

# CUSTOMIZED

Industry: Automotive industry

## EOL (end of line) tester for BDU subassemblies



### Task

The main requirement for this testing system for the automotive industry was to cover the relevant statutory tests. At the same time, it should be easy for the user to operate, as many of these systems should be operated in various emerging markets. Maximum ease of use combined with high comfort and safety were our customer's preferences.

### Solution

The testing system was mounted along with the complete DUT support on a rack. This enables transportation of the entire mechanism as a unit, thereby waiving reassembly at the site. Once the system is installed, it can be operated immediately after being switched on. A light curtain, which is activated automatically when the test program is booted, has been provided for ensuring the safety of operators. The testing area was designed very spaciouly, to allow convenient placement. The contacting of DUT is automatically, pneumatically performed after booting of the test program. Using the PC control, the test data can be automatically downloaded and the results stored again. On a large „OK / DEFECTIVE“ display, the user can immediately decide on what to do with the product. In case of fault, it must first be acknowledged before the product can be removed. This step can be password-protected if preferred, so that the operator must inform the responsible supervisor to ensure that the product is rejected as defective. Besides the required safety tests, the current shunt and the Hall sensor were also tested. Upon successful testing, the poka-yoke flap is knocked off.

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
- + The test system and the complete test support are mounted together on a rack so that the compact unit can be connected immediately to the mains supply
- + Spacious testing area for comfortable working on the DUT

### Specifications

- Insulation resistance test from 100 to 4,000 V DC, safety-current-limited
- High voltage test from 100 to 4,000 V DC, safety-current-limited
- Measurement of contact resistances < 100 µOhm
- Testing of current shunt and Hall sensor
- Knocking off the poka-yoke flap upon successful testing
- PC-controlled testing system with database connection