

EC Series Static Electricity Meters USER MANUAL

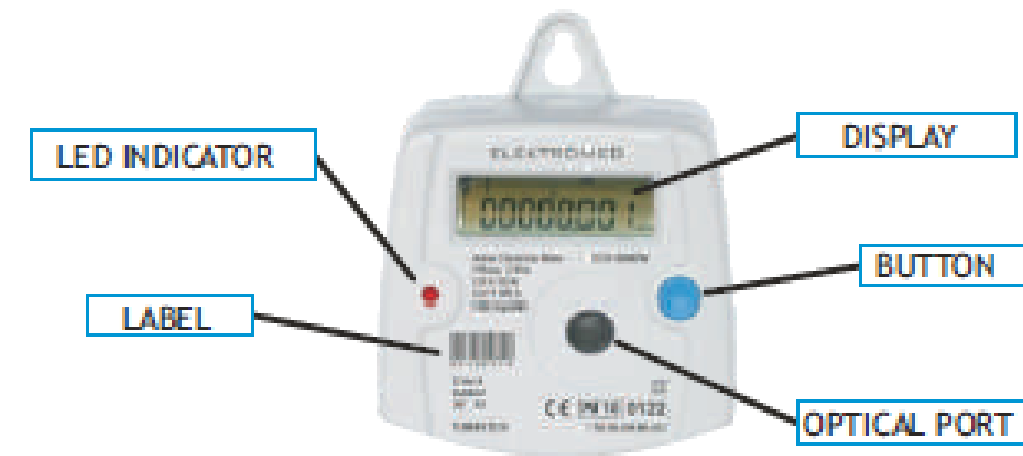


ECO Single Phase & EC1 Three Phase ELECTRICITY METER SERIES

1. IMPORTANT POINTS TO BE CONSIDERED SAFETY AND SECURITY

- Do not operate the meter in excess of its maximum rated current, as indicated in the technical specifications and on the ID label located in front of the meter.
- Do not touch the terminals while electrical energy is applied.
- The mains should NOT be energized while installing or removing the meter.
- Only authorized agency personnel or technicians should service this meter, and they should refer closely to the to the wiring diagram.
- Enclose the meter against direct physical shocks.
- Protect the meter against water and high levels of humidity.
- Do not clean the external surface of the meter with solvents of plastic materials or their derivatives.
- This device is a measuring apparatus. Please use necessary care during transport.
- Proper use is defined by the guidelines given in this instruction guide.

2. FRONT VIEW OF METER



- DISPLAY:** Data about meter configuration and usage is displayed.
BUTTON: Provides for scrolling through menus and access to TOU data.
LED INDICATOR: Blinks according to the value of the meter constant when that usage level has been consumed.
LABEL: Type, serial number, meter class, operating voltage, operating frequency, basic and maximum current values are embossed on the label plate of the device.
OPTICAL PORT: Provides meter data to be read by HHU (Held Hand Unit).

3. GENERAL SPECIFICATIONS

- Time of use property which allows the usage of three day types and 8 time slices for one day,
- Displays maximum demand value with "P" symbol,
- Optical port providing data input output to / from the meter in line with IEC 62056 -21 Standard,
- Accuracy class is consistent with EN 50470-1/3 Class B,
- Consumption data on LCD indicator is displayed as decimal part in 3 digits (Wh),
- Terminal block allows 16 mm cross section area cables for energy connections,
- Display of battery level status,

- The meter can detect any kind of failure and intervention displaying these on LCD indicator and allowing the same to be read by means of the optical port even if mains power is cut off,
- Display of data and error messages and easy to use help for symbols on LCD,
- Display of date and real-time of the meter,
- Fabricated from fire proof, light, and strong plastic material,
- Easy installation,
- Security and detection against probable unauthorized tamper attempts,
- Microprocessor based accurate electronic measuring system.
- AMR - RS 485 port for automatic meter reading (optional),
- Produced according to Measuring Instrument Directive (MID).

4. TECHNICAL SPECIFICATIONS

Type	EC018MBW	EC058MBW	EC056MBW	EC11ATBW	EC158TBW	EC15ATBW
Connection	Single Phase, Two Wire (DIN)			Three Phase, Four Wire(DIN)		
Voltage	230 V			3x230/400 V		
Current	10 (80) A	5 (80) A	5 (60) A	10 (80) A	5 (80) A	5 (100) A
Minimum Current	0,50 A	0,25 A	0,25 A	0,50 A	0,25 A	0,25 A
Meter Constant	1000 imp / kWh			500 imp / kWh		1000 imp / kWh
Accuracy	±1% Class B (EN 50470-1/3)					
Frequency	50 Hz					
Display	LCD					
Temperature Range	-40 / +70 °C (IP 54 Outdoor)					
Weight	430 g			780 g		

5. USING METER

5. a) LCD INFORMATIONS

- If the mains power is on the tariff energy values (T, T1, T2, T3, T4), maximum demand value (P), date and time are successively seen on the LCD according to the utility.
- The data can also be seen by pressing the button.
- An example of successive data is on the following line.

Index values examples:

T : T1 kWh 00138,563	Total energy consumption in Wh unit
T1 : T1 kWh 00051,103	Energy consumption during 1 st Tariff
T2 : T1 kWh 00025,125	Energy consumption during 2 nd Tariff
T3 : T1 kWh 00062,335	Energy consumption during 3 rd Tariff
T4 : T1 kWh 00000,000	SPECIAL Energy consumption in the 4 th Tariff *
P : T1 kW 000,000	Demand information (displays the maximum passing value)
T1 09 - 04 - 24	Date information (year / month / day)
T1 13 - 50 - 55	Time information (hour - minute - second)

Explanations:

- If the real time fails by means of any reason, the meter continuous to run on T1 tariff only.
- "T" symbol indicates which tariff slice is valid at present.
- (*) The 4th tariff can be programmed by optical port whenever the utility wants without demounting the meter.

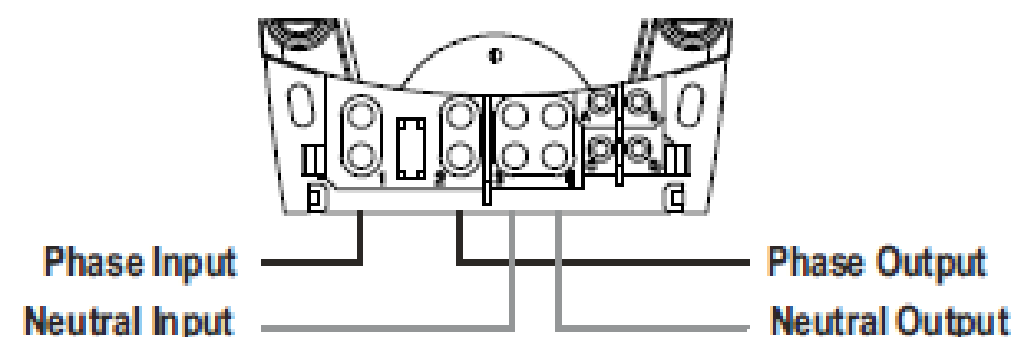
5. b) LCD SYMBOLS

Symbol	Explanations
	Backup battery is low. Please service the meter.
T1 T1 T2 T3 T4	Indicates the tariff slice.
	Indicates memory error.
	Meter cover is opened (a tamper).
	(*) Terminal cover is opened (a tamper).

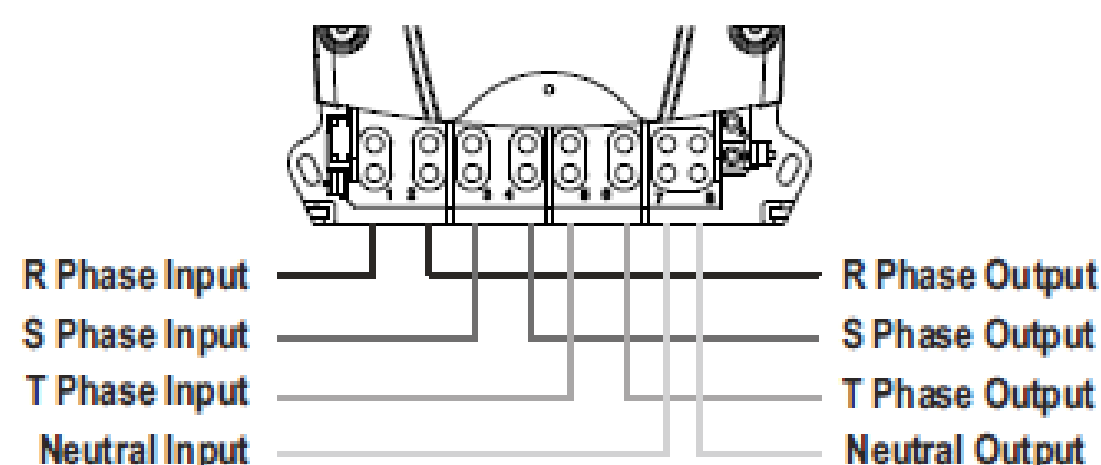
* If the sign continues to appear at first installation, albeit the terminal cover is fully secured is completely inserted to its location on the body, the tamper sign shall disappear when the meter is activated by personel.

6. TERMINAL WIRING DIAGRAM

6. a) EC0 SERIES SINGLE PHASE METERS



6. b) EC1 SERIES THREE PHASE METERS



7. INSTALLATION OF METER

- Do not try to fix your meter to other points except mounting points.
- "Energy must absolutely be cut off" while mounting and removing the meter.
- The seal screw should be fixed after the lugs under the terminal cover are inserted to the slots on the body of the meter.
- The plastic piece of bar fixed on the terminal cover must absolutely be inserted fully and correctly into its housing on the body. Otherwise Δ sign shall appear on LCD display.

8. MAINTENANCE AND REPAIR

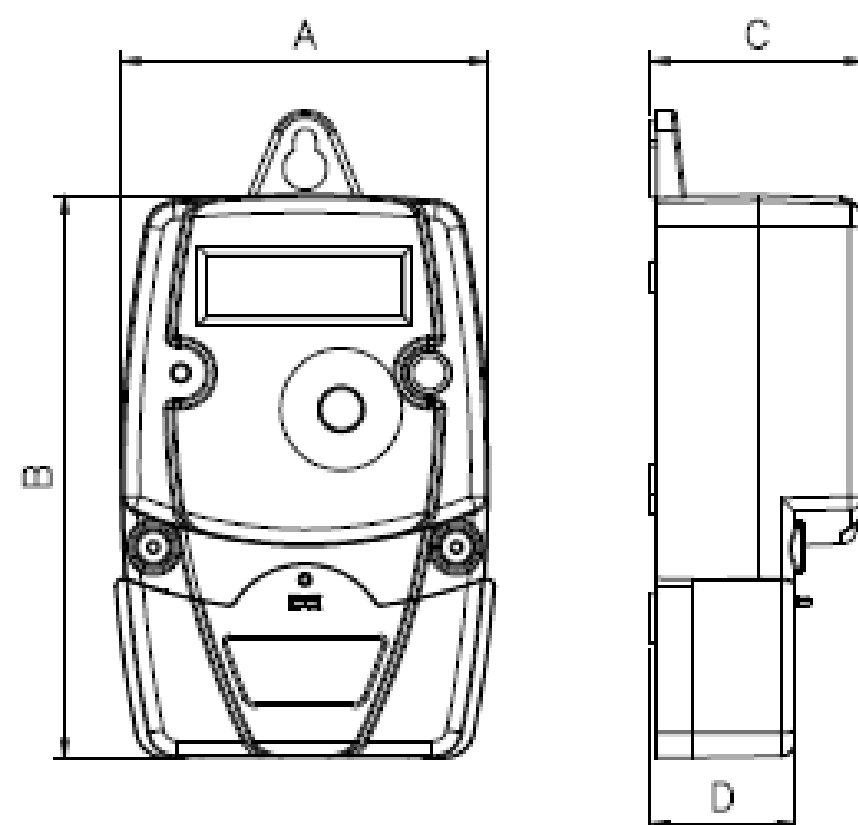
- There is not any maintenance and repair point that can be repaired by the subscriber of the meter, which is fabricated utilizing methods of today's technology. The meter should not be attempted to be repaired by the subscriber or any other unauthorized people albeit a very simple reason. Please get in touch with our nearest authorized service in case of a problem.
- Your meter has been controlled and sealed by the Directorate of Measuring and Calibrations of The Ministry of Industry and Trading, of related country.
- Maintenance and calibration of these devices in every 10 years realized at the authorized repair and calibration stations of The Ministry of Industry and Trading is compulsory.
- Your meter has a guarantee period in the scope of the conditions indicated in the Certificate of Guarantee, and this is valid only for troubles occurring on the product. no rights and indemnities can be claimed other than those.

9. TIME OF USE

The purpose of time of use is to share out the high level energy consumption in 2nd tariff (evening) to the other tariffs and thanks to this, to increase the efficiency in production and distribution of energy.

- These gains in the efficiency are used to discount the energy price of subscriber.

10. TECHNICAL DRAWING



	A	B	C	D
EC0 SERIES	101	155	58	40
EC1 SERIES	160	230	67	51

In units of mm.

11. FACTORY

Organize Sanayi Bölgesi Uygurlar Cad. No: 4
Sincan - ANKARA / TURKEY

Tel: 0 312 267 13 67 (pbx)
Fax: 0 312 267 13 66

e-mail: elektromed@elektromed.com.tr
[http:// www.elektromed.com.tr](http://www.elektromed.com.tr)

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12. CE DECLARATION OF CONFORMITY 

Suppliers Name: Elektromed Elektronik Sanayi ve Sağlık Hizmetleri A.Ş.
Address: Org. Sanayi Bölgesi, Uygurlar Cad. No:4 Sincan-ANKARA/TURKEY
Phone: +90.312 267 13 67
Web: www.elektromed.com.tr

We declare that the production at under mentioned meets MID directive requirements as determined in MI-003 and D module (Quality Assurance of the Production Process) and we also declare to give this conformity declaration to our

Type or Model Name

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Serial Number:

to which this declaration relates is in conformity with the following standart(s) other normative document(s) following the provisions of

Notified Body Number	0122
EC Type-examination Certificate Number	
Conformity Assessment body for D Module	NMi Certin B. V.
D Module certificate No	CE-145

European Directives

Reference No	Title
2004/22/EC	Measuring instrument directive
2004/108/EC	Electromagnetic compatibility

European Standards and Guides

Reference No	Title
WELMEC 7.2	Software guide
WELMEC 8.6	Measuring instrument directive 2004/22/EC, Presumption of Conformity of the Quality System of Manufactures with Module D or H1 when EN ISO 9001:2000 is applied
EN 50470-1	Electricity metering equipment (a.c.) - Part 1: General requirements, test and test conditions - Metering equipment (class indexes A, B and C)
EN 50470-3	Electricity metering equipment (a.c.) - Part 3: Particular requirements-Static meters for active energy (class indexes A,B and C)

Name and Signature

HASAN HÜSEYİN TÜRÜDÜ
COMPANY MANAGER

Place : ANKARA

Date :

TECHNICAL FEATURES

BRAND	ELEKTROMED
TYPE	
SERIAL NO / P.D.	
CONNECTION TYPE	
VOLTAGE	
CURRENT	
CLASS	Active, Class B
MEASURING TYPE	DIN Connection (Active Measurement)
BATTERY LIFE	10 Years
TARIFF TYPE	Multi Tariff
T1	Disabled
T2	Disabled
T3	Disabled
T4	Disabled

Terms of Guarantee

- Guarantee period (2 years) will start from the beginning of delivery date of the product.
- All parts of the product and the product itself is under scope of guarantee.
- If the product fails during its guarantee period, repairing time should be added into the total guarantee period. Maximum time to repair is 30 working-days. The span will start from receiving good to service point, if there is no service point, to the vendor or dealer or agency or representation.
- The product will be repaired without charging any labour cost or spare part cost due to failures from material quality or workmanship during its guarantee period.
- The failures from user error or the articles mentioned in this document not covered by the guarantee.