Key Features:
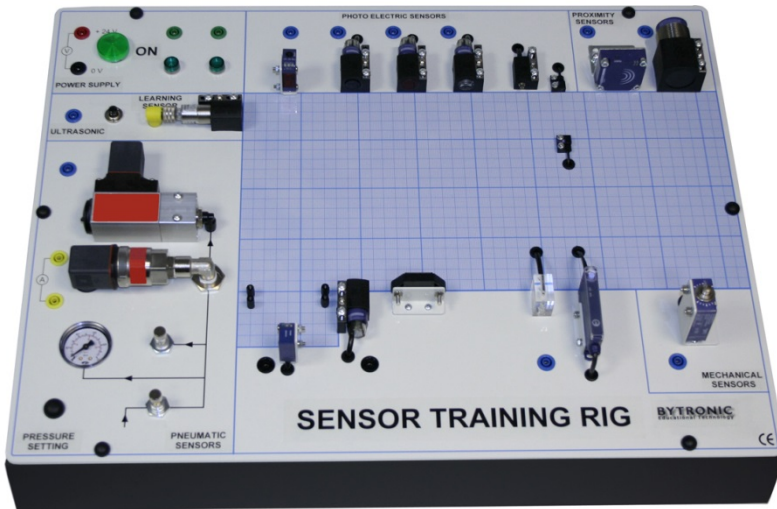
- Self-contained
- Fits onto a bench top
- Introduction to the use of sensors
- Rules of detection using sensors
- Efficiency evaluation of various sensors
- Techniques for connection to a PLC
- Choice of sensor technology
- Selection of sensor from a list of conditions
- Various materials supplied for use with the sensor training rig

The Sensor Training Rig is an introduction to the use of sensors, types of sensors and a teaching aid when studying the application of control, manufacturing or automation. The sensors include infra-red, capacitive, photoelectric, inductive, proximity, fibre-optic and mechanical sensors. The outputs to the sensors are easily accessible through 4mm colour coded terminals on the front of the unit or through a D type connection and can be linked to a PLC or PC for analysis and testing of the sensors.

The STR is supplied with various types of material steel, aluminium, foam, wood, plexiglas, plastic abs, white plastic abs, to provide the student with the facility to compare the effectiveness of the different types of sensors for different types of materials supplied. The student can evaluate the efficiency of the sensors using the various materials. The range and suitability of the sensors can be observed providing the student with the opportunity to make recommendations for the selection of a sensor in particular applications.

The knowledge of how to select a suitable sensor for the correct application, types of sensors that are used in automation, the effect of different types of materials and outputting the signal are all applied using the STR. The unit can be used with other training units in manufacturing and automation. The STR is a self-contained unit and allows for easy set-up. Coursework covers the decision making in the choice of sensors, selection of sensors according to types of materials, justification for the choice, rules of detection, evaluating sensors and their suitability and the selection from a list of conditions, connections of sensors and their characteristics

Curriculum Coverage

- Introduction to sensor training rig
- Power supply
- How to use pressure
- Pressure sensor description
- Flow valves
- Photo electric sensors
- Inductive sensor
- Capacitive sensor
- Ultrasonic sensor
- Mechanical sensor
- Choosing a sensor
- Industrial solutions
- Position and flexible reed switches
- Choice criteria
- First choice criteria according to test result

- Final choice according to other criteria
- Choice of sensor and justifications
- Technical information
- General characteristics and user guide
- Position switches
- Inductive proximity sensors
- Capacitive proximity sensors
- Through beam photoelectric sensors
- Reflective photoelectric sensors
- Proximity photoelectric sensors
- Fibre optics photoelectric sensors
- Mechanical technology (advantages/disadvantages)
- Two wire technology (advantages/disadvantages)
- Three wire technology (advantages/disadvantages)

Labworks

- Connection of sensors
    - Practical exercises
    - Study of the operation
    - Connection principle
- Information flow within an automated system, sensor connection

- Positive or negative logic
- Electro-mechanical sensors
- Two wire electronic sensors
- Three wire electronic sensors
- Through beam photoelectric sensors

Specification

Connections	1 x Power switch
	4mm colour coded terminals
	1 x D type PC interface connector
	1 x Pneumatic push in connector
Controls	1 x Unidirectional flow valve
	1 x Bidirectional flow valve
	1 x pressure gauge
Mechanical actuator	1 x with changeable heads
Sensors	1 x Ultrasonic sensor NO / NC type with teach button
	1 x Capacitive sensor 15mm. 24v d.c. PNP N/O contact, 3 wire
	1 x Inductive proximity sensor with teach button
	1 x Pressure sensors NO / NC with adjustable threshold
	1 x Pressure sensors
	1 x Photo electric sensor
	1 x Photoelectric thru beam sensor
	1 x Photoelectric reflective sensor
	1 x Photoelectric proximity sensor
	1 x Photoelectric fibre optical sensor can be used in proximity mode or thru-beam mode
Accessories	blocks of various materials for identification: steel, aluminium, foam, wood, transparent Plexiglas, black plastic
Power supply requirements	230Va.c.

Required

A suitable air supply with a minimum of 6bar continuous supply.

Ordering Information

Model Number:	**STR**
Consists of:	1 x Sensor training rig
	1 x Accessories with mechanical heads and blocks of materials
	1 x Technical documentation with characteristics and diagrams
	1 x User and courseware manual

Weights and Dimensions

Un-Packed		Packed	
Approximate Dimensions (mm)	600W x 440D x 180H	Approximate Dimensions (mm)	700W x 600D x 400H
Approximate Weights	22Kg	Approximate Weights	25Kg

- *Specification is subject to change without notice.*
- *All dimensions are in mm unless otherwise stated*
- *Manufacturer type of sensors may vary from that shown on the image but a manufacturer of equal quality will be used*

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