3695

Programmable Electronic Voltage Burden

HAEFELY HIPOTRONICS has designed a programmable electronic voltage burden for efficient testing of instrument transformers.

In conjunction with the type 2767 automatic instrument transformer test set and the type 4860 electronic voltage divider, the system makes it possible to integrate burdens into a computer-controlled testing system.

The electronic voltage burden replaces traditional burdens with passive resistances and inductances.

The wide range of programmable impedances makes it possible to emulate most existing national and international standard burdens as well as customer-specific values.



FEATURES AND BENEFITS

- ☑ The **universal voltage burden** is suitable for standard voltage ratings. Power levels are selectable over a wide range (up to **75 VA**) with cos β = 0.1 to 1 at 50 and 60 Hz.
- ☑ Cost-effectiveness: many classical passive burdens can be replaced by a single electronic voltage burden.
- ☑ The **power range can be extended to 400 VA** with an additional passive voltage burden.
- ☑ Burden values can be retrieved from stored tables based on **IEC 60044-2, ANSI C57.13** and VDE 0414 Part 2.
- ☑ **Nine individual burden settings** (S_N, cos β) can be stored and retrieved as needed.
- ☑ **High accuracy of 1%** - even with additional passive burden connected.
- ☑ The internal resistance of the measuring system can be parameterised from the keyboard and is automatically compensated. The unit can thus be used with a variety of instrument transformer test sets, such as Tettex types 2767 or other makes.
- ☑ Prompting for interactive input of parameters makes operation simple.
- ☑ The unit can be fully integrated into an automatic measurement system via the RS – 232 or optional IEEE 488 GPIB interface.

APPLICATIONS

The programmable electronic voltage burden 3695 is mostly used by:

- Manufacturer of Voltage Instrument Transformers
- Calibration Laboratories
- National Standards Laboratories
- On-Site Testing of High Voltage Instrument Transformers

TECHNICAL SPECIFICATIONS

Rated power S_N In increments of	0; 1 to 75 VA 0.01 VA
Power factor cos β In increments of	1 to 35 VA: 0.1 to 1 ind. 35 to 75 VA: 0.5 to 1 ind. 0.01
Rated voltages U_N All values with factors of	100 / 110 / 115 / 120 / 200 / 230 V 1/1, 1/√3 and 1/ 3
Voltag range	2 to 190% U_N
Maximum burden current	12 A
Test voltage frequency	48 to 62 Hz
Error thresholds:	
- under reference conditions: Test voltage frequency Resistance Δ R / IZI Reactance Δ X / IZI	 50 or 60 Hz ± 1 % * ± 1 % *
- under rated service conditions: Resistance Δ R / IZI Reactance Δ X / IZI	 ± 3 % * ± 3 % *
- at 0 VA setting	S < 0.05 VA
Cited error thresholds also apply when additional burden is connected. Reference and rated service conditions according to IEC 359 and operating instructions.	
Line power	230 or 115 V, 50 or 60 Hz
Power consumption	Approx. 620 VA
Temperature range	+5 to +40 °C
Dimensions (W x H x D)	500 x 320 x 470 mm
Weight	Approx. 50 kg

* Related to the corresponding impedance Z = R + i X , I Z I = U_N^2 / S_N. Excitation < 2% U_N : General error limit ±5 %

SCOPE OF SUPPLY

Programmable electronic current burden 3695 and power cable.
Please specify line voltage when ordering (230 V / 50 Hz or 110 V / 60 Hz).

ACCESSORIES AND OPTIONS

3697	Remotely controlled additional passive voltage burden with automatic detection of possible burden range S_N, U_N and cos β by 3695. Expands the range to max. 400 VA. Rated power S_N 75 to 400 VA Rated voltage U_N 100 / 110 V All values with factors of 1/1, 1/√3 and 1/ 3 Power factor cos β 0.8 to 0.85 Test voltage frequency 50 and 60 Hz
3695 / 1	Interface (IEEE 488 GPIB) for remote control by external computer, incl. data cable. Disables standard RS – 232 interface.

INSTRUMENT TRANSFORMER TESTING EQUIPMENT



2767

Automatic Instrument Transformer Test Set

Highly accurate test set for accuracy measurements of voltage and current instrument transformers according IEC60044, ANSI C57.13 and others.

3691

Electronic Current Burden

Programmable electronic current burden according IEC, ANSI or user defined values. Up to a rated power of 75 VA with 1% accuracy. Can be extended to 200 VA with external burden Tettex 3692.





3697

Additional Voltage Burden

Remotely controlled additional voltage burden
Range expansion to max. 400 VA
1% accuracy

3692

Additional Current Burden

Remotely controlled additional current burden
Range expansion to max. 200 VA
1% accuracy over the full range





4860

Standard Electronic Voltage Divider

Electronic voltage divider used as a variable comparison standard (replacement of inductive nominal voltage transformers). Voltage Ranges from 1 kV to 800 kV or higher.

4761 / 4764

Current Comparators

Electronically compensated current comparator with an accuracy of 10 ppm and 0.05 min. User settable ratios of 1 / 5 A to 1000 or 5000 A.



OFFICES:

Europe
Haefely Test AG
Birsstrasse 300
4052 Basel
Switzerland
☎ + 41 61 373 4111
🖷 + 41 61 373 4912
sales@haefely.com

China
Haefely Test AG Representative Beijing Office
8-1-602, Fortune Street
No. 67, Chaoyang Road, Chaoyang District
Beijing, China 100025
☎ + 86 10 8578 8099
🖷 + 86 10 8578 9908
sales@haefely.com.cn

North America
Hipotronics, Inc.
1650 Route 22 N
Brewster, NY 10509
United States
☎ + 1 845 279 3644
🖷 + 1 845 279 2467
sales@hipotronics.com

HAEFELY HIPOTRONICS has a policy of continuous product improvement. Therefore we reserve the right to change design and specification without notice.

V18.05