



**Caneco HT is a conception and inspection software of private high voltage electrical installations according to IEC 60909.**

It defines short circuits currents, calculates cables, and helps set the protections.

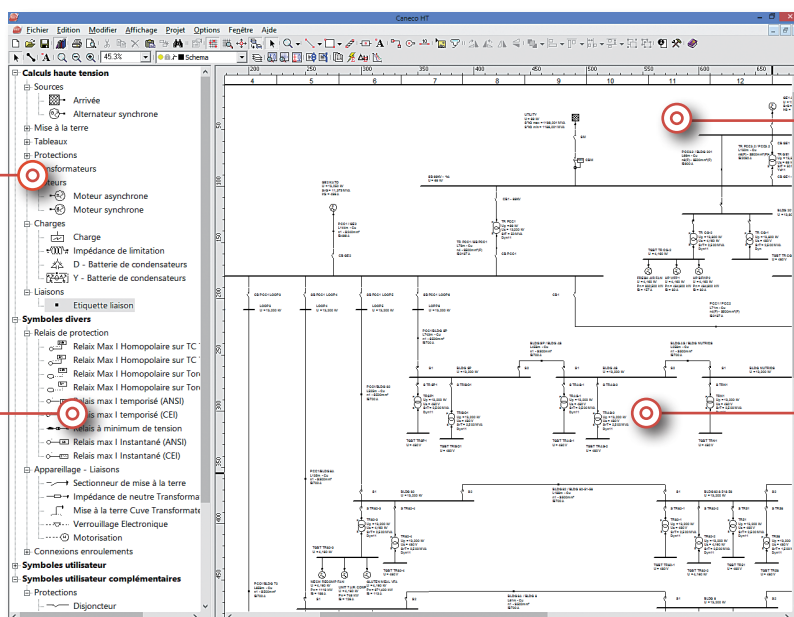
# Calculation and schematics of HIGH VOLTAGE ELECTRICAL INSTALLATIONS

## Test the compliance of your installation

Caneco HT guarantees the conformity of the calculations with the electrical standards IEC 60909, NF C 13-200 or VDE 276. Create all the calculation documents needed for the good technical specification of the equipments.

## Choose the size of your electrical equipment

- ▶ Choose or check the electrical cables.
- ▶ Calculate the short circuit currents needed for the dimensions of the switch gears and protection relays: maximum short circuit current (effective value and peak value), minimum between phases.
- ▶ Take the engines contribution into account.



The high voltage symbols library that are used for calculations

The supplementary symbols library to detail furthermore your schematics: protection, measurement, logical, links, symbols

With each symbol, a reference tag is associated. It can be completed with essential electrical characteristics of the device, as well as with Icc values

Calculation of complex loop networks

## Take the different configurations of your network into account

- ▶ Caneco HT can define and record all the operating configurations of the installation.
- ▶ The calculations do the synthesis of the worst possible cases, which guarantees the compliance of your network with all the configurations chosen for its operation.

## Record your calculations file

- ▶ Print directly your calculations file or save it in HTML, then add your own annotations.
- ▶ Record or share your calculations file in PDF (no further modification possible), your schematic in DXF.

### FORM FOR AN ALTERNATING CURRENT GENERATOR

Alternateur synchrone

Repre: ☐ Construction

Equipment connect: Anal. tableau groupe 10 kV

Catégorie: Valeurs utilisateur

Caractéristiques électriques

Puissance assignée: 4.47 MVA Rendement à 4/4: 97.46 %

Tension assignée: 10.00 kV Courant assigné: 258.08 A

CatPhi: 0.80 Rapport d'impédance: 0.07

Impédances

Réactance: 12.60 % Constante de temps: 41 ms

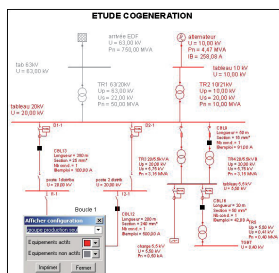
Subtransitoire saturée x/d: 19.60 % Subtransitoire T'd: 70 ms

Synchrone non saturée x/d: 208.60 % Induct T'a: 100 ms

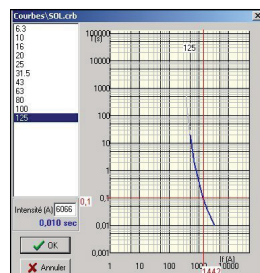
Synchrone x/d sat.: %

Homopolaire x0: 3.80 %

### OPERATION CONFIGURATION



### FUSES CURVES



### RESULTS EDITION

NF 1200-2007: Eclairage Courant de court-circuit des tableaux									
Cig	Emplacement de défaut	Tension (kV)	Sub. (A)	Trans. (A)	Paramètres (A)	Valeur calcul (A)	Facteur calcul (A)	Courant calcul (A)	Statistiques
Configuration: [A] Config A, EEP, sans moteur branché sur le PT1									
A	Phase Tension	10.00	12.500	12.500	12.500	26.871	1.44	12.500	
A	PT1	26.800	11.244	11.244	11.244	22.619	1.41	11.244	
A	PT2	26.800	7.700	7.700	7.700	12.411	1.43	7.700	
A	TR1								
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## Why choose Caneco HT ?

### Statutory obligations

French regulation orders foremen to give all the necessary documentation on electrical installations to control bodies, including:

- ▶ cables notebooks,
- ▶ network single-line diagrams,
- ▶ calculation notes.

Caneco HT gives a file which regroups all these elements, and which guarantees the good coherence between them.

### Design or check a High Voltage installation according to actual electrical standards and security requirements

The IEC 60909 standard is the reference for private high voltage electrical installations. The calculation of lcc and cables dimensions are defined.

Following these guidelines, Caneco HT can:

- ▶ Check the compliance of an existing installation
- ▶ Rapidly design a new installation or an extension

### High value complementary services

ALPI has a high voltage engineering department that can give you complementary services for software support or even customized projects.

## Who is it for ?

- ▶ High voltage distribution specialists
- ▶ Electrical department of major foremen, industry or real estate, using high voltage installations
- ▶ Control bodies

## Caneco HT content

- ▶ Single line diagrams editor
- ▶ Catalog of cables, alternators, transformers, engines and fuses
- ▶ Calculation of lcc with the impedances method (EN 60-909 and part 4 NFC 13-200) for multiple loops networks
- ▶ Maximum number of nodes: 1000
- ▶ Cables dimension (current carrying capacity and thermic constraints)
- ▶ Calculation of the melting time of fuses according to manufacturers curves
- ▶ Synthesis of the worst cases possible in every configuration
- ▶ Edition of a calculations file with the characteristics of all the equipment, the description of the operating configurations, calculation of the lcc, standards compliance validation for cables according to all the operating configurations
- ▶ Edition of the complete single-line diagram or under chosen specification, with tags for calculated lcc

## Additional software



Calculation and schematics for low voltage electrical installations to design the installation downstream Caneco HT



HV & LV protection discrimination study on Time/Current graph

## Update, maintenance

Yearly maintenance contract that includes the hotline and the update of the software depending on electrical standards evolutions and manufacturers' files updates.

## Training

For a good use of Caneco HT, we advice you to attend a two days training.

## Recommended configuration

Windows 2000, XP, Vista, W7, W8 (32 and 64 bits).

Hardware key protection (USB dongle).



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