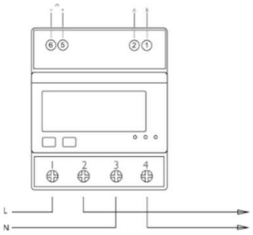
## EMM.320C



The EMM.320C budget meter is the combination of an advanced mono phase energy meter with direct connection up to 100A and a built-in 1 pole power relay up to 100A.
The meter is configured via the push button and the LCD display. The bi-directional meter (import and export) is suitable for both active and reactive power measurement. The reading of the consumption values can be done via the display or via the linked web server. In addition to an RS485 connection, the module also has a pulse output.

## 1. Connect:



**Power supply:** L1 in on Terminal 1, L1 out on Terminal 2; N in on terminal 3, N out on terminal 4

**Modbus:** Connect A to small terminal 2, B to small terminal 1

**Pulse:** - on small terminal 6, + on small terminal 5

## 2. Configuration on the display:

This module is partly pre-configured, normally only a **UNIQUE** Modbus address is required, number between 1... 247 but also check the other Modbus parameters.
**HOW TO GET INTO SETUP:**
Keep pressing the **right button (enter)** until PAS 0000 appears, enter default password PAS 1000 by pressing the **left button (scroll)** until 1 appears, briefly press **enter** for next number or long press **enter** to go to next setting. Go **through** the set values via scroll. After waiting a few seconds, you will automatically go out of the menu. The preset Modbus parameters: **9600 8N1**

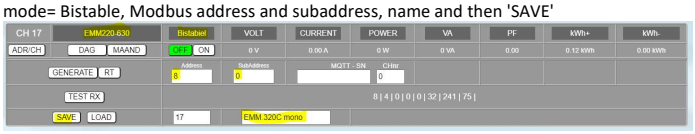
- Modbus address: Id001... ID247 (default 1)
- Baudrate: b 9600 (default 9600)
- 8 bit
- Parity: Prty n (parity none) (default n)
- Stop bit 1(default 1)

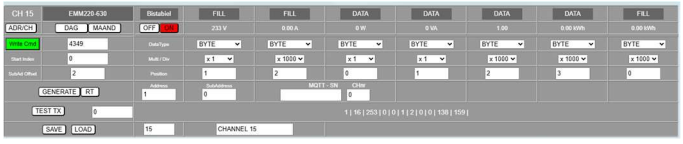
So, if there are multiple meters in the installation, you have to set a unique Modbus address via this display (Id001... Id247 (default 1)) for each meter.
The extensive manual with all technical specifications, detailed configuration, Modbus registers is available via our website [www.2-wire.net](http://www.2-wire.net)

## 3. Configuration in the web server

**MEMo3b:**

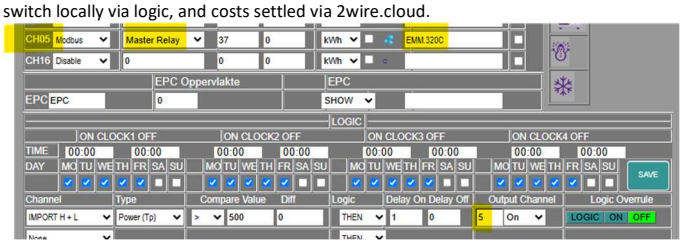
In the web server go to Level3 (installer level), click on the button "EDIT GROUP-CHANNELS" enter the word 'Level3' and press the button 'CANCEL', you will now see 'Level3' at the top left. In this installer Level3 you can add meters.
For the configuration in the MEMo3b we refer her to the Memo manual > v1.3 point 9b. Below an example with CH17=phase 1+import, Input: module=EMM220-630, mode= Bistable, Modbus address and subaddress, name and then 'SAVE'




**ELAN2:**

Via the EMM.320C, an ELAN2 can read and record data, but also switch based on locally set logic. Important to keep in mind the log channels (CH1... CH16) Modbus/Master Relay setting and then choose the same channel in the local logic line. A nice solution for e.g. campsites: Limit on power and/or day consumption, switch locally via logic, and costs settled via 2wire.cloud.




## 4. Reading values on the display

By briefly pressing the **scroll** button each time, you can read all measured values and Modbus parameters:
Total kWh→ Import kWh→Export kWh→ Total kvarh→Import kVarh→ Export kVarh→ Max. Power Demand→Voltage →Current→W→ Var →VA→ Power Factor →Frequency →Pulse Constant→Modbus Address→Baud Rate

## 5. What values are logged.

MEMo3 logs every 60 seconds:

- Meter reading Import in kWh
- Meter reading Export in kWh
- Voltage in Volts
- Electricity in Amps
- Power in Watts
- Power factor
- Reactive power Var

ELAN2 logs every 5 minutes:

- Meter reading Import in kWh
- Meter reading Export in kWh
- Voltage in Volts
- Electricity in Amps
- Power in Watts

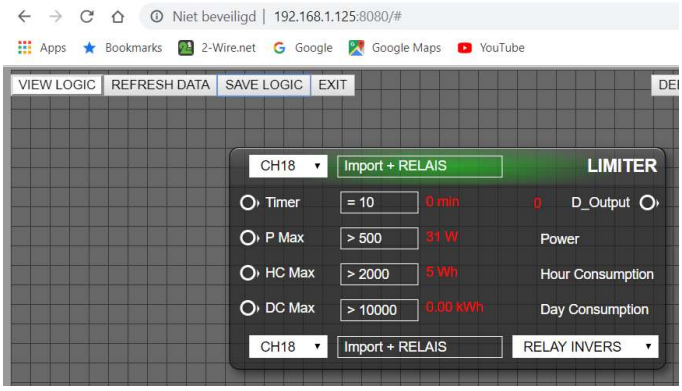
## 6. General remark:

If you want to see both import and export consumption, enter a Modbus sub-address 0 and 1 in the webserver, import graph is then under sub-address 0 and export under sub-address 1.
Visualization of the channels for the customer: see WS.503 web server configuration/channels. Since the web server cannot show negative graphs, the E-meter for solar panels must be connected according to the direction of the current.
Manual operation can be done from the web server with an on/off button and not via the display on the module.




Automatic operation e.g. as a budget meter, can be set via the visual logic user interface in the web server. See manual logic MEMo3

Example In the configuration below, the logic in the MEMo3 web server switches off the budget meter for 10 minutes if more than 500 Watts are consumed for 10 minutes or switches off until the next hour or day transition if respectively hour or day consumption was exceeded.




**ELAN2:**
If you want to see both import consumption and export consumption, enter a 0 or 1 in the web server at para2, import graph is then at para2= 0 and export at para2=1.

## 7. Installation Requirement

The installation must be carried out by a qualified installer and in accordance with the regulations in force. The module must be built into a fireproof fuse box. During installation, the following must be taken into account (non-exhaustive list):
- the applicable laws, standards and regulations.
- the state of the art at the time of installation.
- this manual which only mentions general provisions and should be read in the context of each specific installation.
- the rules of good craftsmanship.
- the prescribed specs in this manual, otherwise there is a risk of damage to the module.

This manual must be attached to the electrical installation file. The most recent manual of the product can always be found on the 2-Wire website.

2-WIRE Qonnex

## 8. Support

Do you want to have the product repaired in case of a possible defect? Please contact your supplier or order "inspection module" online.

## 9. Warranty provisions

The warranty period is two years from the date of delivery. The delivery date is the invoice date of purchase of the product by the consumer. If no invoice is available, the production date applies. The consumer is obliged to inform Qonnex bvba in writing about the lack of conformity, and this no later than two months after detection. In the event of a lack of conformity, the consumer is only entitled to a free repair or replacement of the product, which is determined by Qonnex. Qonnex is not responsible for a defect or damage resulting from incorrect installation, improper or negligent use, incorrect operation, transformation of the product, maintenance in violation of the maintenance instructions or an external cause such as moisture damage or damage due to overvoltage. The mandatory provisions in national legislation on the sale of consumer goods and the protection of consumers in countries where Qonnex sells directly or through distributors, agents or permanent representatives take precedence over the above provisions.

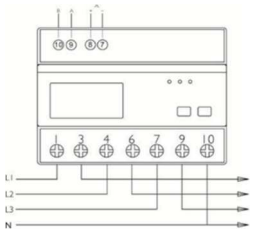
Qonnex bv
B-9310 Aalst Belgium
info@2-wire.be
www.2-wire.net

## EMM.530C



The EMM.530C is the combination of an advanced 3-phase+N energy meter with direct connection up to 3x 100A +N and a built-in 3-pole power relay up to 3x100A.
The meter is configured via the push button and the LCD display. The bi-directional meter (import and export) is suitable for both active and reactive power measurement. The reading of the consumption values can be done via the display or via the linked web server. In addition to an RS485 connection, the module also has 1 pulse output.

## 1. Connect:



**Nutrition:**

L1 in on Terminal 1, L1 out on Terminal 3
L2 in on Terminal 4, L2 out on Terminal 6
L3 in on Terminal 7, L3 out on Terminal 9
N in/out on terminal 10

**Modbus:** A to small terminal 9, B to small terminal 10
**Pulse:** + on small terminal 7, + on small terminal 8

## 2. Configuration on the display:

This module is partly pre-configured, normally only a **UNIQUE** Modbus address is required, number between 1... 247 but also check the other Modbus parameters.
**HOW TO GET INTO SETUP:**
Keep pressing the **right button (enter)** until PAS 0000 appears, enter default password PAS 1000 by pressing the **left button (scroll)** until 1 appears, briefly press **enter** for next number or long press **enter** to go to next setting. Go **through** the set values via scroll. After waiting a few seconds, you will automatically go out of the menu. The preset Modbus parameters: 9600 8N1

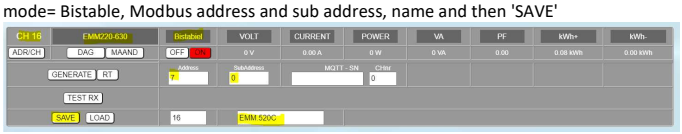
- Modbus address: Id001... ID247 (default 1)
- Baud rate: b 9600 (default 9600)
- 8 bit
- Parity: Prty n (parity none) (default n)
- Stop bit 1(default 1)

So if there are multiple meters in the installation, you must set a unique Modbus address via this display (Id001... Id247 (default 1)) for each meter.

## 3. Configuration in the web server

**MEMo3b:**

In the web server go to Level3 (installer level), click on the button "EDIT GROUP-CHANNELS" enter the word 'Level3' and press the button 'CANCEL', you will now see 'Level3' at the top left. In this installer Level3 you can add meters.
For the configuration in the MEMo3b we refer her to the Memo manual > v1.3 point 9b. Below an example with CH16=phase 1+import, enter: module=EMM220-630, mode= Bistable, Modbus address and sub address, name and then 'SAVE'

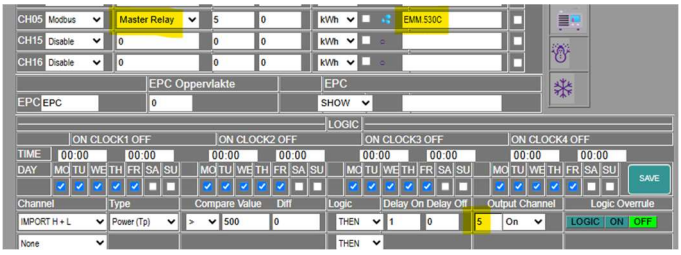






**ELAN2:**

Via the EMM.530C, an ELAN2 can read and record data, but also switch based on locally set logic. Important to keep in mind the log channels (CH1... CH16) Modbus/Master Relay setting and then choose the same channel in the local logic line. A nice solution for e.g. campsites: Limit on power and/or day consumption, switch locally via logic, and costs settled via cloud.




## 4. Reading values on the display

By briefly pressing the **scroll** button each time, you can read all measured values and Modbus parameters:
Total kWh→ Import kWh→Export kWh→ Total kvarh→Import kVarh→ Export kVarh→ L1L2L3Voltage → L1L2L3 Current→ L1L2L3 Power→ L1L2L3Total Power Factor →Frequency → Modbusadres→Baudrate→Parity→Pulse rate

## 5. What values are logged.

MEMo3 logs every 60 seconds:

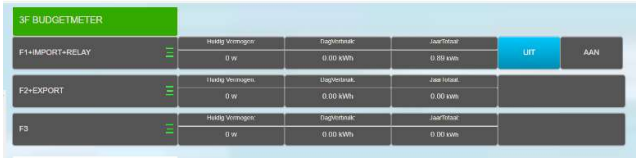
- Meter reading Import in kWh
- Meter reading Export in kWh
- Voltage in Volts
- Electricity in Amps
- Power in Watts
- Power factor
- Reactive power Var

ELAN2 logs every 5 minutes:

- Meter reading Import in kWh
- Meter reading Export in kWh
- Voltage in Volts
- Electricity in Amps
- Power in Watts

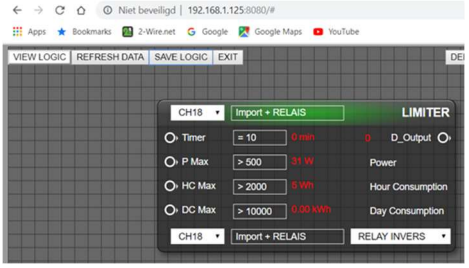
## 6. General remark:

- The current import and export meter readings can be read in the web server (light green values).
- The EMM.530C module is only suitable for a **3x380V+N**
- If you want to see both import consumption and export consumption, enter Modbus sub-address 0,1 and 2 in the webserver, import graph is then under sub-address 0 and export under sub-address 1. For the channel with relay choose MODE 'BISTABLE' for the other channels choose MODE 'COUNTER'
- Visualization of the channels for the customer: see WS.503 web server configuration/channels. Since the web server cannot show negative graphs, the E-meter for solar panels must be connected according to the direction of the current.
- Manual operation can be done from the web server with an on/off button and not via the display on the module.




Automatic operation e.g. as a budget meter, can be set via the visual logic user interface in the web server. See manual logic MEMo2

Example In the configuration below, the budget meter switches off for 10 minutes if more than 500 Watts is consumed for 10 minutes, or switches off until the next hour or day transition if respectively hour or day consumption was exceeded.




The extensive manual with all technical specifications, detailed configuration, Modbus registers is available via our website www.2-wire.net

**ELAN2:**
If you want to see both import consumption and export consumption, enter a 0 or 1 in the web server at para2, import graph is then at para2= 0 and export at para2=1.