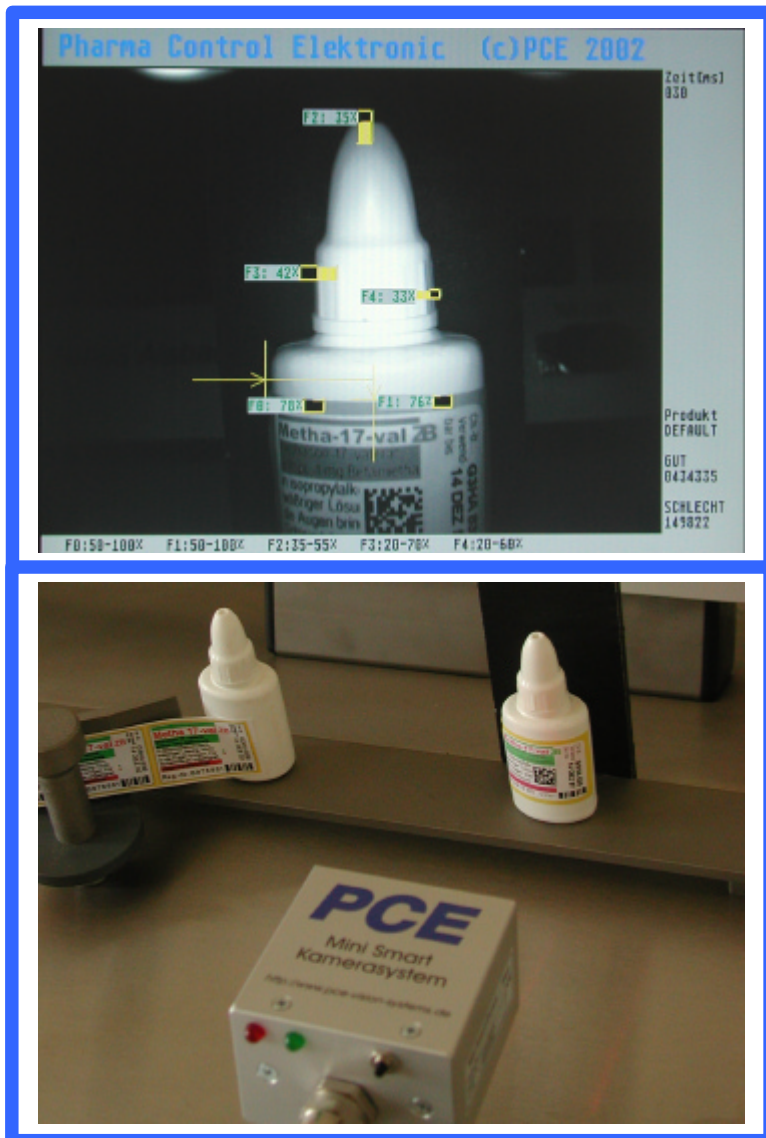


Product Control Mini Smart Camera System

Intelligent Image Processing Camera for Multi Purpose Product Control



- Control of object presence & characteristics
- Position control of caps & labels
- Control of fill level
- Presence control for up to 12 characteristics
- Position measurement of up to 18 object parts
- Relative & absolute position measurement
- Control of up to 600 objects / minute
- Format/product data base
- Optional CFR 21 part 11

Product Control Mini Smart Camera System

Intelligent image processing camera for multi purpose product control

This intelligent camera system is designed for fast, but secure detection of typical characteristics and for control of presence or position of packaging parts or the product.

Applications

Multi purpose presence and dimension/position control of objects or parts of objects, e.g. control of:

- cap position on bottles
- label position on cartons
- fill level of ampoules
- print mark position on leaflets
- completeness of trays & blisters
- presence of print on labels
- breakage of ampoules & vials

The camera system is able to control the presence of up to 12 characteristics and to measure the position of up to 18 object parts at the same time, i.e. there are 30 measurements per image available.

Single positions can be measured absolutely or relatively to each other. The exact calibration of measurements is possible. The high-speed system evaluates up to 600 objects per minute.

Recurrent configurations can be stored as formats in a product data base and be used again on demand.

Operation

The system is operated by a LCD terminal with integrated keypad or by manual input via a

mini keyboard, laptop or LAN, respectively.

Optics are easily and simply focused by two spot LEDs. A manual trigger is integrated.

The camera system can be networked together with other PCE code reading units. The product control camera is addressable without restrictions.

Fault Analysis

For presence control a control window is positioned on the object, for measuring the position, one or more windows are placed at or around the object, respectively.

The object must have contrast (B/W) against the background. The percentage of the white or black area is evaluated. A value out of the allowable tolerances results in a false reading for the object, i.e. the object is either missing or in a wrong position

System Components

The small camera head includes all essential parts, including illumination, optics and video unit, in a compact housing meeting GMP standards. Therefore the camera can be installed even in areas with restricted space.

The control unit is separated from the camera head and also has very small dimensions. Connectable to the camera system are the operator terminal with flat LCD monitor and keyboard, other PCE code reader input devices, laptops and other options.

Technical Data

Product Control

- Presence control of up to 12 characteristics
- Position measurement of up to 18 object parts
- Absolute & relative position measurement
- Accuracy 0,2mm
- Processing time 5ms / window
- Focus 50 – 150mm

Illumination

- 48 super bright white LEDs

Input/Output

- Power supply
- 2 inputs 24V DC for
 - trigger
 - confirmation
- 2 outputs 24V DC for
 - OK pulse
 - system active
- Digital interface RS232
- Display output SVGA analog

Power Supply

- +24V DC free of interference current ca. 250mA

Dimensions

- Camera head WxHxD 60x61x40mm (with cable outlet H=79mm)
- Camera connector cable Standard=1,5m
- Camera control unit WxHxD 160x67x80mm

Technical data are subject to modification