



# CONPROVE

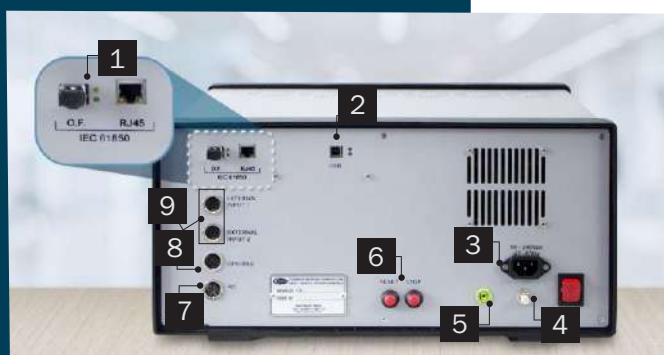
*Since 1984*

## CE-6710



Universal Test Set for Protection, Automation, Control  
and Measurement with Total Support to Standard  
IEC-61850

The CE-6710 is a versatile tool that encompasses several features in one equipment for tests in power systems. This portable instrument, ideal for both field and laboratory, is capable of testing and calibrating the most diverse types of equipment in secondary levels such as electromechanical, static or microprocessed relays; meters and transducers.



### Subtitle:

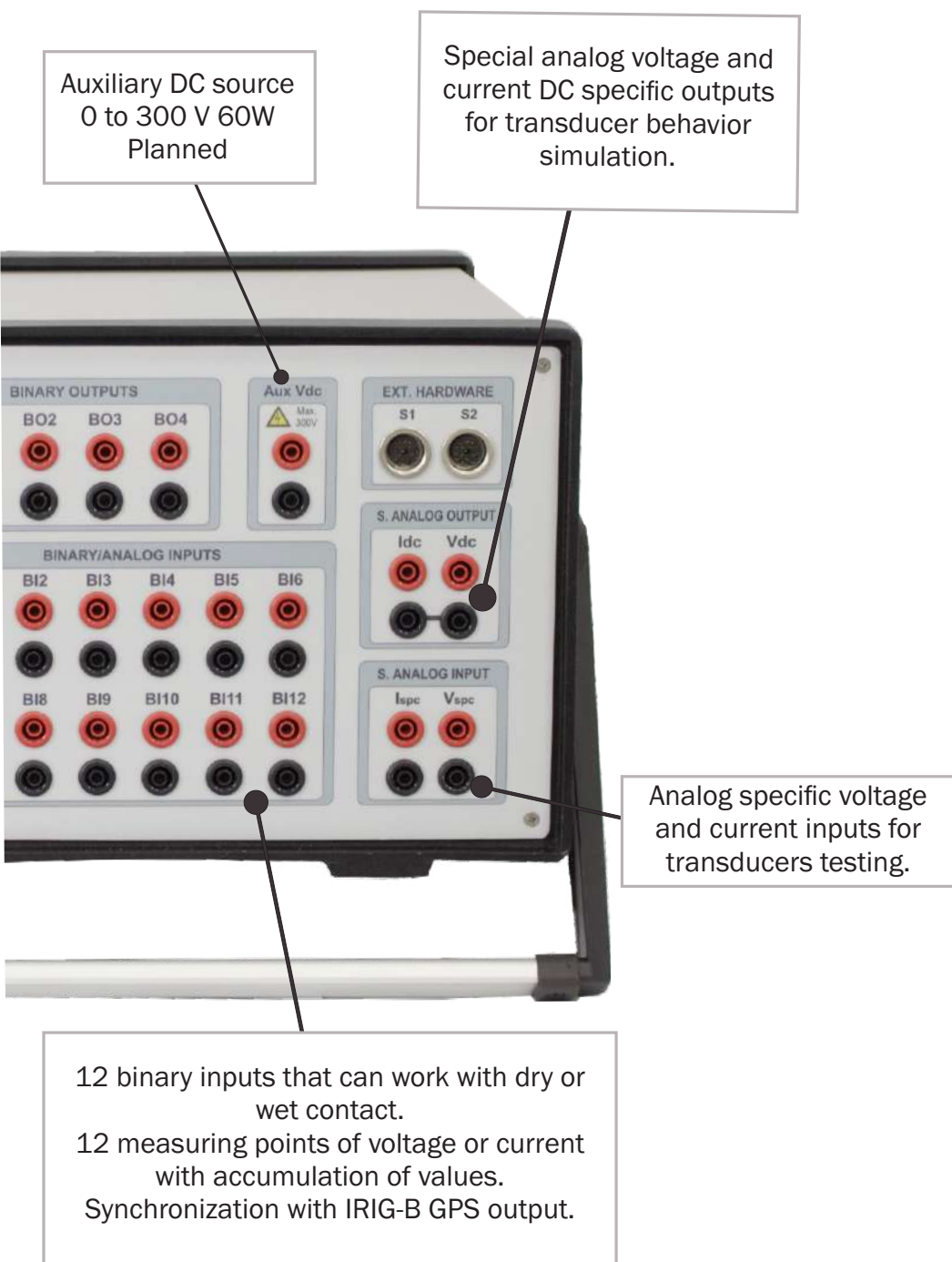
- 1** - Specific interface for IEC 61850 Temporal Synchronization (PTP);
- 2** - Communication via USB 2.0 / High Speed / Plug and Play;
- 3** - Power supply 90-240 V / 47-63 Hz
- 4** - Thermomagnetic mini-circuit breaker;
- 5** - Grounding;



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## SPECIFICATIONS



The CE-6710 has 6 channels of current and 4 channels of voltage for performing the most different tests, besides allowing to realize oscillography of circuit-breakers.

The tool is fully controlled by software (virtual instrumentation) and therefore operates both manual and automatic tests. It still uses Digital Signal Processing (DSP) to create waveforms, allowing frequencies up to 3 KHz continuously.

Performs IED tests with the IEC 61850 standard receiving and sending GOOSE and Sampled Value (SV) messages.

It compares the times between the traditional contact (hard copper wiring) and sending the event via ethernet GOOSE msg allowing the test of any protection function through GOOSE msg's.

Evaluates possible differences between analog signal and SV msg. Ideal for use in factory acceptance tests (FAT) and field acceptance tests (SAT).

- 6** - General stop / general reset of amplifiers and firmware update;
- 7** - Transistor binary outputs (open collector) IRIG-B / PPS;
- 8** - CE-GPS Accessory Interface;
- 9** - Specific interface for working as amplifier or master / slave mode.



### APPLICATION



Electromechanical relays tests (1100 VA available);  
Static relay tests;  
IED's Tests ;  
Tests in IEC-61850-9-2 (Sending / Receiving GOOSE and SV);  
End-to-end testing with CE-GPS;  
End-to-end tests with GPS from the substation itself.

Generation of short circuit with DC component;  
Simulation of trajectories of power balance and loss of synchronism;  
Playback of COMTRADE and ATP files;  
Tests on arc relays with current and arc flash;  
Tests on relays with unconventional analog inputs;  
Testing on billing meters accurately;

Wiring check;  
CT / VT Relation Test;  
Burden measurement;  
Breaker opening and closing time.

Multi-meter with 12 channels for V, I, f, S, P, Q,  $\cos\Phi$  and etc;  
RMS accumulation function (modulator) of module and angle up to the 50th harmonic order with statistical treatment;  
Power Quality analyzer.



### PRODUCT DIFFERENTIALS

Enough power for relay testing in any technology (Electromechanical, Static and IED);  
Sufficient accuracy for meter testing (0.05% in voltage and current);  
Totally included software (with 26 applications, including the IEC-61850-9-2 package);  
Software with multiuser license;  
There is no need for license renewal;  
No charge for upgrades;  
Specialized technical support and application;  
Maintenance in reduced time;  
Calibration by software.



## GET TO KNOW OUR PRODUCT LINE



### EQUIPMENTS

CONPROVE is a reference in the Latin American market for electrical test equipment. See also the CE-7012 and CE-7024 models that are intended for testing at primary levels (High Voltage equipment such as CT's, VT's, circuit breakers, power transformers, disconnectors and ground loop) and secondary (relays, transducers).

We also develop and commercialize software: PSSIMUL (modeling of power systems and electromagnetic transient solution); SIMULGOOSE (software for sending and receiving GOOSE messages of standard IEC 61850) and MULTIMSV (software for receiving messages Sampled Value of the standard IEC 61850).



### TRAININGS

We offer specialized courses in:

- **Protection, control and automation** of electrical power systems;
- **Electrical Installations and inspections;**
- **Equipment - fundamentals** for design, operation, maintenance and commissioning;
- **Equipment - maintenance and commissioning tests;**
- **Electrical studies.**



### TECHNICAL SUPPORT

We have an immediate and free technical support for our clients. Our team is made up of engineers who are experts in the power system and are always looking for solutions to meet the needs of our users.



### ACCESSORIES

**CE-GPS** - Accessory that allows temporal synchronization via GPS for application of end-to-end tests;

**CE-FLASH ARC 1** - Accessory that allows to test arc relays, synchronizing current generation with flash emission;

**CE-CSB1** - An accessory that allows you to test relays with low power (LPIT or rogowski coils);

**CE-RBOX** - Accessory that allows you to expand the binary outputs from 4 to 8;

**CE-OSU1** - Accessory that picks up consumption pulses of kWh or kVAh, measuring billing meters.





## Conprove Industria

Since 1984, CONPROVE has been working in the area of testing and training solutions for power system. This pioneerism has placed us in a leading position in the market for electrical tests in Brazil.

We have state-of-the-art products and innovative softwares that allow the application of primary and secondary tests, included in a single equipment. All our solutions have led us to conquer a portfolio of renowned clients covering the transmission, generation and distribution of electric power, industries, service providers and universities. With the purpose of helping our clients and strengthening partnerships, CONPROVE offers the best after sales with a team of highly qualified professionals and modern structure.

 [www.conprove.com.br](http://www.conprove.com.br)

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