



Automatic test cell for testing engine sensors

Product description

The system is used for fully automatic end-of-line testing of crankshaft and camshaft sensors on a Hall effect basis. Different specimen types are automatically recognized and tested.

The system is fed via an assembly line, which automatically feeds the specimens to the table on a workpiece carrier including its own data memory.

Field of application

Quality control and end-of-line test in the production/manufacturing area



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Technical data

Test bench/device

- Test cell with substructure
- Transfer unit with gripper and contact
- Adjustable slide with two drive motors
- Test device with drive and contacting
- Conveyor line with type-specific workpiece carriers
- Measuring and testing technology integrated in test cell

Software

- TST-WIN under Windows
 - Process control
 - Performance of measurements and tests
 - Presentation of test results
 - All settings and sequences menu-driven freely programmable
 - Automatic type change
 - Password-protected access levels
 - Daily/monthly and worker statistics
- Data transfer to line computer for data traceability

Scope of testing

- Inspection of crankshaft and camshaft sensors on Hall effect basis using original encoder wheel at defined distance and speed
- Rotation angle Resolution 0.015° , recording 1 revolution with 15 bit resolution at $n_{\max} = 6000 \text{ 1/min}$
- Camera-based distance adjustment between encoder wheel and sensor
- Measurements:
 - Signal voltage, resolution 1 mV
 - Current consumption, resolution 0.01 mA
 - Phase position, resolution 0.015°
 - Rise / fall time, resolution 50 ns
 - Jitter, duty-cycle, edges, min/max signal voltage
 - True_Power-On Functions

Input-/visualisation units

- Keyboard
- Monitor

Dimensions/Transport

- 2300x100x1250 mm (WxHxD)

Test time

- Individual, depending on test scope

Exemplary device type

- 114 0009