

CUSTOMIZED

Industry: Luminaires

Testing system for explosion-proof linear fluorescent luminaires



Task

The outdated manual test stations of our customers should be replaced by modern testing systems that are automated as far as possible. High flexibility and quick refitting to mains-operated and battery-operated linear fluorescent luminaires was important there. In addition to process safety, documentation of the test was an essential requirement. The whole concept must meet the stringent requirements for explosion-proof products.

Solution

In cooperation with our customers, a PC-controlled testing system was developed. The workplace design was a key factor in the process. Handling as well as the cycle time could be optimised by the use of an approved safety light curtain. The system was equipped with several original luminaires for the function test. Thus, real test conditions were created. The luminaires were stored in a drawer beneath the workplace, thus allowing easy and quick replacement at any time.

The standard software DAT not only controls the testing process but also guides the user through the entire process. The PC software DAT is a complete WINDOWS-based quality system. Anyone, who can turn on a PC will be able to operate the tester.

The function test is carried out by measuring the power consumption following the safety tests in accordance with the globally valid standards (IEC, EN, UL, VDE etc.). Following this, subjective tests of any kind are possible.

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 DUTs 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
- + Original luminaires for the function test

Specifications

- Protective earth conductor test from 10 A to 30 A max. 0.4 Ω
- High voltage test from 250 V DC to 4,000 V DC / 4 mA
- Function test 0 – 300 V AC / 1 kVA, 10 Hz to 80 Hz