

CUSTOMIZED

Industry: Luminaires

Test system for PX-LED spotlights



Task

Especially with explosion-proof products an intensive quality assurance is absolutely necessary. Therefore the explosion-proof luminaires have to be submitted to a safety and function test. For a new product of our customer a fully automatic test system was to be developed to be integrated directly into the production line. For a new product a fully automatic test system has to be developed. Important thereby was a high flexibility and a quick conversion for line-operated and battery-powered linear luminaires. In addition to process reliability the documentation of the test was an essential requirement. The entire concept has to meet the high requirements for explosion-protected products. As it is intended to use the test system directly in the production line the focus was also on workplace design.

Solution

In cooperation with our customers a PC controlled test system was developed. An important factor thereby was the workplace design. By using a safety curtain with approval the handling and thus also the cycle time could be optimized. The standard software DAT not only controls the test sequence but also guides the user through the entire process. The PC software DAT is a complete quality system based on Windows. Anyone who can turn on a PC will be able to operate the tester.

After the safety tests according to the worldwide applicable standards (IEC, EN, UL, VDE etc.) the functional test is carried out by measuring the current consumption. Subsequently subjective tests of any kind are possible additionally.

Any number of test programmes can be stored in the test system PC. This allows the customer to create new test programmes independently when developing new products. For products with identical data it is however also possible to use the same test programme which will then be assigned to the respective DUTs via the product list. The test results are automatically stored in the format XML or Access at any location in the network.

Via a separate test dummy the functionality of the test system is tested fully automatically. When starting the test system daily the tester is requested to connect this dummy and to start the corresponding programme. Without a correct dummy test the test system does not allow any further tests.

Advantages

- + Turnkey solution including DUT holding fixture, adaptation and workplace design
- + Simple, intuitive operation for semi-skilled personnel
- + The DUT must be connected only once, then the entire test sequence is performed automatically
- + In the network mode all test data are automatically stored in the desired location / database
- + Long service life and service-friendly setup
- + Short cycle times through efficient workplace design
- + All values and settings are possible via the software
- + Automatic dummy test
- + Workplace protection according to EN 50191
- + Original illuminants for the function test

Specifications

- PE conductor test 10 A to 30 A / max. 0.4 Ω
- High voltage test 250 V AC to 5,000 V AC / 3 mA
- High voltage test 250 V DC to 4,000 V DC / 4 mA
- Function test 0 – 300 V AC / 1 k VA, 10 Hz to 80 Hz