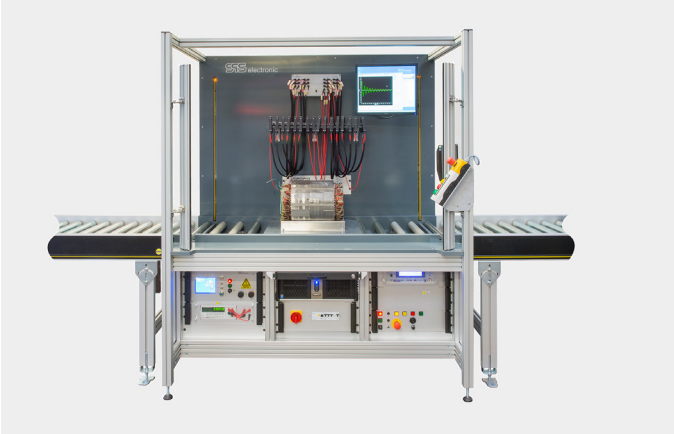
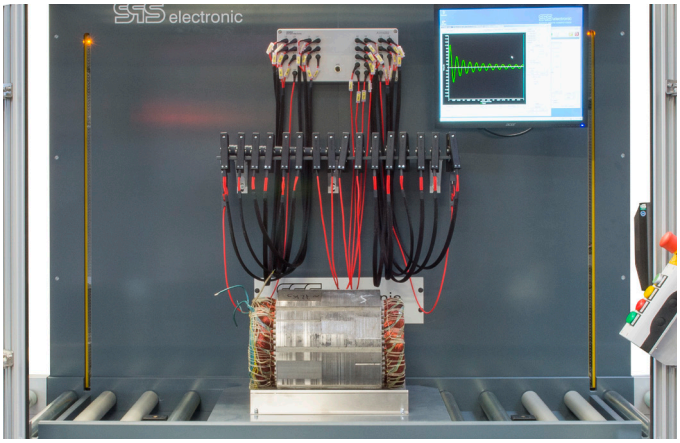
CUSTOMIZED

Industry: Electric motors

Testing systems for 1-, 2- and 3-phase stators





Task

Our customer's wish was to automate the existing test facilities and reduce the cycle time. At the same time, the depth of testing should be improved and the quality assured. The operation should be as easy as possible, so as to allow working of unskilled assistants. Highest level of safety for the employees was another requirement.

Solution

Therefore, a computer-controlled testing system with a matrix for 3-phase motors with a maximum of 4 speed levels was developed. The matrix with the high voltage relay allows the combination of safety test with low-ohm function measurements. The extended standard software DAT was used for controlling. The safety of the personnel is guaranteed by an approved light curtain (on 3 sides) with deflection mirror.

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
+ Short cycle times through efficient workplace design with light curtain
+ All values and settings can be made using software
+ Automatic dummy test
+ Workplace safety according to EN 50191

Specifications

- High voltage test with 5,500 V: Windings – Housing – Sensors
- Resistance measurement: Windings – Sensors
- Withstanding voltage test up to 6,000 V
- Rotating magnetic field monitoring using sensors

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