

EMM.630-MID

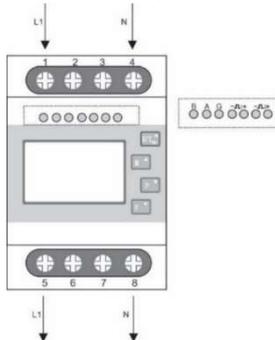


The EMM.630 MID is an advanced 3 phase energy monitor up to 100A. The configuration of the meter is done via the touch buttons and the LCD display. The bi-directional measurement measures consumption on mono, 3x230V or 3x380V+N power supplies and measures both active and reactive power outputs. The readout of the consumption values can be done via the display or on the linked web server. The module is packed in a 4 module wide DIN rail housing and

has a direct power connection up to a maximum of 100A. In addition to an RS485 connection, the module also has 2 pulse outputs of which 1 configurable

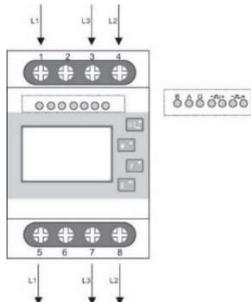
1. Connect:

EMM.630: Mono-phase connection:



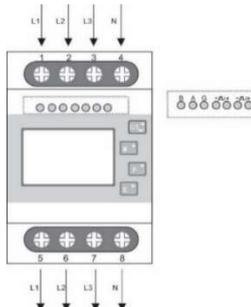
On display: set as mono phase: SYS 1P2
Connect: L in : Clamp 1; L out: Clamp 5;
 N in: Clamp 4; N out: Clamp 8
Modbus: Modbus Clamp A, B in G(-)

EMM.630: 3x230V connection



Set to display as a 3 phase 3 conductor:
 SYS 3P3
Connect:
 • L1 in : Clamp 1; L1 out: Clamp 5
 • L2 in : Clamp 2; L2 out: Clamp 6
 • L3 in : Clamp 3; L3 out: Clamp 7
Modbus: Modbus Clamp A, B in G(-)

EMM.630: 3x380V



On display: set as 3 phase-4 conductor:
 SYS 3P4
Connect:
 • L1 in : Clamp 1; L1 out: Clamp 5
 • L2 in : Clamp 2; L2 out: Clamp 6
 • L3 in : Clamp 3; L3 out: Clamp 7
 • N in : Clamp 4; N out: Clamp 8
Modbus: Modbus Clamp A, B in G(-)

2: Configuration on the display:

This module is partly pre-configured, there is only a **UNIQUE** Modbus address, number between 1... 247 to be imported and possibly the type of power supply mono,3x230V,3x380V+N.

How to get into SETUP:

Keep pushing the bottom button 4 (enter→) until **PASS 0000** appears, fill in default password **PAS 1000** by pressing the button 2 (M↑) to 1, briefly press button 4 (enter) for next number or press enter a little longer to move to next

setting. Go through button 3 (PV) through the set values and adjust the necessary Modbus values.

Briefly press **button 1 (U/I ←)** to leave menu.

Modbus parameters and power supply to be set: 9600 8N1

- Modbus address : Id001... Id247
- Baudrate: b 9600
- Parity: Prty n (parity none)
- Stopbit: 1
- En type voeding: 1P2,3P3 of 3P4

So if there are several meters in the installation then you have to set up a unique Modbus address (Id001.) via this display. Id247 (default 1) for every meter.

The list of all Modbus registers for link to a Modbus reading system is available via our website

3: Configuration in the web server

In the web server, go to /configuration/modules:



1. Enter **unique fictitious** serial number starting with 03E followed by a unique number with 5 digits: Vb. **03E00001**
2. Give a name to the meter: E.g. **EMM.630** and press "**NEW**"
3. A table appears with 3 rows, 1 row per stage. Give a recognizable name to the each stage exit: E.g. Phase 1; Phase 2; Phase 3
4. Choose mode **COUNTER** (automatic)
5. Enter the Modbus address of the module: E.g. **17** (AND NOT **017!!**)

STAGE	NAME	UNIT	MODE	ADDRESS	UNIT	ADDRESS	UNIT	ADDRESS
1	Phase 1	kWh	Tracer	17	0	17	0	17
2	Phase 2	kWh	Tracer	17	1	17	1	17
3	Phase 3	kWh	Tracer	17	2	17	2	17

6. Enter Modbus sub-address : **always 0 (phase 1); always 1 (phase 2); always 2 (phase 3);**
7. Log type: Only if you're working on charging data to a central server check the parameters you want
8. Choose unit kWh(automatic)
9. Press "ZEND" if Module appears OK the programming is in order otherwise see manual (Modbus address error, cabling check,...)

4: Reading values on the display

There are 4 touch buttons by pushing on this momentarily you can read the following readings:

Button 1 U/I (voltages/currents): voltages between phase-Neuter Volt → current per phase in Ampere → Harmonic on tension between phase and neuter THD in % → Harmonic on current THD in % →

Button 2 M (frequency, PF, peak): frequency and power factor → power factor per phase → maximum flow per phase with set sample time after reset → maximum total power set sample time after reset

Button 3 P (capabilities): current active power per phase in kW → current reactive power per phase in kVar → current VA per phase in kVA → total power in kW, KVar, kVA

Button 4 E (energy consumption meter reading)*: meter reading total active consumption in kWh → meter reading total reactive consumption in kVarh → meter mode imports active consumption in kWh → meter position export

active consumption in kW → meter state import active consumption in kVarh
 → meter state export active consumption in kVarh →

*NOTE: Meter reading on 2 lines as 1 line: 0001 04.80 kWh=104.80kWh

** NOTE: With meter reading total consumption is meant import + export

5. What values are logged.

MEMo logs every 60 seconds:

- Total active consumption over the 3 phases:
 - Meter mode Import in kWh
 - Meter mode Export in kWh
- By phase:
 - Tension in Volt
 - Power in Ampère
 - Power in Watt
 - Powerfactor
 - Reactive capability VAR

6. General note:

- Import consumption over the 3 phases, in the html graph only with 1 hour resolution, is calculated by difference between start and end counter position and the result you see in the web server below the graph of phase 1 (Modbus sub-address 0) Export consumption you see in the web server under the chart of phase 2 (Modbus sub-address 1) See ook FAQ on www.2-wire.be
- Visualization of the channels for the customer : see at WS.503 web server
- 3x380V CONNECT neuterless as 3x230V and set as 3P3
- Because the web server cannot show negative graphs, the E-meter for solar panels must be connected in the direction of the current.
- With the help of the RG.016 module, this meter can be read wirelessly via MEMo and MiLo.
- The comprehensive (English) manual with all technical specifications, detailed configuration, Modbus registers is available through our website www.2-wire.net

7. Installation instructions

The installation must be carried out by an approved installer and in accordance with the rules in force.

- This device is only suitable for DIN rail assembly in accordance with EN 50022 and must be fitted in a closed distribution board.
- Make sure that a safety interruption of the device is possible. Turn off the module before installing it.
- Do not open the device – the warranty expires when the device is opened.

This manual must be attached to the file of the electrical installation. The 2-Wire website always has the latest manual of the product.

8. Support

Do you want to exchange the product in case of a possible defect? Please contact your wholesaler or the 2-wire support service. The contact details can be found on our website www.2-wire.net/contact/

9. Guarantee conditions

The warranty period is two years from delivery date. The date of delivery is the invoice date of purchase of the product by the consumer. If there is no invoice available, the production date applies.

The consumer is obliged to inform Qonnex bvba in writing of the lack of conformity, and this at the latest within two months of adoption.

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 any defect or damage caused by improper installation, improper or negligent use, improper operation, product transformation, maintenance in violation of maintenance regulations or an external cause such as moisture damage or damage from span.

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