

# Vision Systems with Height Control!

the right perspective is important



## Height Control HCT

The quality assurance process of fuse boxes presently includes the testing of colors and fonts, as positions (x / y-direction) of fuses and relays via camera. Not deep enough inserted components (z-direction) are disregarded in this procedure.

The consequence is, that the lead to fail of partial or complete vehicle systems in the field can not be excluded.

TSK Vision Systems with height control relate these problems in the safety process-test for fuse boxes. With the option HCT for vision systems you test precisely and accurately the mounting depth of fuses and relays. For your quality!



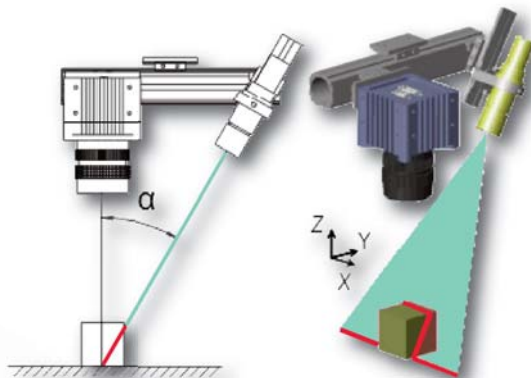
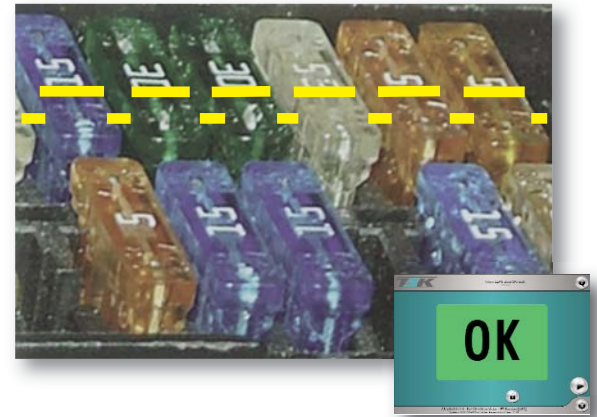
## Principle of Measuring

In the sheet of light (triangulation) method, a light beam is directed via a line optic onto the surface of the object to be measured. With the help of the camera, a picture of the light line is acquired from the triangulation angle alpha. As a result of the triangulation arrangement of the light line and the camera, any change in the surface make-up below the light line will lead to the light line in the camera image being displaced in a defined manner.

The so-recorded profile (3D profile) is evaluated and compared with the reference data stored in the system. Any deviation outside the tolerance leads to an error message.

## Test Function

- Testing the correct locking of a fuse box
- Testing the height or depth of assembled fuses
- Testing the height, depth or slope of assembled relays
- Testing the position and the presence of the transport lock



## HCT Features

- Easy configuration of the test system
- Highly accurate, precise and fast measurements
- Up to 30mm measuring height with one line optic
- Use of existing VS components (eg camera)
- Low investment for expansion of existing systems
- Testing, evaluation and recording via test software CS WIN nx



Automatic deactivation of the laser after test.  
The laser radiation within the visible spectral range with a power output of 5mW. A laser of this class (2M) can be used without further protection, as long as no optical instruments such as magnifying glasses and binoculars, are used.

# Vision Systems with Height Control!

viewed from a different angle



## Test Samples

- All standard types of fuses, e.g.: ATO-, MINI-, MIDI-, MAXI-, etc...
- All standard types of relays
- Fuse carriers
- Fuse holders and connector locking devices
- More on request

## Areas of Application

You can extend the vision systems VS50, VS70 and VS100 with the option height control (HCT). Certainly we provide customer-specific applications and combinations. Ask our employees in sales or services.



Vision Systems VS50



Vision Systems VS70



Vision Systems VS100

## All systems based upon:

- Microsoft® Windows® XP
- TSK Test Software CS WIN® nx - VS
- Cameras using FireWire
- LED lightning

Information of the individual vision systems can be found in the appropriate flyers and the Internet [[www.VS32.info](http://www.VS32.info)].