SPS electronic
TRUE GERMAN QUALITY

CUSTOMIZED

Industry: Electrical industry

Testing system for 1-4-pin RCCB up to 250A

Task

The customer's wish was to test a one-to-four-pin RCCB for its function with a high current of up to 250A. The problem here was to allow the operator to also intervene manually, without compromising his or her safety. There should also be no problem in testing the products, which differ in number of pins, breaking current, size and add-on devices.

Solution

Based on these requirements, a standing workstation, which was equipped with a special test cage to protect the user was developed. This was in turn designed so that the operator can also manually operate the product to be tested using a special tool. The operator can therefore make adjustments and changes to the product during the function test. The RCCBs are tested with a current of up to 250 A AC, wherein the shut-down time is determined for each contact path. The various contact paths can be connected. In addition, the pilot contacts are detected. The current is adjusted manually using a control knob as this is a purely manual workstation. The operator can read the set current on a digital display instrument. The rest of the system is computer-controlled and realtime data is processed. Different test adapters allow testing of the different RCCBs.

An arbitrary number of test programs can be stored in the testing system PC. This allows the customer to independently write new test programs when developing new products. However, for products with identical data, it is also possible to use the same test program, which is then allocated to the respective DUT over the product list. The test results are stored automatically in XML or Access format on an arbitrary place on the network.

A separate test dummy is used to check the functionality of the testing system fully automatically. During the daily start of the testing system, the testing personnel is asked to include this dummy and start the corresponding program. The testing system does not allow further testing without a passed dummy test.

Advantages

+ Turnkey solution including DUT support, adaptation and workplace design
+ Simple, intuitive operation for semiskilled personnel
+ The DUT needs to be connected only once, then the whole test process occurs automatically
+ In network operation, all test data is automatically saved at the specified location / database
+ Long service life and service-friendly design
+ All values and settings can be made using software
+ Automatic dummy test
+ Workplace safety according to EN 50191
+ In addition to automatic tests, the operator can also manually intervene during the function test, without compromising his or her safety.
+ Testing of different products with a current of up to 250 A AC
+ Despite manual setting options, the testing system is PC-controlled and has realtime data processing
+ Different test adapters and an extensive switching matrix allow testing of different products and addition of different numbers of contact paths

Specifications

- Manually adjustable power source
- Function test with power from 0 to 250 A AC
- Manually adjustable power source
- Determining the shut-down time for each contact path
- Additional detection by pilot contacts
- The various contact paths can be connected to the power supply

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