

Measuring Bridge for Testing of Voltage Transformers

WM 303 - U



General

The measuring bridge WM 303-U can be used in transformer test laboratories for manual, semiautomatic and automatic tests of voltage transformers.

Features

- The use of 20-bit-dual-AD-converters is guaranteeing high precise measurement of the N- and X-current.
- With this measurement principle the ratio error and the phase displacement will be measured with very high accuracy.
- The WM 303-U will measure the absolute voltage values of the standard transformer and the transformer under test. Therefore an adjustment of the secondary voltage is possible by using an internal programmable divider is possible.
- The WM 303-U is controlled by an external PC with Windows-based control software.

Technical Data

Measuring bridge	WM 303 - U
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General	
Power supply	230 VAC, 185 V ... 265 V, 47 Hz ... 65 Hz
Power consumption	approx. 6 VA
Voltage ranges	480 - 240 - 120 - 60 - 30 - 15 - 7.5 - 3.75 V automatic and manual ranging ²
Dimensions (HxWxD)	86 x 483 x 260 mm
Weight	approx. 4.5 kg
Technical Specifications	
2 measuring voltage inputs	2 ... 480 V ¹
Nominal voltage of the standard PT (N)	2 ... 480 V ¹
Nominal voltage of the normal inductive PT (X)	2 ... 480 V ¹
Frequency	15 ... 65 Hz
Resolution ratio error	0.0001 %
Resolution phase angle error	0.001 min
Resolution voltage measurement	0.01 %
Uncertainty voltage measurement	0.1 % of range
Interface	1 RS232
Divider Range	$T = \frac{U_{PX}}{U_{SX}} : \frac{U_{PN}}{U_{SN}} = 0.5...2$
Normal PT	
Uncertainty of ratio measurement	$\pm 100 \text{ ppm}^3$
Uncertainty of phase angle measurement	$\pm 0.3 \text{ min}^4$
Inherent Burden N side	300 k Ω
Inherent burden X side	300 k Ω

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¹ With Option 01 (in cooperation with special board 5511) : 5 mV ... 480 V

² With Option 01 (in cooperation with special board 5511) : additional ranges 10 mV, 100 mV, 1 V

³ With Option 01 (in cooperation with special board 5511) : 20 mV ... 2 V ± 200 ppm

⁴ With Option 01 (in cooperation with special board 5511) : 20 mV ... 2 V ± 1 min