



## Test system for steering column switch modules in a robot cell

### Product description

In the test cell, the steering column switch module runs through three robot test stations in which the lever movements are carried out and the buttons are pressed, a station in which the printed symbols are checked using high-resolution industrial cameras and a station that automatically prints and applies a product label. The throughput is realized with the help of a clocked indexing table.

### Field of application

Final assembly, quality control, end-of-line testing in production/manufacturing



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### Technical data

Test bench/device	
<ul style="list-style-type: none"> <li>Base frame made of tubular steel, welded</li> <li>Indexing table for 6 stations</li> <li>Three 6-axis lightweight robots</li> <li>Six cameras for image processing</li> <li>Measuring, testing, control and supply technology in the control cabinet</li> <li>Separate „not okay“ belt for process-reliable filing of not okay parts</li> </ul>	
Software	
<ul style="list-style-type: none"> <li><b>TST-WIN test system</b> <ul style="list-style-type: none"> <li>- All settings and processes are menu-driven and freely programmable</li> <li>- Extensive options for controlling the process and the measurements</li> <li>- Visualization of the test results using a table of measured values and an additional graphic display</li> </ul> </li> <li>The "<i>remote maintenance</i>" module enables remote access by ITronic service employees</li> <li>The "<i>MES</i>" module enables variant-dependent testing by a higher-level system</li> <li>The "<i>ITDB</i>" module, including vITronic, enables the evaluation and statistical processing of measurement data</li> <li>The "<i>Image processing and image documentation</i>" module enables the use of cameras</li> <li>The "<i>Robotics</i>" module enables the integration of a robot in the testing and handling process</li> </ul>	
Scope of testing	
<ul style="list-style-type: none"> <li>Electronic testing of all lever and button functions, winding spring test</li> <li>Mechanical check of turn signal reset</li> <li>Haptic test of all levers using a force/displacement measurement</li> <li>Checking the symbols using image processing</li> <li>Programming of production data and serial number</li> <li>Automatic label placement</li> </ul>	
Input-/visualisation units	Dimensions/Transport
<ul style="list-style-type: none"> <li>Keyboard</li> <li>Screen</li> <li>Labelprinter including applicator</li> <li>Barcodescanner</li> </ul>	<ul style="list-style-type: none"> <li>3100x3100x2700 mm (WxHxD)</li> <li>Weight approx. 3200 kg</li> </ul>
Test time	Exemplary device type
<ul style="list-style-type: none"> <li>ca. 70 sec</li> </ul>	<ul style="list-style-type: none"> <li>006 6393</li> </ul>