

MSVT 20

Multi Secondary Voltage Transformer for 20 positions



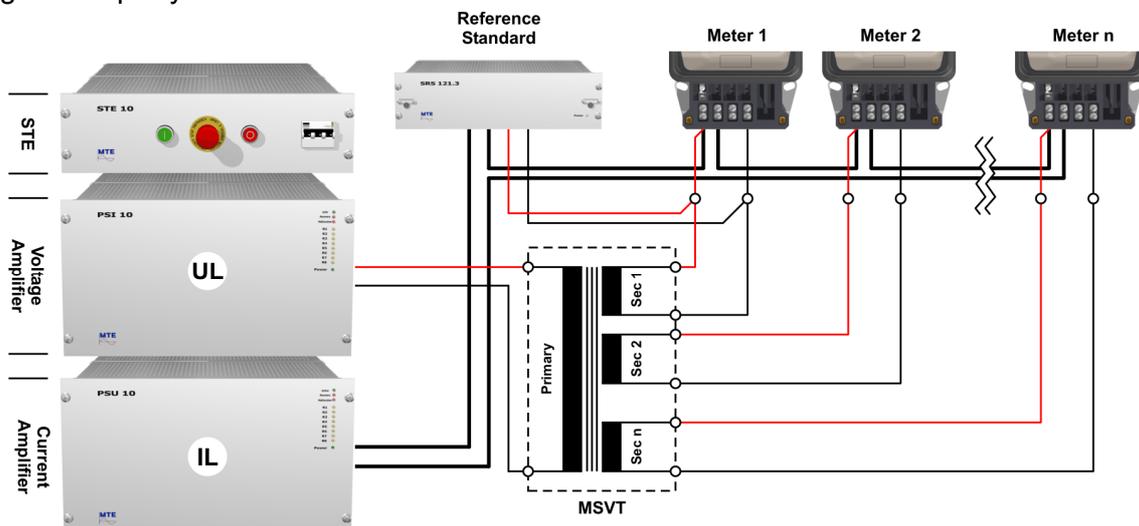
With ever increasing frequency meter manufacturers and meter operators are producing and using meters that do not allow the links between the current and voltage measuring circuits (I-P links) to be opened for test or calibration purposes. This is done to prevent fraud and to reduce the manufacturing costs.

For the testing of multiple single-phase meters with fixed links between the voltage and current path on a test bench galvanic isolation must be provided at each test position. This can be done with isolation transformers for the voltage path or the current path at each position.

At 1-phase test benches normally for reasons of costs a voltage transformer with several isolated secondary windings (known generally as a multi-secondary voltage transformer MSVT) is used. The number of secondary windings is at least equal to the number of meters under test.

The MSVT 20 has a ratio 1:1 (Primary: 1 x 230 V : Secondary 22 x 230 V, 50 Hz or 60 Hz) and is designed for the use with a 1-phase 20 position test bench.

The reference standard is connected to the first secondary winding in parallel to the first meter. The influence of the MSVT on the voltage accuracy is therefore defined by the differences in ratio and phase angle errors between the secondary windings. Minimum errors are achieved, if all secondary windings are equally loaded.



Technical Data MSVT 20

General		Description
Power supply		None (passive device)
Housing		Metal ¹
Dimensions	Width x Height x Depth	500 x 340 x 500 mm
Weight		approx. 117 kg
Ambient temperature	Operating range	-10 °C ... +50 °C
Storage temperature		-20°C ... +60°C
Relative humidity		≤ 85 % at Ta ≤ 21°C
Relative humidity at 30 days / year		≤ 95 % at Ta ≤ 21°C

Safety		
CE		
Maximum test voltage	Primary to Secondary	3 kV AC
	Secondary to Secondary	500 V AC

Operating Range		
Ratio	Primary : Secondary	1 : 1
Rated voltages		230 V, 240 V ± 20 % ²
Voltage range		110 V ... 288 V
Frequency		45 ... 65 Hz
Number of windings	Primary	1
	Secondary	22
Output power	@ Rated Voltage	20 VA / Winding (PF: 0 .. 1)

Accuracy		
Secondary to Secondary	Ratio error:	≤ ± 0.05 %
any load relation	Phase angle error:	≤ ± 1 min
Primary to Secondary	Ratio error:	typ. 0.1 %
depending on load	Phase angle error:	typ. 2 min

Notes

- The MSVT 20 can be delivered standalone in a case with wheels or directly built into the cabinet of the test bench.
- Other rated voltages (e.g. 120 V) can be manufactured on request.

