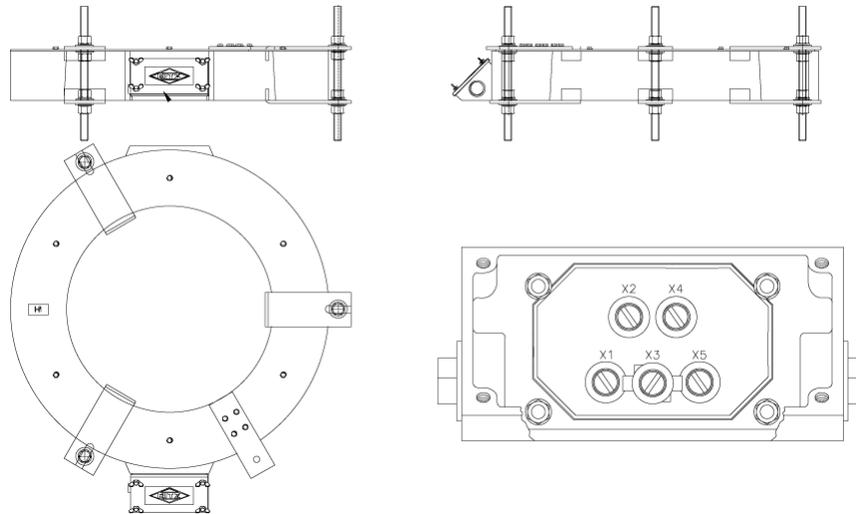




Instrument Transformers

INSTRUCTION MANUAL IL-OBCT-R1

SLIP-OVER CURRENT TRANSFORMER OBCT



1.0 General Description

The OBCT current transformer is a dry-type, slip-over unit designed for mounting over insulated bushings on electrical apparatus, like power transformers, circuit breakers, and potheads. The rated voltage class of the OBCT is 600V.

2.0 Design Details

2.1 Design

The core(s) and secondary winding(s) are encapsulated in either a polyurethane or epoxy insulation system which is UV inhibited. The outer insulation material is designed to operate across a wide temperature range.

2.2 Secondary Terminal Box

The weatherproof terminal box is made of cast, marine-grade aluminum construction. The box is detachable from the transformer body and has an industry standard hole-pattern. The box has ventilation holes to avoid condensation. One 1" NPT conduit opening is provided on each side of the terminal box and one 1" knockout is provided on the bottom of the box. The secondary terminals are bronze, clamp-type, with a large diameter hole. A bronze, pivoting short-circuit device is an integral part of the secondary terminal arrangement. The proper torque value for secondary terminals is 4 foot-pounds.

2.4 Nameplate

The nameplate is made from marine-grade aluminum and is permanently fixed to the unit near the secondary terminal box.



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3.0 Installation

3.1 Transport and Lifting

The transformer should be lifted by means of a fabric hoisting sling through the window opening. Care should be taken not to damage the outer insulation, terminal box, or ground shield (if present).

3.2 Inspection

Before installation, the transformer should be inspected for physical damage that may have occurred during shipment and handling. Consult the factory should any damage be noted.

3.3 Mounting

The OBCT can be ordered with a variety of mounting options. The standard mounting option consists of 3 or 4 mounting bracket sets, with each set consisting of 2 brackets and an all-thread rod. The bracket sets can be adjusted around the unit as needed. "Z" brackets can be ordered or field fitted to tie into the bushing mounting flange.

For direct placement on top of tanks of transformers and circuit breakers, the typical method is to simply place the unit on top of the tank with no additional mounting hardware.

3.4 Secondary Connection

Connect the secondary to a suitable burden (meter, relay, etc...). If a secondary winding is not used, ensure that it is short-circuited using the provided short-circuit device or by connecting a lead between the terminals of the winding. If the secondary winding is a dual-ratio or multi-ratio design, ensure that the full winding is short-circuited.

DANGER: NEVER OPERATE THE CURRENT TRANSFORMER WITH A SECONDARY WINDING OPEN-CIRCUITED, AS HIGH-VOLTAGES COULD BE INDUCED!

3.5 Ground Shield

The OBCT should be ordered with the optional aluminum ground shield whenever the OBCT is positioned close to, or in, the strike distance of a bushing or insulator. The ground shield is fitted with a 1-hole ground pad, which should be connected to the station ground. Depending on the design, the OBCT may come with the ground shield already attached, or it may come as a separate item to be attached on-site using included RTV material.

4.0 Maintenance

The transformer is designed to be maintenance-free for the life of the unit.

5.0 Testing

5.1 Accuracy Testing

Current transformer cores can become magnetized when subjected to DC (e.g. resistance measurements, polarity checks, etc...). It is recommended that current transformers be demagnetized prior to energization, especially for metering applications. If needed, consult the factory for demagnetization instructions.