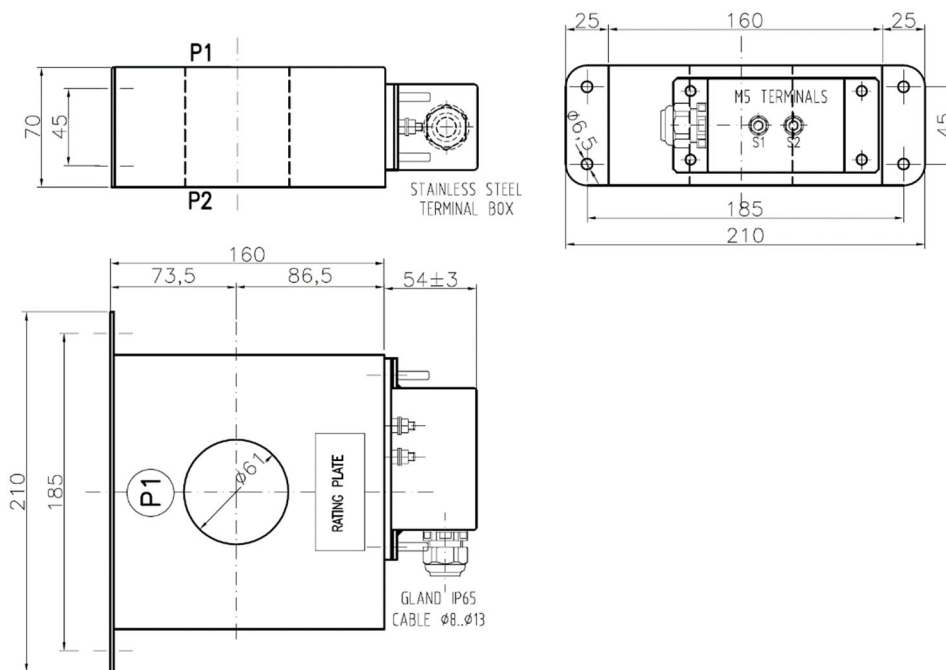


LOW VOLTAGE TYPE **TCE/1593** RING CURRENT TRANSFORMER - OUTDOOR INSTALLATION

HANDLING, STORAGE, TESTING, INSTALLATION and MAINTENANCE INSTRUCTIONS

INTRODUCTION

These instructions apply to TCE/1593 ring type low voltage current transformer for outdoor installation. These current transformers are compliant to IEC 61869-2 Standards.



RECEIPT OF THE GOODS

On receipt of the goods, carefully verify the packing conditions and after unpacking verify the integrity of the product. If there are damages, a claim must be raised to the forwarder. S.T.E. must be informed as well.

STORAGE and HANDLING/MOVING:

Storage indoor, in not polluted air and with normal level of humidity. Air temperature must be included between -40°C and +80°C.

Avoid any shocks. Shifting and transport can be done by hand due to light weight of the product.

INSPECTION BEFORE INSTALLATION

Before installation, transformers should be inspected for physical damage that may have occurred during shipment or handling. Transformers should be dry and the surface should be clean.

TESTING AND INSTALLATION:

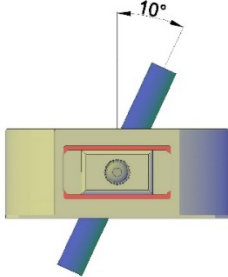
The operations must be done by expert and qualified technicians, respecting the a.m. IEC standard and relevant safety prescriptions.

To identify the product and properly connect the CT, check the rating plate and the terminal/polarity markings.

Before putting in operation the current transformer, check the following points:

1. Always consider an instrument transformer as a part of the circuit to which it is connected, and do not touch the leads and terminals or other parts of the transformer unless they are known to be adequately grounded.
2. Always ground the metallic cases, frames, bases, etc., of instrument transformers. The secondaries should be grounded close to the transformers. However, when secondaries of transformers are interconnected, there should be only one grounded point in this circuit to prevent accidental paralleling with system grounding wires.
3. Do not open the secondary circuit of a current transformer while the transformer is energized and do not energize while the secondary circuit is open. Current transformers may develop open-circuit secondary voltages which may be hazardous to personnel or may damage the transformer or equipment connected in the secondary circuit.
4. Identify the product, check the rating plate and terminal markings on the current transformer and properly connect the current transformer.
5. Check that connections were properly performed:
 - a. Secondary terminals are connected to the rated load or that they are short-circuited.
 - b. one secondary terminal is earthed
 - c. all the data indicated in the rating plate (rated primary and secondary current, rated frequency, rated burden, accuracy class) are respected.

Primary cable positioning:

<p>The primary cable has to be placed in the center of the primary hole of the CT. Cable position should be perpendicular to the CT, if it isn't possible, the maximum allowed inclination is 10 degrees from the perpendicular.</p>	 <p>(sample picture)</p>
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MOUNTING

Make sure that the secondary leads are twisted closely together and carried out without passing through the field of the primary conductors. It is not necessary that the primary conductors exactly fill the window, but the primary conductors should be centralized.

POLARITY

When wiring instrument transformer circuits, it is necessary to maintain the correct polarity relationship between the line and the devices connected to the secondaries. For this reason, the relative instantaneous polarity of each winding of a transformer is indicated by a marker.

Where taps are present, all terminals are marked in order. The primary terminals are P1 and P2. The secondary terminals S1 and S2. The marker P1 always indicates the same instantaneous polarity as S1.

When connecting instrument transformers with meters, relays or other devices, refer to the instructions furnished with the device involved.

MAINTENANCE:

Annual check:

- External aspect of the current transformer,
- Tightening check of terminals and connections,
- Normal cleaning of the external surface.