Technical Specifications

Safety and environmental conditions

CE marking	LV directive 2014/35/EU RoHS directive (EU) 2015/863
Standard	EN 61010-1:2010 WEEE directive 2012/19/EU

This product is designed to be safe under the following conditions:

Location	Indoor use
Altitude	Up to 2000m
Ambient temperature	-25°C .. +55°C
Storage temperature	-20°C .. +70°C
Relative humidity	5% .. 85%, non condensing
Pollution degree	2
Degree of protection	IP20

Specifications

Standard	IEC 61869-2:2012
Rated short-time thermal current (Ith):	60 x Ipr / 1s
Rated dynamic current (Idyn)	2,5 x Ith
Continuous thermal current (Icth)	120%
Rated insulation level	0,72/3/-kV
Rated frequency	50/60Hz
Class of insulation	E (120°C)
Material	Makrolon 2405

Specifications per type

	ERM60 -E2A	ERM60 -E3A	ERM70 -E4A	ERM70 -E4B	ERM85 -E6A
Suitable for cable (ø mm)	22,7	24,5	30,5	30,5	30,6
Suitable for busbar (mm)	20 x 10 (22,7)	30 x 10 (13,5)	40 x 10 (13,8)	30 x 10 (17,8)	60 x 10

Please be aware, product liability, fulfilment to requirements and warranty are all expired when modifications on the product are made.

ELEQ reserves the right to carry out modifications on its products, in order to improve them, without prior notice.

Safety instruction

All activities for installation, commissioning and maintenance of this current transformer must be performed by qualified personnel that have the knowledge of applicable safety precautions. This guide assumes that the reader of this document has sufficient electro-technical knowledge to understand the content of this document.

General

The ERM is a current transformer (CT) and can only be used measuring electrical alternating currents. The ERM is suitable for mounting on busbar and (insulated) primary conductors in a weather protected and dry location.

Explanation of symbols

This product is designed according to the EN-IEC 61010-1:2010 standards and therefore this product meets the requirements of the Low Voltage Directive 2014/35/EU.

Read the installation guide before mounting the product. Unprofessional work activities on electrical installations may result in a threat of danger to the life and health of human beings and livestock!

Under no circumstances the secondary circuit of the CT may be opened when the CT is mounted and current is flowing in the primary circuit. High voltages may appear on the secondary terminal when this circuit is left open.

RoHS Directive (EU) 2015/863
ELEQ states that they only uses qualified components in their products from manufacturers, whose specifications meet or exceed the requirements of the European Directive for the Restriction of use of certain Hazardous Substances.

WEEE Directive 2012/19/EU
The 'crossed out wheeled bin' symbol indicates that the equipment should not be disposed as unsorted municipal waste. Contact a qualified recycler for disposal.

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83720 / EN1902

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Energy Revenue Line
Installation Guide

ERM60(N)-E2A (4M2140E(D))
ERM60(N)-E3A (4M2450E(D), 4M2451E(D), 4M2452E(D))
ERM70(N)-E4A (4M3453E(D), 4M3454E(D), 4M3455E(D))
ERM70(N)-E4B (4M3556E(D), 4M3557E(D))
ERM85(N)-E6A (4M8758E(D))

Read this installation guide before installing the product

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Always avoid working on live parts of an installation.

Mounting instruction

A flat screwdriver is required to install a current transformer (CT) of the ERM series. To connect the CT to the meter correctly, please consult the installation guide of the meter.

Assembly

Under no circumstances the secondary circuit of the CT may be opened when the CT is mounted and current is flowing in the primary circuit. High voltages may appear on the secondary terminals when this circuit is left open.

1. Ensure a safe working area during assembly, maintenance and inspection of the CT. Disconnect the power of the primary circuit and make sure it can not be enabled unintentionally.

2. Find the power direction of the bus bar or cable you want to measure. It is recommended to mount P1 side to power source and P2 side to power consumer. If the CT is installed like this, the arrow on the CT will indicate the direction of the power flow.

3. Mount the CT around the cable or busbar.
   - When the CT is on the intended position on the busbar fit it by turning both threaded rods down with the use of a screw driver.
   - When the CT is on the intended position on the cable place the rubber caps delivered separately on the threaded rods and fit it by turning both threaded rods down with the use of a screw driver.

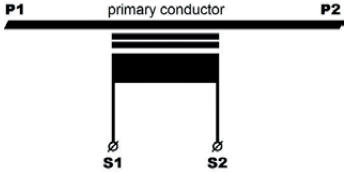
4. Connect the CT output (S1, S2) to the low impedance current input of the measurement instrument (e.g., an ammeter or current input of kWh-meter).

5. Seal the CT if necessary.

6. Check if the CT is mounted properly. Check if the wires are connected properly and firmly.

7. Enable the primary circuit if necessary.

Wiring Diagram



Maintenance and inspection

- Check whether the wires are connected firmly.
- Check whether the CT is mounted firmly.
- Remove severe pollution on the casing.

Temporarily disconnecting the CT

The secondary terminals of the CT always have to be connected to a low impedance burden such as an ammeter. When during maintenance no burden (eg. measuring instrument) is available to connect to, the two secondary terminals must be short-circuited.

Problem solving

e.g. unexpected or incorrectly values, reversed power,

- Check the settings of the meter by using the installation guide of the meter.
- Check if the CT is mounted on the intended bus bar or cable in the right direction.
- Check the value of the secondary burden (secondary leads length/diameter and meter dependent). See product sheet for the maximum burden value.

Attention

Always follow the disassembling instructions when reversing the CT.

Disassembly instruction

Flat screwdriver required for removing the CT.

1. Ensure a safe working area during disassembling the CT. Disconnect the power of the primary circuit and make sure it can not be enabled unintentionally.

2. Disconnect the wires from the CT.

3. Turn both threaded rods up.

Recycling

When the product has reached ‘end of life’, it must be recycled. Do not dispose this product as unsorted municipal waste. Contact a qualified recycler for disposal.