

# TWA-TRT Safety Switchbox

- Enables safe switching of test leads between TWA Tap Changer & Winding Analyzers and TRT Transformer Turns Ratio Testers
- No need to change any connections to the transformer terminals
- Test leads can be safely grounded at any time



## Description

The TWA-TRT Safety Switchbox is an optional accessory for TWA series of Tap Changer & Winding Analyzers and TRT series of Transformer Turns Ratio Tester, which share the common test leads. It ensures the safety of the operator during the change of test leads from one instrument to the other by safely grounding the test leads during the change of instruments.

The TWA and TRT instruments, together with the safety switchbox, enable the measurement

of three-phase transformer winding resistance, DVtest graph, turns ratio, excitation current, phase angle, magnetic balance, and also to detect the transformer vector group and safely demagnetize the transformer, with one-time connection and disconnection to 6-8 transformer terminals. There is no need to change any connections on the transformer between any of these tests, all changes of connection can be safely performed on the ground.

## Connecting the TWA and TRT instrument to the Switchbox

The switchbox is placed between the TRT (or TWA) instrument and the transformer. A special grounding state can be switched on by turning the switch on the front panel to “ground” position. While this state is selected,

the cables leading to the transformer are grounded and the instruments can be safely replaced on the ground, without any need to climb to the top of the transformer.



## Features

### 1 - Instrument connection

Connects to the active instrument using provided switchbox cables

### 2 - Status signals

Inform the operator about the current status

### 4 - Operational mode switch

Switches the operational modes between "TRT", "Ground" and "TWA"

### 5 - Instrument supply output

Used for powering the TWA/TRT  
90 V – 264 V AC; 50 Hz – 60 Hz

### 6 - Protective earth connector

90 V – 264 V AC; 50 Hz – 60 Hz

### 7 - Mains power supply input

90 V – 264 V AC; 50 Hz – 60 Hz

### 3 - Transformer connection

Connects to the transformer using the instrument test leads



## Technical Data

### Measurement

- Test current 5 mA – 40 A DC
- Test voltage up to 50 V DC  
up to 250 V AC (single-phase)  
3 x 250  $\sqrt{3}$  V AC (three-phase)

### Dimensions and weight

- Dimensions (W x H x D) 405 x 170 x 335 mm / 15.9 x 16.7 x 13.1 in
- Weight (without cables) 4.5 kg / 9.9 lbs

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## Accessories

- H connection between instrument and switchbox, 4 x 0,8 m
- X connection between instrument and switchbox, 4 x 0,8 m
- Ground cable
- Mains power cable

*All specifications herein are valid at ambient temperature of + 25 °C and recommended accessories.  
Specifications are subject to change without notice.*