

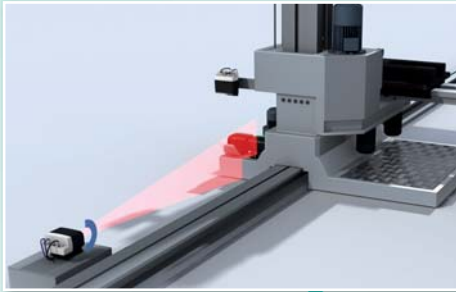


Practical Training in Sensor Technology



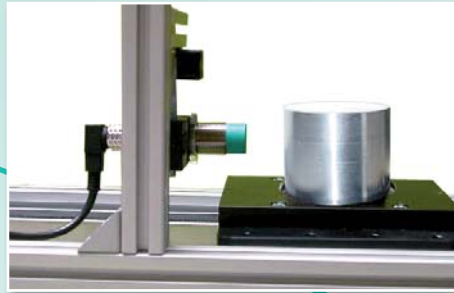
SENSOR TECHNOLOGY

FROM THEORY TO PRACTICE!



Operational order

Test setup



Testing



COMPETENCIES

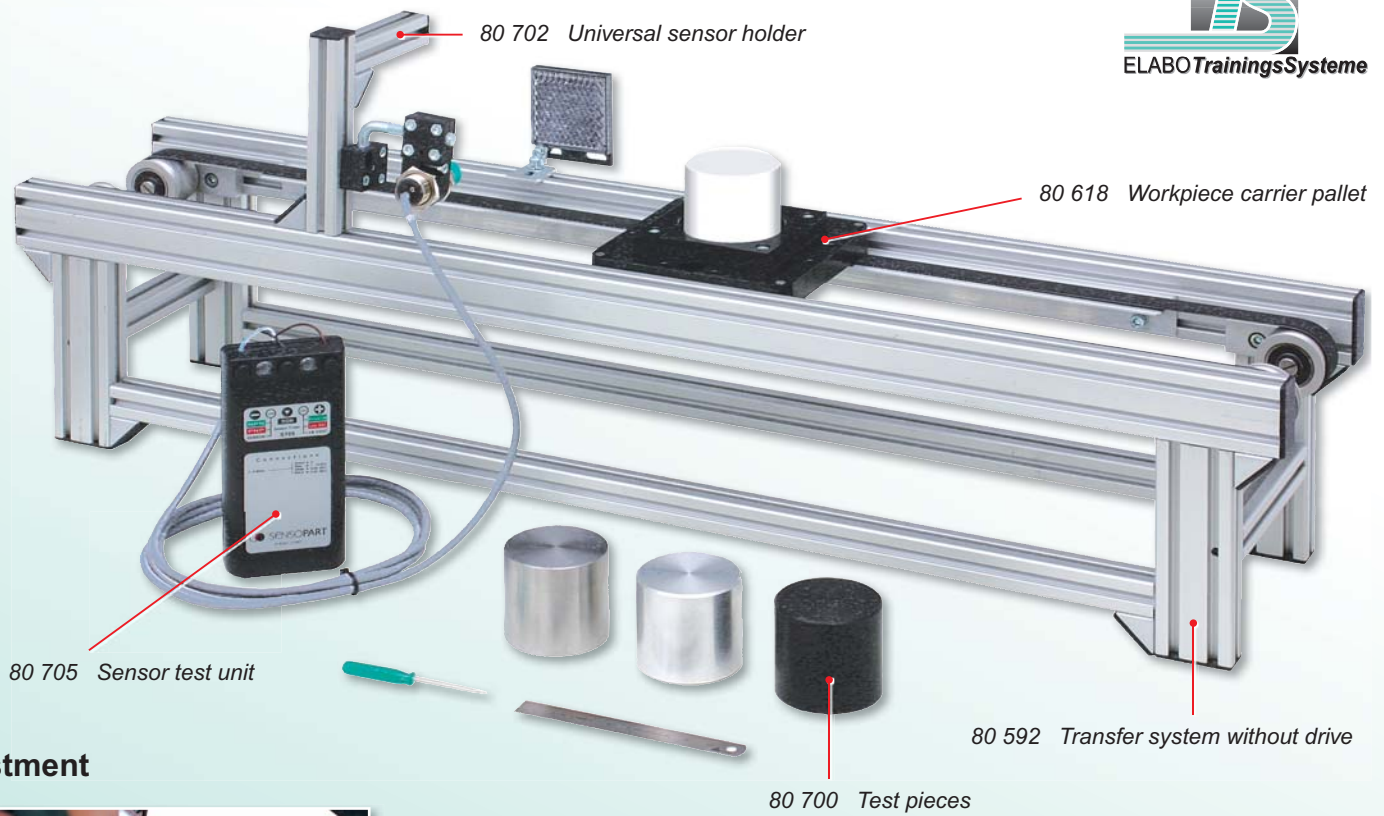
- ✓ Types of sensors and how they work
- ✓ Testing and adjustment of sensors
- ✓ Applications of sensors
- ✓ Distance measurement and material detection



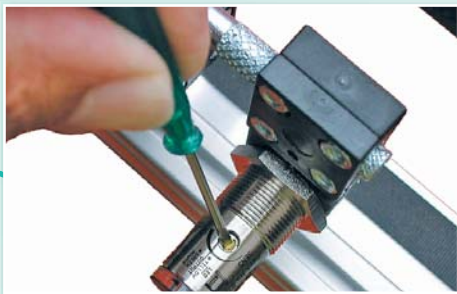
80 710 Sensorics Box

Contents of Sensorics Box

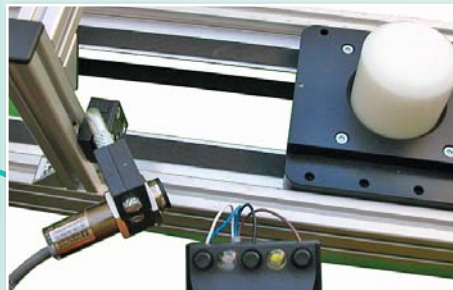
- 80 700 4 **test pieces** (plastic white, plastic black, aluminium, stainless steel)
- 80 701 4 **sensors** (capacitive, inductive, 2 x optical with 1 reflector and a fastening bracket)
- 80 702 2 **universal sensor holders** for accommodation of cylindrical sensors 5 – 30 mm
- 80 703 1 **set of fixing material for sensors**
2 x slot nut
2 x M4 threaded screws
- 80 704 1 **mounting system**
1 x profile girder for setting up test stations at any free place on the transfer system
- 80 618 1 **workpiece carrier pallet**
dimensions: 119 x 119 x 15 mm
- 80 619 1 **4-bit ident system**
1 set, 4-fold
- 1 **compartment for sensor test unit** for accommodation of the sensor test unit (80 705)



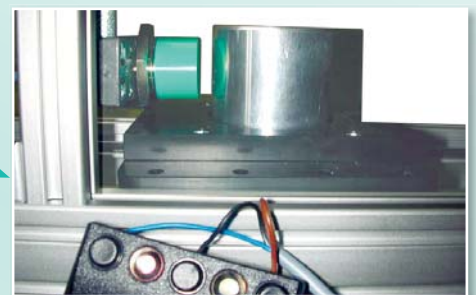
Adjustment



Commissioning and troubleshooting



System function test



Sensors:



- inductive
- capacitive
- optical:
 - diffuse reflective sensor
 - retro-reflective sensor

Experiment routine:

- | | | |
|----------------------------------|---------------------------------------|-----------------------------------|
| ■ 1. Tasks | ■ 4. Selection of sensors | ■ 7. Proving the function |
| ■ 2. Simplification / simulation | ■ 5. Circuit diagram | ■ 8. Evaluation of the experiment |
| ■ 3. Work planning | ■ 6. Set-up of the measurement layout | ■ 9. Parts list / calculation |

Trainer Section

Basic Principles of Sensor Technology

Trainer Section
Version 4.1 - Order No. E80 706

Basic Principles of Sensor Technology

E80 706CD Trainer Section

Practical Experiments

Basic Principles of Sensor Technology




Practical Experiments
Version 4.1 - Order No. E80 707

Basic Principles of Sensor Technology

E80 707CD Practical Experiments

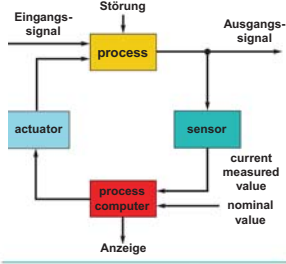
Transparencies

Basic Principles

Use of sensors in control circuits

Sensors are frequently used in control circuits. Values frequently measured are:

- temperature
- flow
- pH value
- position
- pressures / force
- moisture
- speed
- revolutions



Basic Principles of Sensor Technology

E80 708CD Transparencies

OBS4000-18GM60-E5

Reflexionslichtschranke mit Polarisationsfilter
OBS4000-18GM60-E5
mit 2 m Festhubel



- Dual colour Anzeige LED
- Reichweite bis 4 m
- Spiegelischer durch Polarisationsfilter
- Hell-/dunkelschaltend verkehrstumsprogrammierbar
- Schutzart IP67
- Robustes Metallgehäuse in zylindrischer Bauform M18 x 1
- Empfindlichkeitsanalyzer zur optimalen Anpassung an die Applikation

Data sheets
(contained in the
Trainer Section)



Printed and digital!

06/1 2012

Subject to technical modifications and further developments

Copy and fax

I am interested in further information:

- Please contact me by phone
 Please contact me by e-mail

- Please send me a quotation
for ____ sets of workstations

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