

Technical Specifications

Safety and environmental conditions

| | |
|------------|---|
| CE marking | LV directive 2014/35/EU RoHS directive (EU) 2015/863 EN 61010-2-032:2012 WEEE directive 2012/19/EU |
| Standard | |

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

| | |
|----------------------|---------------------------|
| Location | Indoor use |
| Altitude | Up to 2000m |
| Ambient temperature | -10°C .. +55°C |
| Storage temperature | -20°C .. +70°C |
| Relative humidity | 5% .. 85%, non condensing |
| Pollution degree | 2 |
| Degree of protection | IP20 |

The TQ is only suitable for insulated primary conductors.

Specifications

| | |
|--|---------------------------|
| Standard | IEC 61869-10 |
| Rated short-time thermal current (I _{th}) | 30 x I _{pr} / 1s |
| Rated dynamic current (I _{dyn}) | 2,5 x I _{th} |
| Rated continuous thermal current (I _{cth}) | 100% |
| Rated insulation level | 0,72/3/5kV |
| Rated frequency | 50/60Hz |
| Class of insulation | E (120°C) |
| Material (housing) | PA 6, UL94: V2 |

Specifications per type

| | TQ30 | TQ40-B | TQ40-C | TQ50-E | TQ50-L |
|--------------------|--------|--------|--------|--------|-----------|
| Suitable for cable | Ø 18mm | Ø 18mm | Ø 28mm | Ø 42mm | 2x Ø 42mm |

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

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 TQ split-core with voltage output is a low power (split-core) current transformer (LPCT), and can only be used measuring alternating currents. The TQ is suitable only for mounting on insulated primary conductors in a weather protected and dry location.

Explanation of symbols



This product is designed according to the EN 61010-2-032:2012 standards and therefore this product meets the requirements of the Low Voltage Directive 2014/35/EU.



Do not apply around or remove from UNINSULATED HAZARDOUS LIVE conductors, which may render electric shock, electric burn, or arc flash.



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!



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.



mastering electricity
worldwide

TQ Split-Core Current Transformer Installation Guide



TQ30
TQ40-B
TQ40-C
TQ50-E
TQ50-L

Read this installation guide before installing the product

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Always avoid working on live parts of an installation.

Mounting instruction

No special tools are required to install a current transformer (LPCT) of the TQ series. To connect the LPCT to the meter correctly, please consult the installation guide of the meter.



Assembly

1. Ensure a safe working area during assembly, maintenance and inspection of the CT. If necessary, disconnect the power of the primary circuit and make sure it can not be enabled unintentionally.
2. Find the primary direction of the cable you want to measure. It is recommended to mount the P1 side to power source and the P2 side to power consumer. If the CT is installed like this, the arrow on the LPCT will indicate the direction of the power flow.

Attention

Do not touch the core surfaces. Removing the petroleum jelly from the core halves will make the halves vulnerable to damages. Avoid dust on the core surfaces.

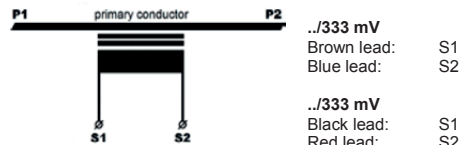
For mounting the TQ50

For the TQ50-E and the TQ50-L the top-part of the transformer can be removed entirely, which makes it even simple to install the transformer. **Attention:** Make sure both transformer parts stick together when you separate both parts. When you mix transformer parts up the measurement class can not be guaranteed.

3. Connect the secondary leads (S1, S2) to the voltage input of the measurement instrument (e.g., a voltage meter or voltage input of kWh-meter).

4. Close the LPCT only when you are sure that the secondary leads are connected to the voltage input of the measurement instrument. The LPCT is properly closed when you hear a 'click'.
5. Fasten the product to the primary cable using the supplied cable ties. Ensure that the cable is in the middle
6. Check if the LPCT is mounted and closed properly. Check if the secondary leads are connected properly and firmly.
7. Enable the primary circuit if necessary.

Wiring Diagram



Maintenance and inspection

- Check whether the secondary leads are connected firmly.
- Check whether the LPCT is closed properly.
- Check whether the LPCT is mounted firmly.
- Remove severe pollution on the casing. Contact with moisture, especially with the core, must be avoided.

Attention

Do not touch the core surfaces by hand: skin acid may damage the core.

Temporarily disconnecting the LPCT

There is no risk of high voltages on the secondary leads due to the internal shunt. It is still advised to work in a powerless situation.

Problem solving

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

- Check the settings of the meter by using the installation guide of the meter.
- Check whether the LPCT is mounted on the intended cable in the right direction.

- Check if the LPCT is closed properly.
- Check the value of the secondary burden (secondary leads length/diameter and meter impedance). See product/data sheet for the maximum burden value.
- If previous points did not solve the problem: Check carefully whether there is dust or other pollution present between the two parts of the core. In case there is pollution, the core surfaces can be cleaned with a lint free cloth and then protected with an extremely thin layer of acid free petroleum jelly (Vaseline).

Attention

Always follow the disassembling instructions when reversing the LPCT.



Disassembly instruction

Tools are only required for removing the cable ties of the LPCT.

1. Ensure a safe working area during disassembling the LPCT. If necessary, disconnect the power of the primary circuit and make sure it can not be enabled unintentionally.
2. Open the LPCT.
3. Disconnect the secondary leads from the measurement instrument.
4. Remove the cable ties. Pay attention not damage the insulation of the primary conductor when removing the cable ties. Remove the CT.
5. Enable the primary circuit if is necessary.

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.