

ZENSOL

First Trip Monitoring

In addition to doing timing and motion on circuit breakers, our CBA-32P instruments are capable of doing on-line first trip monitoring.

Here is an example of a real test in Alabama.

First Trip Monitoring

Real tests in Alabama (USA)



Control cabinet

Goal: To show that the CBA-32P is able to do ON-LINE testing of breaker first trip.

First Trip Monitoring

Ω The challenge

When doing first trip monitoring, the breaker is always « on line », which means that the breaker is not isolated during the test. Connecting the contacts is impossible because the current circulating is too high (thousands of amps).



No need to open the sectionnor to isolate the breaker

Contrary to classic timing tests, the trip test must be done without the help of the CBA-32P contacts.

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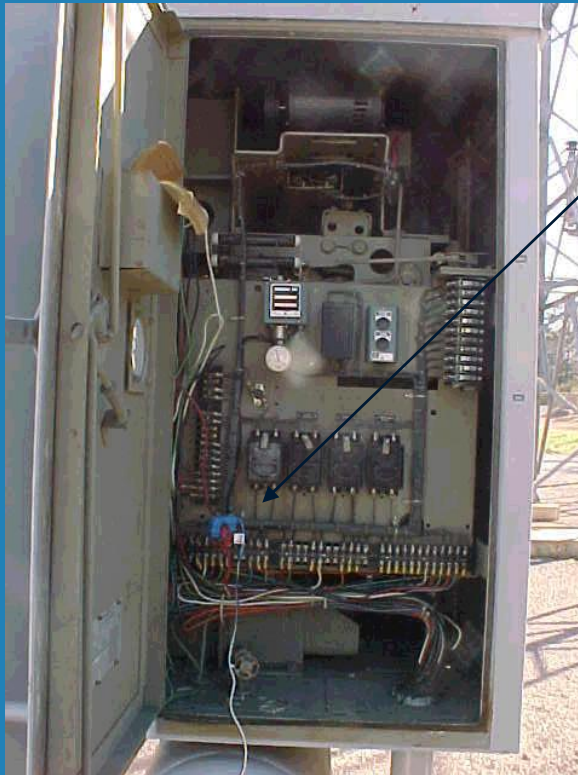
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First Trip Monitoring

Ω The solution



The solution is to connect a current transducer directly on the output of the CTs.

The principle is to measure the lowest current (5 amps) to know the evolution of the current and at the same time to guarantee the security of the operators.

First Trip Monitoring

⌚ Test set-up

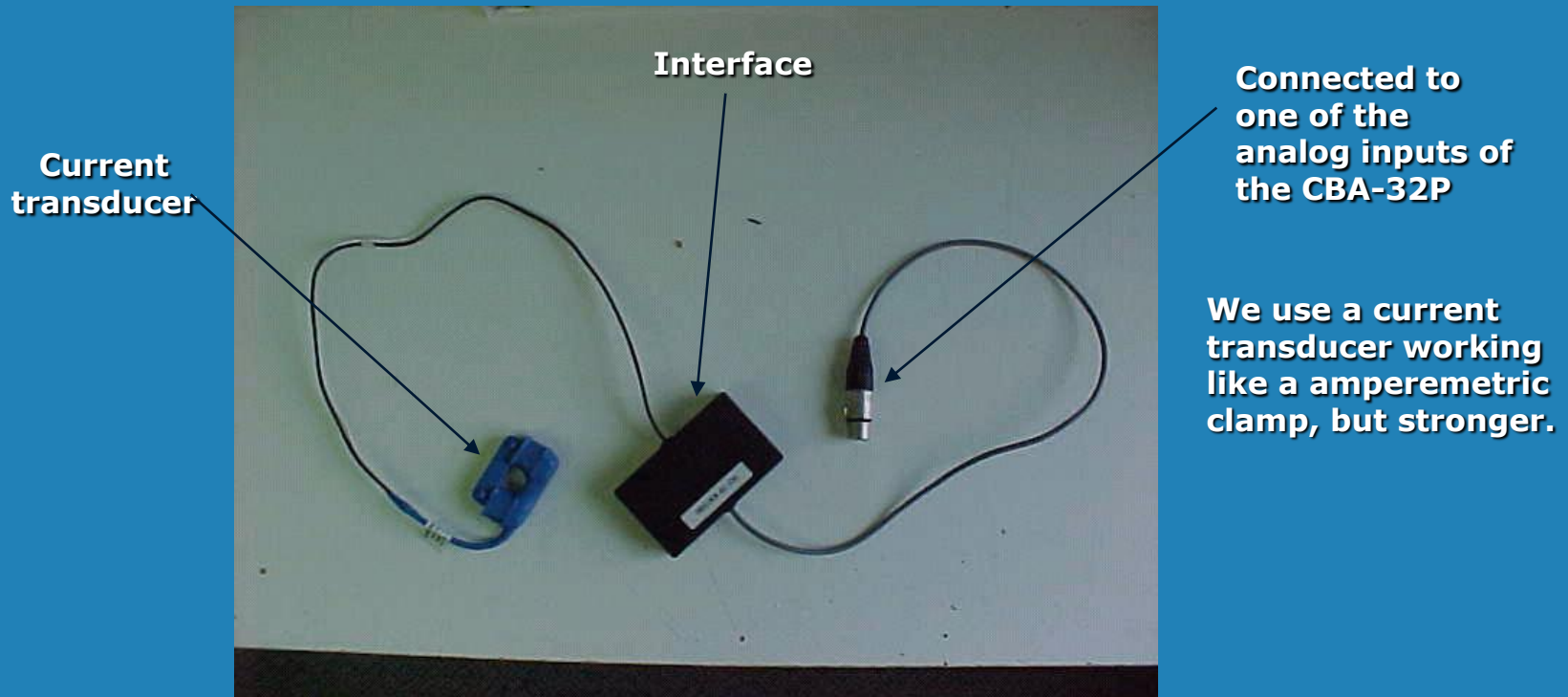


To do on-line testing, To monitor the breaker first trip, the current transducer will be connected to the analog inputs of the CBA-32P.

0-10 Vcc analog inputs

First Trip Monitoring

Ω The first trip monitoring kit : KIT-Z-FT



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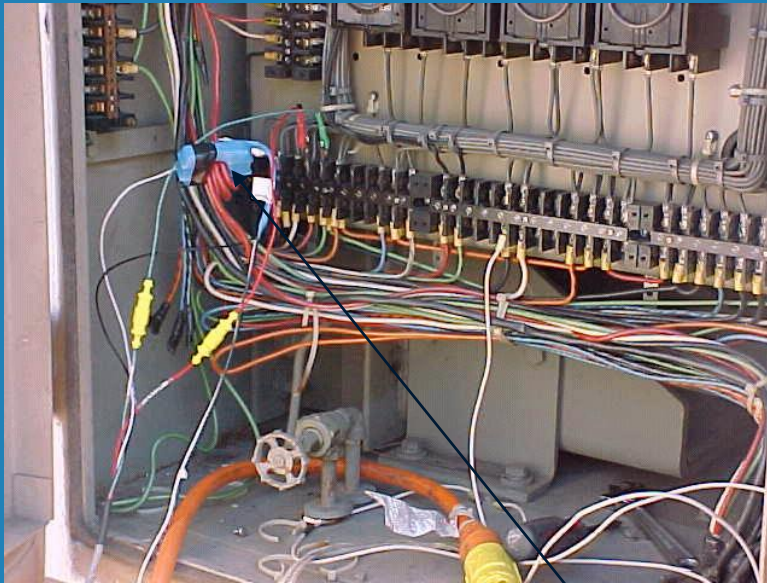
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First Trip Monitoring

Ω Installation of the current transducer



Current transducers

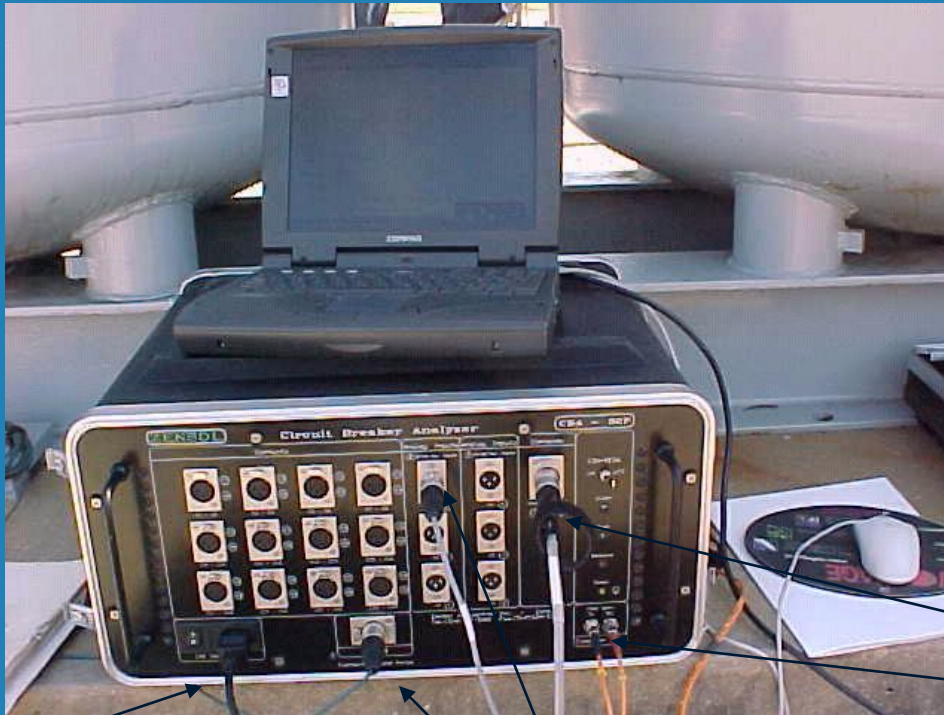


Extension to connect the transducer to the CBA-32P

Interface

First Trip Monitoring

Easy test procedure



Power

Ground

Analog input

- Ground the CBA-32P
- Connect the optic fiber link
- Connect the command cable and the current transducer onto the control cabinet
- Connect the current transducer to the analog inputs of the CBA-32P
- turn on the CBA-32P and the CBA WIN software

Command cable

Fiber optic

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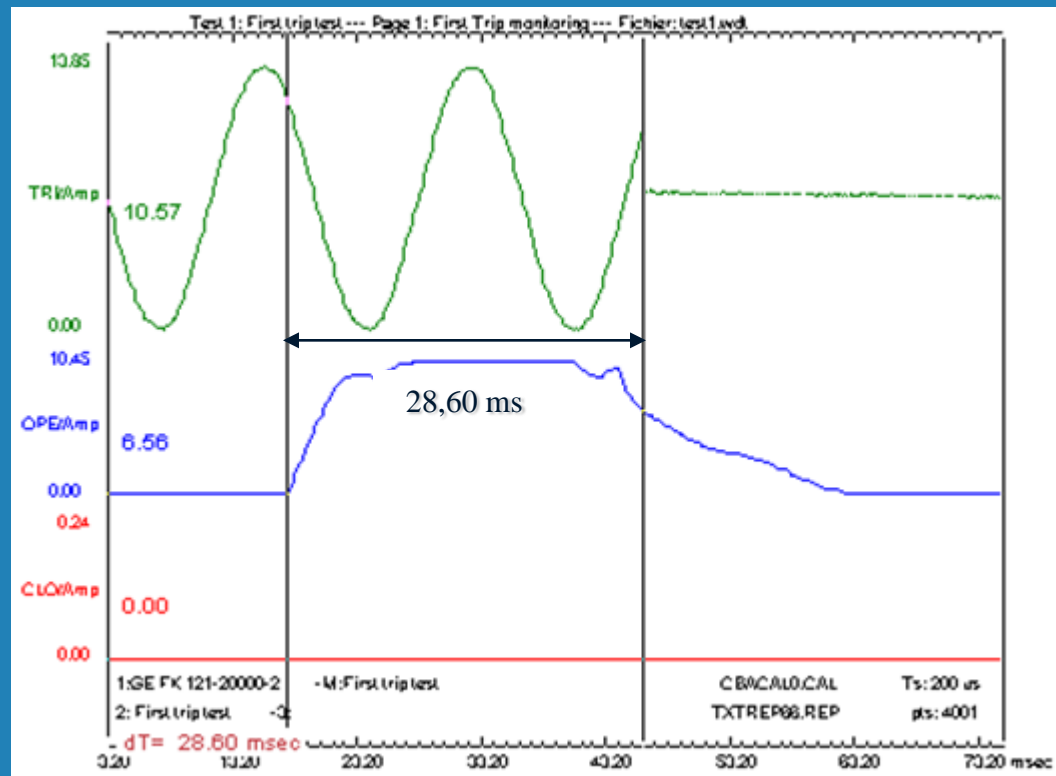
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First Trip Monitoring

Ω Trip test



First Trip Monitoring

In this example we only use 1 current transducer which measures 1 phase.

You can measure the three phases simultaneously, in "one simple click of the mouse", by connecting three current transducers.

CBA-32P

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**On-line testing of breaker's first trip
+ Off-line testing (including timing & motion)**

All the tests are done according to the international standards IEC.56.3.105