



3691 ELECTRONIC CURRENT BURDEN

Programmable Electronic Current Burden



PROGRAMMABLE ELECTRONIC CURRENT BURDEN

The programmable electronic current burden of Tettex Instruments is designed for efficient testing of current instrument transformers. When it is used with a type 2767 instrument transformer test set, the burden can be integrated in a computer controlled test system. The electronic current burden can replace traditional passive resistance and inductance types. With the wide programmable impedance range provided, most national and international standard burdens or specific customer burden values can be set.

FEATURES AND BENEFITS

- **Universal current burden** for standard current ratings, freely adjustable power steps up to 75 VA, $\cos \beta = 0.5$ to 1 at 50 and 60 Hz.
- A cost-effective solution, since a single electronic burden can replace most conventional passive burdens.
- The power range can be extended to 200 VA with additional passive burdens.
- Burden values can be retrieved from the stored IEC60044 and ANSI C57.13 standard tables.
- Storage of nine individual burden settings (S_N , I_N , $\cos \beta$), which can be retrieved as required.
- 1% accuracy (even with additional passive burden).
- Internal test set resistance, input cable and contact resistances are compensated by four-conductor measurement. This electronic current burden can be used too with different current transformer test set, i.e. Tettex types 2711/22, 2761 or from other suppliers.
- Simple use by interactive parameter entry.
- The burden can be fully integrated in an automatic measurement process via an optional interface.

APPLICATIONS

The programmable electronic voltage burden Tettex 3691 is mostly used by:

- Manufacturer of current instrument transformers
- Calibration laboratories
- National Standards Laboratories
- On-Site Testing of high voltage current instrument transformers

SPECIFICATIONS

Rated power S_N	0; 1 to 75 VA
In increments of	0.01 VA
Power factor $\cos \beta$	0.5 to 1 ind.
In increments of	0.01
Rated current I_N	1 / 2 / 5 A
All values with factors of	1/1, 1/√3 and 1/3 for $I_N = 1/\sqrt{3}$ A: $S_N = \max. 40$ VA (at 200 % I_N)
Operating range	1 to 200% I_N Up to max. burden voltage $U_{k-1} = 150$ V
Test voltage frequency	48 to 62 Hz
Error thresholds:	
- under reference conditions:	
Test current frequency	50 or 60 Hz
Resistance $\Delta R / Z $	± 1 % *
Reactance $\Delta X / Z $	± 1 % *
- under rated service conditions:	
Resistance $\Delta R / Z $	± 3 % *
Reactance $\Delta X / Z $	± 3 % *
- at 0 VA setting	$S < 0.05$ VA
Reference and rated range of use according to IEC 359 and operating instructions. Stated error limits also apply with additional burden.	
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

*) $|Z| = \text{impedance} = IR + jXI$

SCOPE OF SUPPLY

Programmable electronic current burden 3691, power cable.
Please specify line voltage when ordering (230 V / 50 Hz or 110 V / 60 Hz).

ACCESSORIES & OPTIONS

3692

Remotely controlled additional passive current burden with automatic detection of possible burden range S_N , U_N and $\cos \beta$ by 3691. Expands the range to max. 200 VA.

Rated power S_N	75 to 200 VA
Rated current I_N	1 / 5 A
All values with factors of	1/1, 1/√3 and 1/3
Power factor $\cos \beta$	0.5 to 1
Test voltage frequency	50 and 60 Hz

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Interface (IEEE 488 GPIB) for remote control by external computer, incl. data cable.
Disables standard RS – 232 interface.

Tettex Instruments offers a complete portfolio for instrument transformer testing



2767

Automatic Instrument Transformer Test Set

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



3695

Electronic Voltage Burden

Programmable electronic voltage burden according to IEC, ANSI or user defined values. Up to a rated power of 75 VA with 1% accuracy. Can be extended to 400 VA with external burden Tettex 3697.



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.

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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.



5270

High Voltage Power Supplies

As part of the Haefely Test AG, Tettex can offer a variety of high voltage sources.

5260

High Current Power Supply

Current power supply from 2 kA up to 10 kA (higher on customer request) for instrument transformer testing.



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 High Voltage
Test Systems