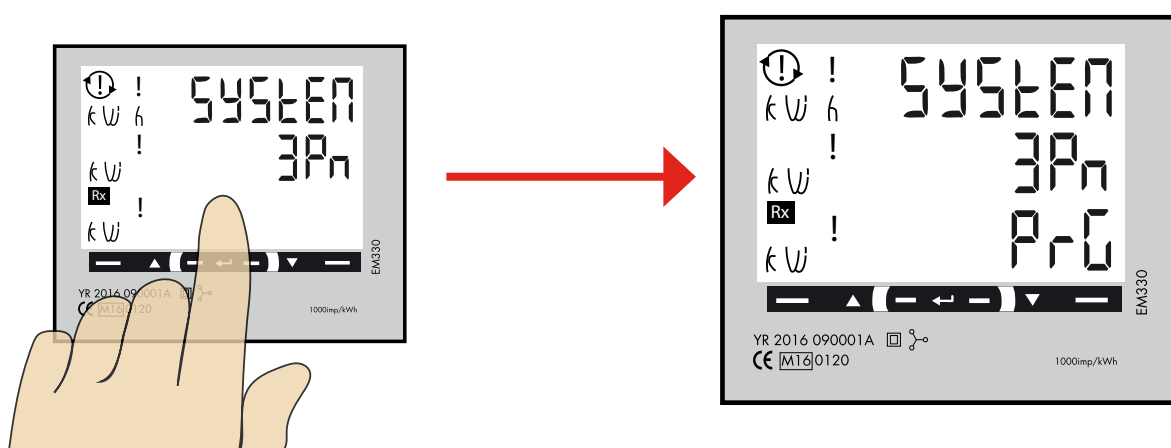# DLM METER SETTINGS

Touch area

1

System and CT Ratio settings
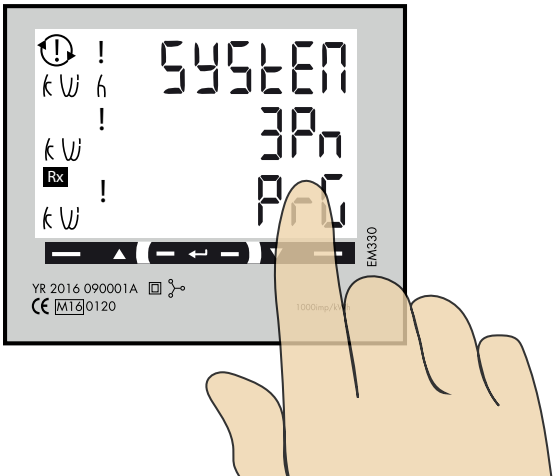
Note: Can only be performed once

This view is shown as startup view before the System and CT ratio settings are done. When the System and CT ratio settings are done, this view is not visible again.
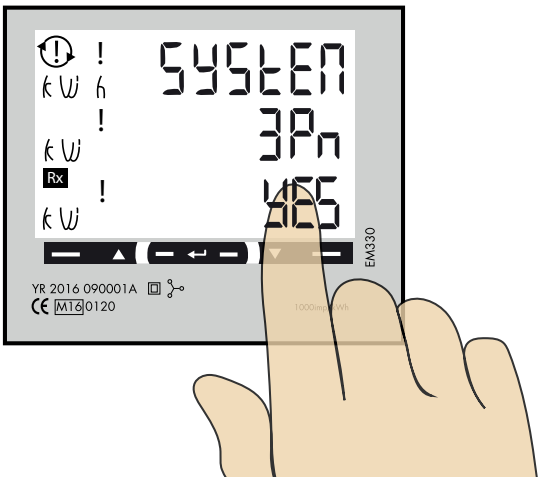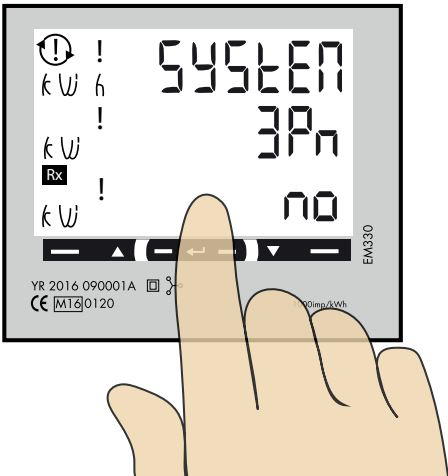
2

System setting

1P = 1phase + N
2P = 2phase + N (3-wire)
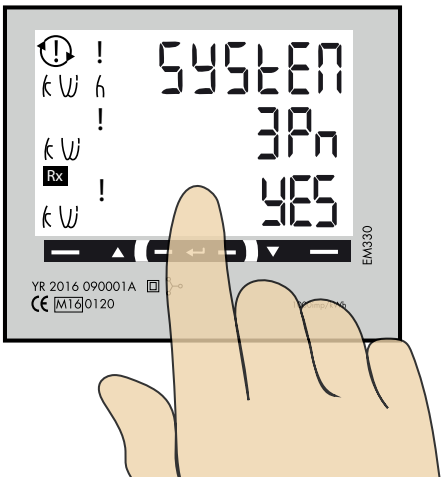3P = 3phase   (3-wire)
3Pn = 3phase + N (4-wire)

System options

1. Click right touch area until wanted value is visible.
2. Press center touch area to confirm and "no" is visible.

3. Click right touch area to change to "YES".
4. Press center touch area to confirm the setting.

3

CT Ratio setting

CT Ratio values (depending on the CT you use):

100/5A   = CT Ratio 20
150/5A   = CT Ratio 30
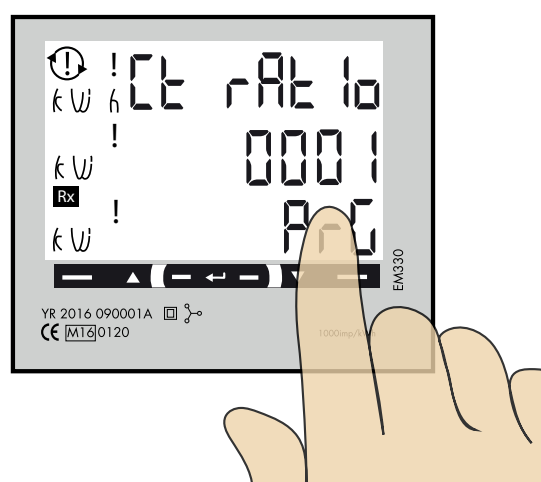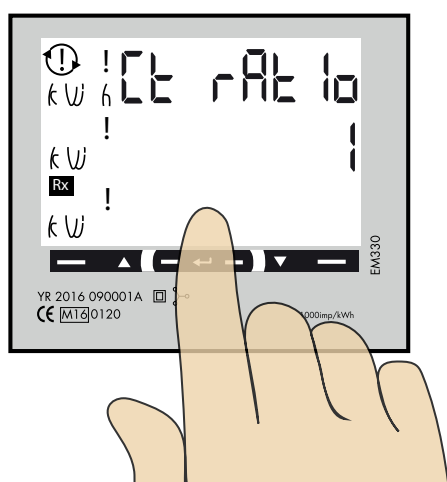250/5A   = CT Ratio 50
400/5A   = CT Ratio 80
750/5A   = CT Ratio 150
800/5A   = CT Ratio 160
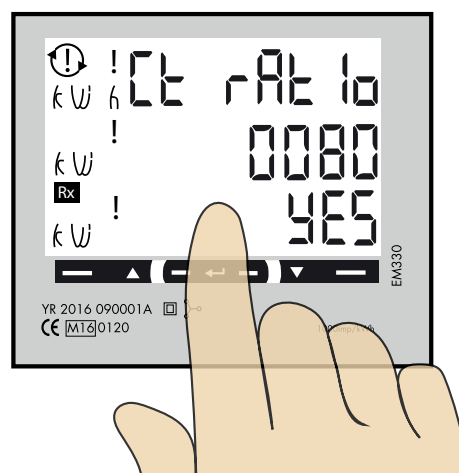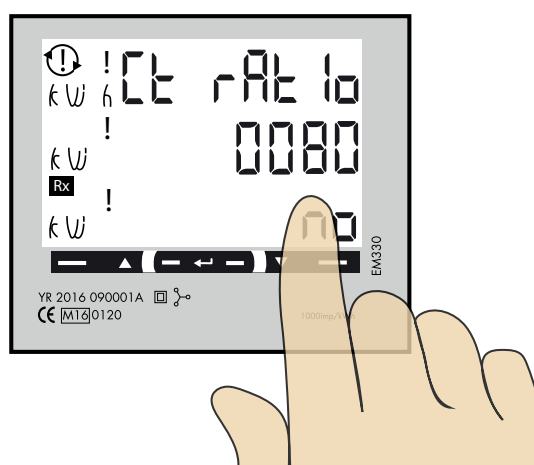1250/5A = CT Ratio 250
1600/5A = CT Ratio 320

1. Press and hold center touch area until PrG is visible.

2. Click right touch area until wanted value is visible. Confirm by press center touch area and next figure starts to blink.
Repeat until the complete value is correct and "no" is visible.

3. Click right touch area to change to "YES".

4. Press center touch area to confirm the setting.

4

UT Ratio setting

NOTE! Correct Ut Ratio value is"1" for 230/400V systems.

1. Press and hold center touch area until PrG is visible.
2. Click right touch area until wanted value is visible. Confirm by press center touch area and next figure starts to blink.
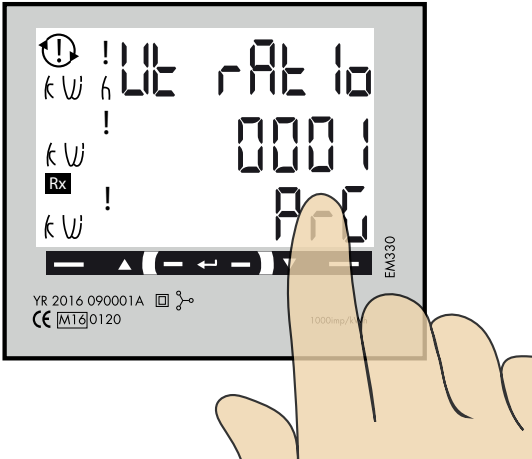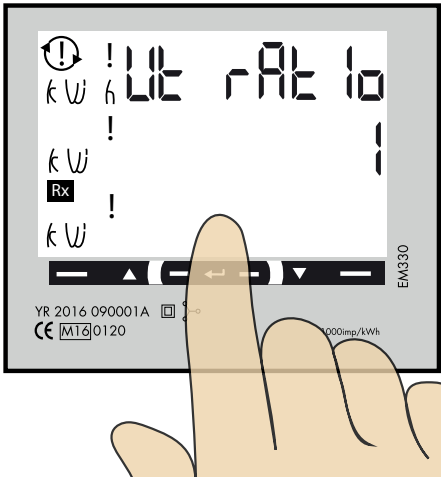Repeat until the complete value is correct and "no" is visible.

3. Click right touch area to change to "YES".
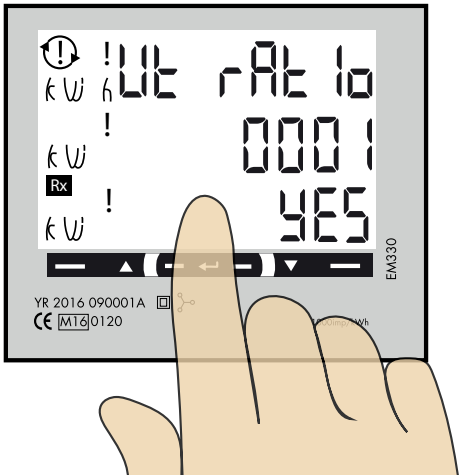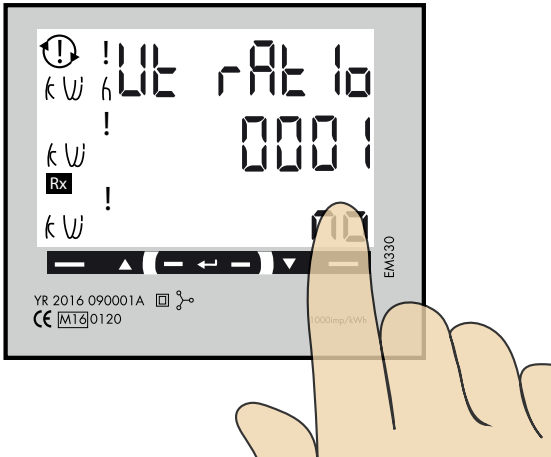4. Press center touch area to confirm the setting.

5

Confirm System, CT and UT Ratio settings

1. Click right touch area to change to "YES".
2 Press center touch area to confirm the setting.

6

Verify System, CT and UT Ratio settings

The settings for System, CT and UT Ratio is visible step by step. Verify that all values are correct.
When all settings are correct, go to step 7.

If the settings are incorrect, you can at this stage by pressing center touch area, start the setting process again at step 2. "no" must be visible.
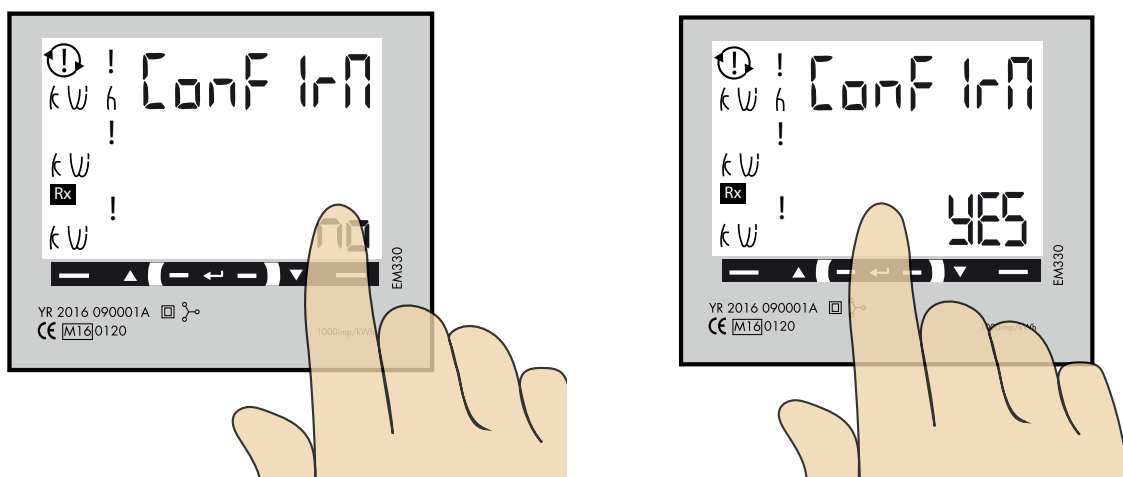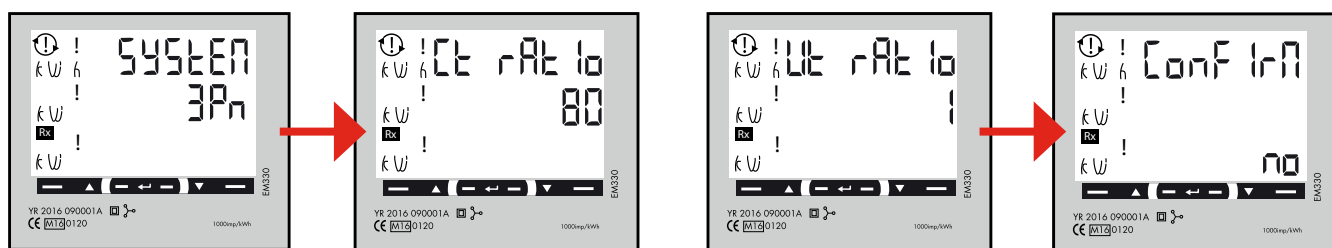
7

Final confirmation of System, CT and UT Ratio settings

1. Click right touch area to change to "YES".
2. Press center touch area to confirm.
3. System, CT and UT Ratio settings are now done. Main menu is visible.
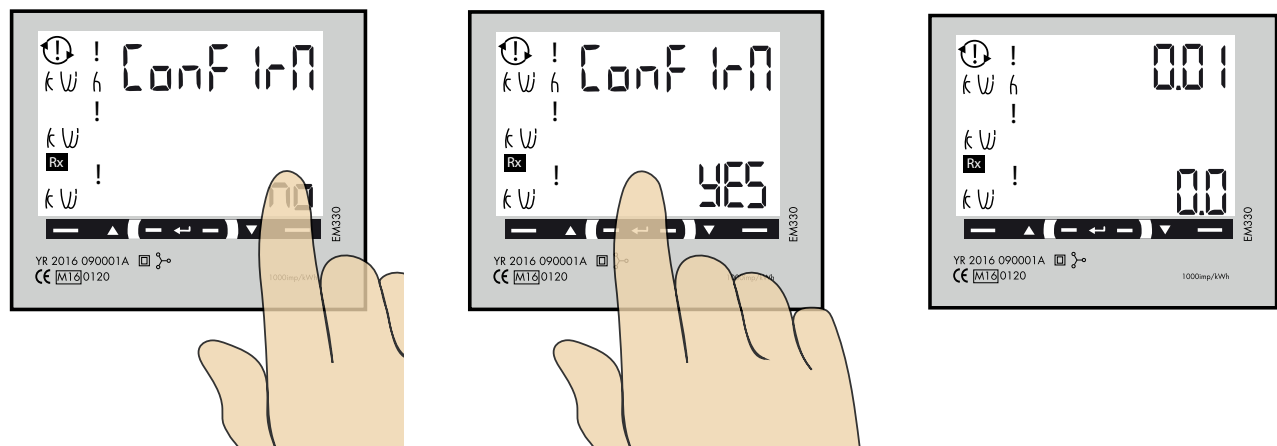
8

Modbus settings

"Longpress" center touch area until you see "PASS".

9

"Longpress" both left and right touch area side to bypass the password.
The blinking "0" will stop to blink after 2 seconds.

10

"Longpress" center touch area until you see "PASS".

11

Modbus address information

For a stand alone wallbox, recommended address is 002.
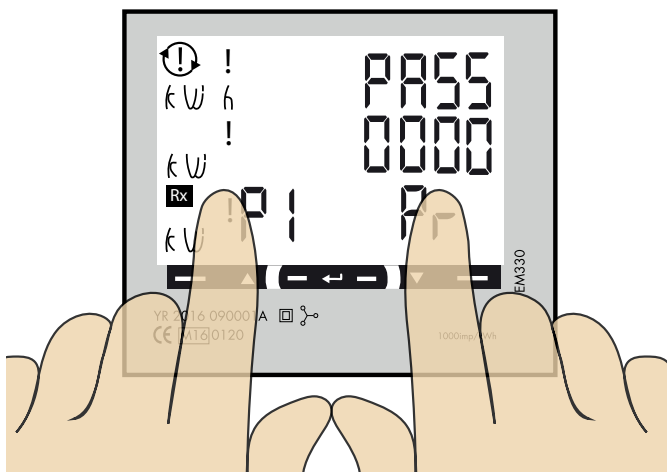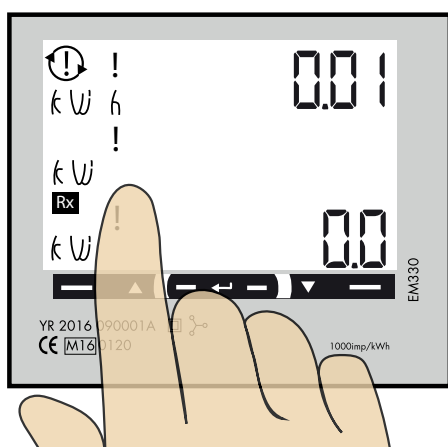This mode will paus the charging process if available current in the system is below 6A. 6A is the minimum av EV can charge according to standard.
Note: No need to to do any settings in the wallbox webinterface.
Modbus address 002 is the only adress that you can use if you do not have any Wifi-module installed in your wallbox
Modbus address 002 is only valid for stand alone wallbox installations.
For multiple wallboxes connected in a grid, use address #100.
DLM settings in the webinterface are required.
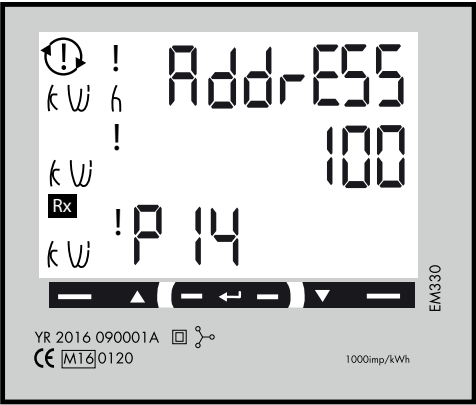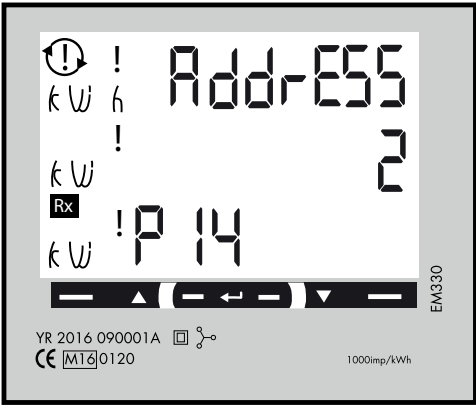Address 100 require an installed wifi-module in the Master Wallbox.
Note: When use of Adress 100, the wallbox will not paus the charging process if available current is below 6A.
If you want to monitor a 2nd mains cabinets, a 2nd DLM meter can be installed in the 2nd mains cabinet. The modbus address for the 2nd DLM meter should be 101.
Both 100 and 101 will not paus the charging process if available current in the system is below 6A.
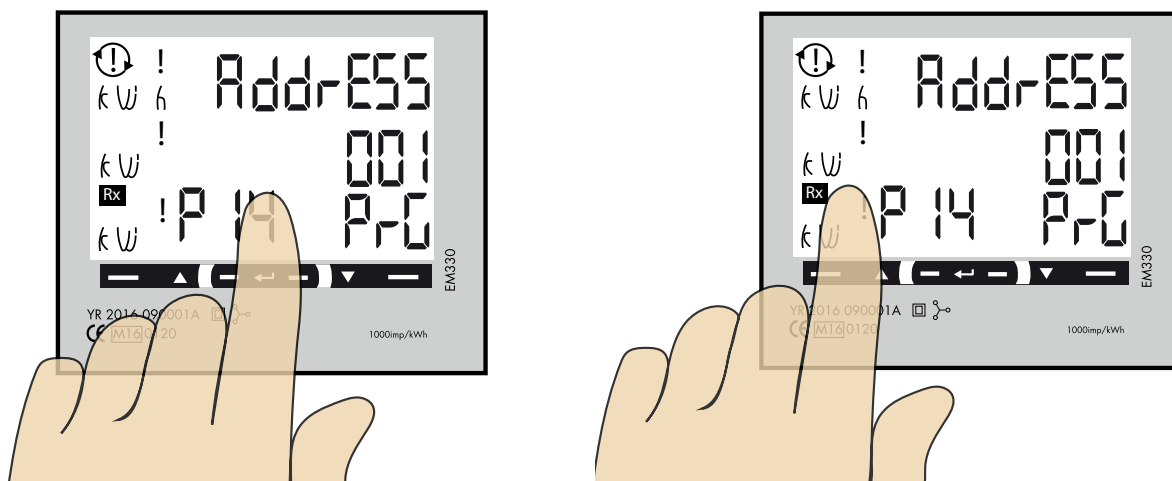Note: DLM settings are required in the master wallbox webinterface.
Modbus address 100 and 101 require an installed wifi-module in your master wallbox.
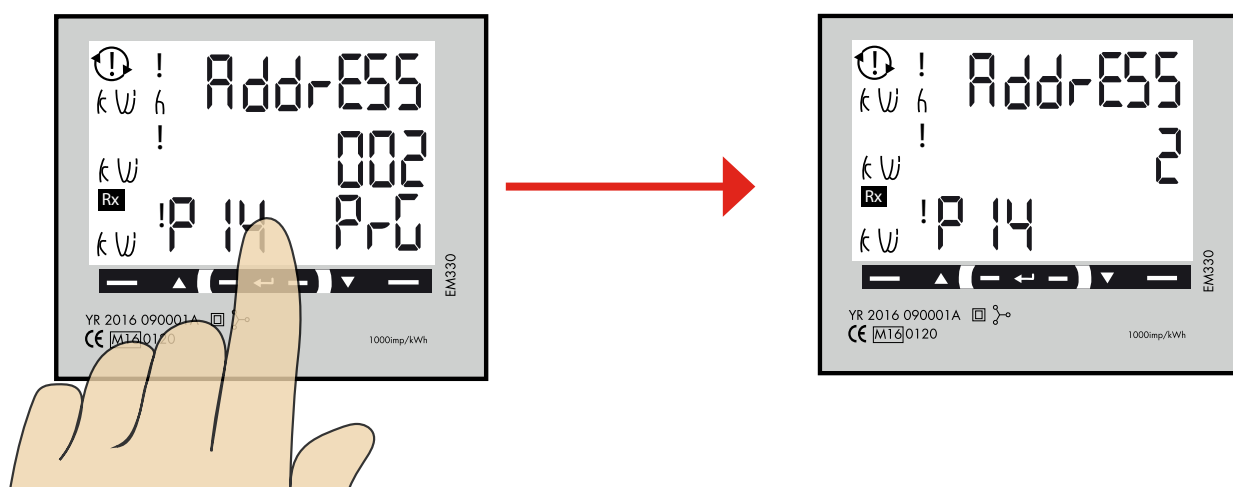
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Set the Modbus Adress

1. Longpress center touch area. 00"1" starts to blink.
2. Click left or right touch area to modify the figure.
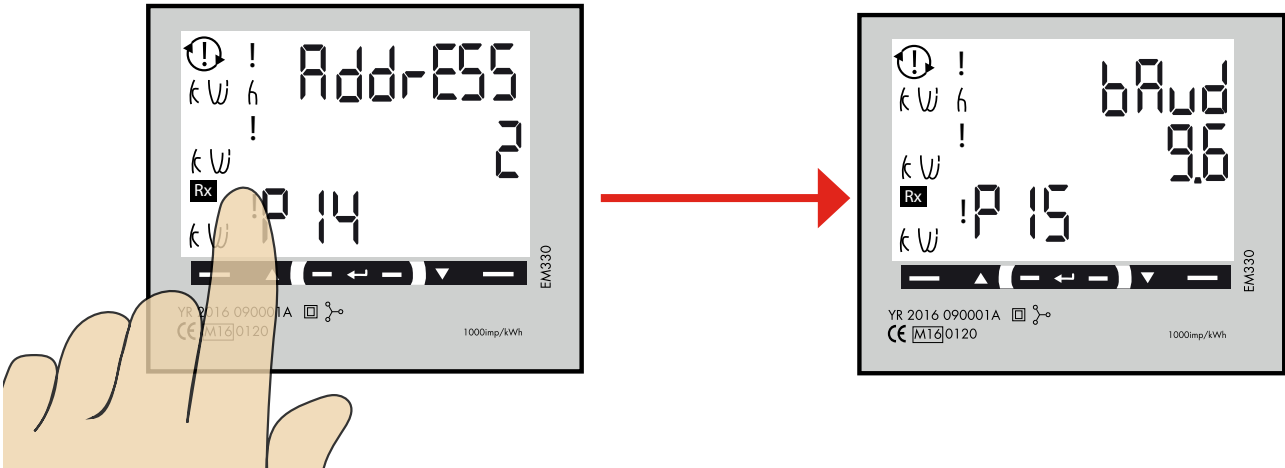3. Longpress center touch area to change to next figure and repeat step 2.

4. When the adress is correct, longpress center touch area to confirm the address.

13

Set/verify the Baudrate
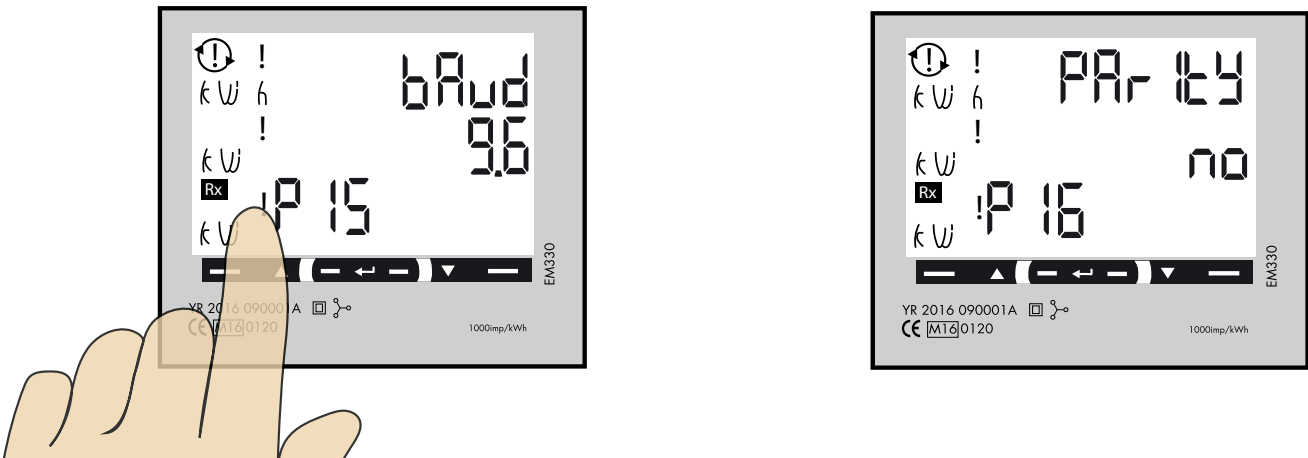
NOTE! Correct Value:Baudrate: 9.6

1. Click left touch area until "bAud" is visible. Default is 9.6 and this is correct.

If you need to change bAud, longpress center touch area and click left or right touch area until 9.6 is visible. Confirm by longpress center touch area.

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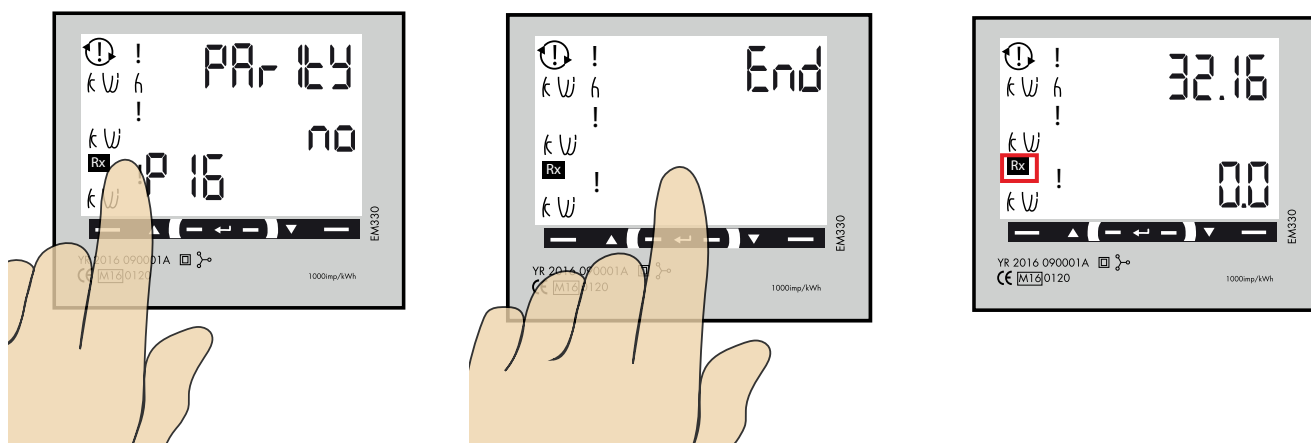### Set/verify the Parity and stopbit

NOTE! Correct Values:Parity: no Stopbit: 1

1. Click left touch area until "PArIty" is visible. Default is "no" and this is correct.

If you need to change the parity, longpress center touch area and click left or right touch area until "no" is visible. Confirm by longpress center touch area.

15

Confirm settings

1. Click left touch area until "End" is visible.
2. Longpress center touch area when "End" is visible and the setting is confirmed.
3. The square is blinking when DLM meter have communication with the wallbox.