NeuroCheck RoboInspector - Dynamic Inspection

For more than 25 years, NeuroCheck has been developing innovative system solutions for visual quality control in the manufacturing industry. More than 20,000 applications are in use in various areas of industry. RoboInspector is an easy-to-use inspection solution featuring the versatile machine vision software NeuroCheck communicating with a robot and flexibly carrying out diverse inspection tasks.

In conventional inspection set-ups, sensor equipment and test pieces are arranged in a fixed alignment. The combination of robot and camera gives the RoboInspector its sense of vision, thus enabling a dynamic inspection of test pieces. Together with NeuroCheck, completely new possibilities of error recognition and process reliability open up.

Thanks to standardized interfaces in NeuroCheck, the sensor module on the robot hand can be configured individually for diverse inspection tasks. The moving screen offers protection against difficult ambient conditions and prevents accidental collisions. Additional protection against extraneous light is not required.

RoboInspector is a scalable system solution with the highest possible overall equipment efficiency whether as a stand-alone solution or integrated into automated production environment and an Industry 4.0 environment.
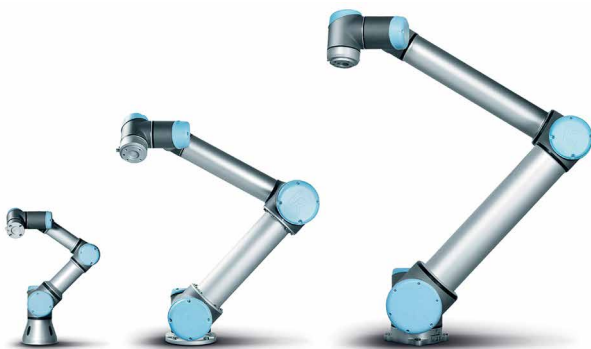
www.neurocheck.com

NEURO CHECK
Industrial Vision Systems

RoboInspector - Technical Data

To create a link between the controller unit of the robot and the image processing software, the RoboDirector flow control was designed. Robot positions and paths can be easily created and managed. In addition, each position can be assigned a specific safety position to guarantee safe operation even in unusual situations. Teaching each position is simple, no elaborate programming. The application is used for the inspection of large components with many different features.

RoboInspector basic variants
UR3 (Mini)   UR5 (Midi)   UR10 (Maxi)

System solutions - Modules

- ■ NeuroCheck software for graphical configuration of machine vision tasks (assembly and component inspection, 2D and 3D gauging, code recognition, defect control)

- ■ Data base to manage inspection part variants and archiving inspection results

- ■ Type-specific positioning control and image processing

- ■ Freely teachable process control „RoboDirector" to teach individual inspection positions and complex paths by manually dragging the robot arm.

- ■ All standard interfaces for communication with production control systems and manufacturing logistics

- ■ 6 axes articulated robot with force sensing in the variants UR3, UR5, UR10

- ■ UR Robot Controller incl. mobile 12" panel

- ■ Switch cabinet with 19" screen and operating terminal

- ■ Scalable camera module in protective casing with safety stop function to prevent collisions
  - • Standard: 1.2 MP digital camera and controllable multi-segment LED illumination
  - • VarioFocus: Optics with electronic focusing
  - • HighRes: High-resolution digital cameras (5 - 20 MP)
  - • 3Dimension: 3D Sensors
    (ToF, stereo, fringe projection, laser scanner)

- ■ Optional work area monitoring SafetyEye

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