

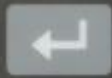
1. Description.

ECM-309 KIT is a DIN 96x96 multifunction three-phase meter equipped with 3 Rogowski coils with a diameter of 30cm, each of which is wired to the meter with 3m long cables.



Picture 1 - Product Image

2. Configuration.

			"Menu" Key
			"Enter" Key
			"Up" and "Down" Keys

- a. Press "Menu" key to obtain the following page:



- b. Press "Enter". Setup password as "0000" pressing "Enter" again
 c. Select following pages using "Up" and "Down" keys and confirm choices pressing "Enter" key

d. Select **insertion mode**:

Three-phase 4 wires, 3 currents	
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e. Select **current fullscale (FSA)**:

500A	
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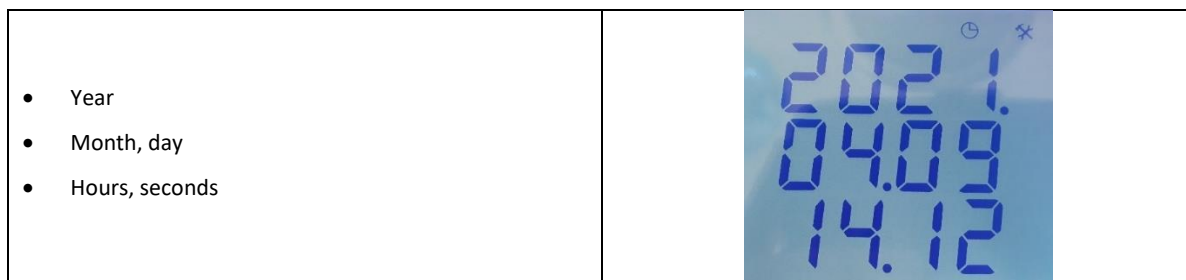
f. Select **output 1 pulse weight**:

Total exported "Σ" active power (kWh) "- "10KWh pulse weight	
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g. Selezionare il peso dell'**impulso relativo all'uscita 2**:

Total exported inductive reactive power (KVAh) "- "10KVAh pulse weight	
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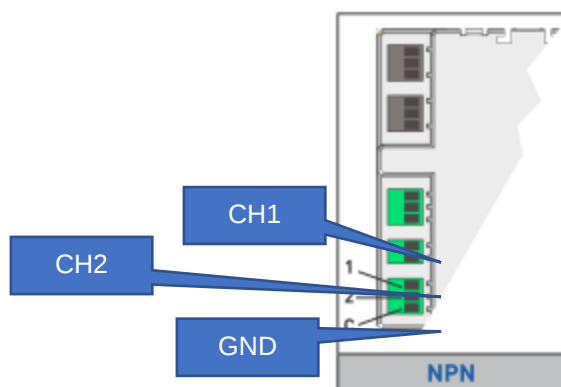
h. Setup date



i. To exit from configuration menu, hold down “Enter” key for 3 seconds and confirm data saving.



3. Connection layout.



Picture 2 - Connection layout

4. Technical Information.

Power supply	230VAC $\pm 15\%$ - Frequency: 50/60Hz
Voltage inputs	- Maximum measurable voltage: 600VAC L-L - Input impedance: $> 1.3\text{M}\Omega$ - Frequency: 45 - 65Hz
Current inputs	- Maximum value: 3 selectable scales, 500/4,000/20,000A - Starting current (<i>I_{st}</i>): 0.3A for FSA 500A, 1A for FSA 4,000A, 10A for FSA 20,000A
Typical accuracy / Performance class (<i>device only</i>)	- Voltage: $\pm 0.2\%$ reading in 10% FS...FS range (<i>FS=Full Scale value</i>) - Current: $\pm 0.4\%$ reading in 5% FS...FS range 2% harmonic accuracy ± 2 digits - Frequency: $\pm 0.1\%$ reading ± 1 digit in 45...65Hz range - Active power/energy: Class 0.5 according to IEC/EN 61557-12 - Reactive power/energy: Class 2 according to IEC/EN 61557-12
Display & keyboard	- Display: Backlighted LCD, 78x61mm - 3 rows, 4 digits + symbols - Keyboard: 4 front buttons
Communication port	- Type: RS485 optoisolated - Protocols: MODBUS RTU/ASCII - Baud rate: 300 to 57,600bps in case of RS485 port
2 digital outputs (<i>Do</i>)	- Type: NPN or PNP, passive optoisolated - Maximum values (<i>according to IEC/EN 62053-31</i>): 27VDC - 27mA - Energy pulse length (<i>only for DO in pulse mode</i>): $50 \pm 2\text{ms}$ ON time - Max output reaction time (<i>only for DO in alarm mode</i>): 1s
Analog output (<i>Ao</i>)	- Type: Active optoisolated - Selectable ranges: 0...20/4...20mADC - Maximum load: 500 Ω
Digital input (<i>Di</i>)	- Type: Optoisolated - Voltage range: 80...265VAC-DC
Sealing	IP54 frontal - IP20 terminals
Size and weight	96x96x39mm, 310g



5. Reference standards.

EN 61010 -1

For electromagnetic compatibility

EN 61000 - 3 - 2

EN 61000 - 3 - 3

EN 300 220 -2

EN 301 489 - 03

EN 61000 - 6 -1

This symbol indicates that this product is compliant with the European Directive 2011/65/CE that restricts the use of substances in the manufacturing of electronic devices.



The "WEEE" logo on the label indicates that this product is compliant with the "WEEE" EC Directive. This symbol (valid only in the European Union countries) indicates that the product it is applied to, MUST NOT be discarded with ordinary household or industrial waste, but must be sent to an authorized reception point. The end user should contact the device provider, either the manufacturer or the reseller, to agree a collection and disposal process, after having checked the terms and conditions of sale.



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The features shown may be subject to change without notice.

