VITAS 2772

Voltage Instrument
Transformer Analyzing Set

Datasheet

HAEFELY

Current and voltage – our passion

Designed by
Tettex

General Description

The VITAS 2772 is a fully digital voltage instrument transformer (VT) measuring bridge. It combines the knowledge gathered over 70 years in this field, with state-of-the-art technology to exceed industry requirements.

The VITAS 2772 measures ratio error, phase error and excitation voltage according to the latest IEC and ANSI standards.

Test objects and nominal transformer with large differences in ratio can be measured with full accuracy, reducing the number of reconnections while testing.

The VITAS 2772 specified accuracy is independent of excitation voltage or reference environmental conditions (temperature & humidity) and guarantees high accurate results under any circumstance.

The easy-to-use windows-based GUI (Haefely CaMS™ based) guarantees short learning times and includes additional features like the scope, which shows the measurement wave shapes in real time to detect potential errors while measuring.

The device can be remote controlled when being used in automated test systems, and test reports can be easily generated after the test.

When required (optional) an SCS calibration certificate according to IEC17025:2018 performed by the Swiss Federal Institute of Metrology (METAS) can be provided.

Features	Advantages
▪ **High accuracy** – independent of temperature or excitation voltage	☑ **Trustable results:** Measurement results are reliable even if measurements are done at non reference conditions, for example in the production area.
▪ **Extremely large k factor** (k-factor is the difference between ratios of nominal transformer and test object)	☑ **Less operations and wider measuring range** extends the capabilities of the available laboratory and reduces the number of operations.
▪ **Computer** with Haefely **CaMS™** user interface. ▪ Automatic error limits according to standards	☑ **No need of additional computers or data collection software.** Control and data collection can be done using any windows-based computer. Pass fail indications are possible.
▪ **Fast** stabilization time ▪ Controls Haefely electronic burdens.	☑ **Faster measurements**, the fast stabilization time (< 1 second) and remote control of the electronic burdens reduces drastically the testing time.
▪ **Optically decoupled** from operator as fiber optic cable is the data connection to the computer.	☑ **Safer operation.** Operator is galvanically isolated from measuring bridge increasing its safety**.**
▪ **Scope function** – waveshapes of the measured signals shown in real time. ▪ **Datalogger** – readings can be collected and presented graphically to see deviations.	☑ **Additional graphical test information** allows operator to detect connecting or setup errors quickly and avoids damaging the test object.
▪ **Compact**, reliable, and EMC hardened design, IP50	☑ **Front end installation.** Device can be installed in the HV laboratory reducing the connecting cables length and installation time.

Applications

- Accuracy test of voltage instrument transformers

Scope of Supply

- Device VITAS 2772
- FiberLink – Optical to USB converter
- 20 m Harting fiber optic cable
- USB stick with CaMS™ application software
- Operating Manual and QuickStart Guide
- Accessories

Technical Data

Accuracy Limits				
	Input voltage (U_N,U_X)	Ratio Error	Phase Error	Amplitude Error
Reference condition	0.3 V … 240 V 240 V … 460 V	± 60 ppm ± 120 ppm	± 0.05 min	± 0.1 %
Full operating range	0.01 V … 510 V	± 200 ppm	± 0.5 min	± 0.1 %
Input impedance	968 kΩ (± 0.1%)			

Conditions		
	Reference condition	Full operating range
Temperature	10 °C … 40 °C	0 °C … 50 °C
Ratio of secondary U_N / U_X	0.1 … 10	0.01 … 100
Fundamental frequency	45 Hz … 65 Hz	

Connectors	
Fiber-optic	2 x HARTING optic connector, Han 4A-SC-Fe, SC type
Voltage inputs (U_N and U_X)	4 x Binding Post with 4mm Safety Banana connectors
AUX	Ethernet 10/100
FiberLink converter	HARTING optic connector, Han 4A-SC-Fe, SC type, Ethernet 10/100, USB 2.0

Environmental, Mechanical and Power Supply	
Storage temperature	-20 °C … +80 °C
Humidity	20 … 90 % r.h. (non-condensing)
Dimensions (W x D x H)	400 x 400 x 140 mm (15.7 x 15.7 x 5.5 in)
Weight	7.8 kg (17.2 lb)
Power supply	90 … 264 VAC, 50/60Hz, 30 VA

PC, Screen Resolution and Operation System Requirements	
PC min. configuration	Intel Core i3® / AMD Athlon II X2® or better, 1 GB RAM, Ethernet / USB 2.0
Screen resolution	1280 x 800 (WXGA)
Operation system	MS Windows 10 or 11, 64bit
Remote access to CaMS™	Ethernet TCP/IP, SCPI commands

Applicable Standards	
General	Specifications conform to the standards / recommendations of IEC 61869-3 [VT], IEC 61869-4 [CVCT] (VT part), IEC 61869-5 [CVT], IEEE Std C57.13 (VT part)
CE conformity	EMC Directive 2014/30/EU and RoHS Directive 2011/65/EU

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