

CITAS 2771

Current Instrument Transformer Analyzing Set

Datasheet



HAEFELY

Current and voltage – our passion

Designed by



General Description

The CITAS 2771 is a fully digital current instrument transformer (CT) measuring bridge. It combines the knowledge gathered over 70 years in this field, with state-of-the-art technology to exceed industry requirements.

The CITAS 2771 measures ratio error, phase error and excitation current according to the latest IEC and ANSI standards.

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

The CITAS 2771 specified accuracy is independent of excitation current 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.

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

- **High accuracy** – independent of temperature or excitation current

- **Extremely large k-factor** (k-factor is the difference between ratios of nominal transformer and test object)

- **Computer** with Haefely **CaMS™** user interface.
- Automatic error limits according to standards

- **Fast** stabilization time
- Controls Haefely electronic burdens

- **Optically decoupled** from operator as fiber optic cable is the data connection to the computer

- **Scope function**– waveshapes of the measured signals shown in real time.
- **Datalogger** – readings can be collected and presented graphically to see deviations.

- **Compact**, reliable, and EMC hardened design, IP50

Advantages

- ☑ **Trustable results:** Measurement results are reliable even if measurements are done at non reference conditions, for example in the production area.

- ☑ **Less operations and wider measuring range** extends the capabilities of the available laboratory and reduce the number of operations.

- ☑ **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.

- ☑ **Faster measurements**, the fast stabilization time (< 1 second) and remote control of the electronic burdens reduce drastically the testing time.

- ☑ **Safer operation.** Operator is galvanically isolated from measuring bridge increasing its safety.

- ☑ **Additional graphical test information** allows operator to detect connecting or setup errors quickly and avoid damaging the test object.

- ☑ **Front end installation.** Device can be installed in the HV laboratory reducing the connecting cables length and installation time.

Applications

- Accuracy test of current instrument transformers

Scope of Supply

- Device CITAS 2771
- FiberLink – Optic 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 current (I_N , I_X)	Ratio Error	Phase Error	Amplitude Error
Reference condition	0.01 A ... 10 A	± 100 ppm	± 0.1 min	± 0.1 %
Full operating range	0.001 A ... 10.6 A	± 0.1 %	± 1 min	± 0.1 %
Input impedance	< 35 m Ω			

Conditions		
	Reference condition	Full operating range
Temperature	10 °C ... +40 °C	0 °C ... +50 °C
Ratio of secondary I_N / I_X	0.1 ... 10	0.01 ... 100
Fundamental frequency	45 Hz ... 65 Hz	

Connectors	
Fiber-optic	2 x HARTING optic connector, Han 3A-gw-M20, SC type
Current inputs (I_N and I_X)	4 x Binding Post with 4mm Banana connectors
CTM input	HARTING PushPull V4-10P-RA
AUX 1	HARTING PushPull V4-10P-RA
AUX 2	Ethernet 10/100
FiberLink converter	HARTING optic connector, Han 3A-gw-M20, 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	8 kg (17.6 lb)
Power supply	90 ... 264 VAC, 50/60 Hz, 35 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 61869-2 [CT], IEC 61869-4 [CVCT] (CT part), IEEE Std C57.13 (CT part)
CE conformity	EMC Directive 2014/30/EU and RoHS Directive 2011/65/EU

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