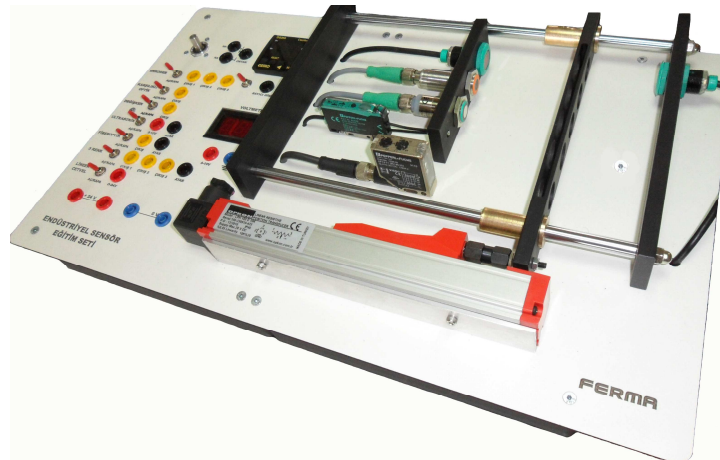**INDUSTRIAL SENSOR TRAINING SET FO-ES**

Industrial sensor training set is arranged with the aim of investigation of sensors which converts physical measurements into electrical signals essential for open/closed loop processes which use programmable controllers.

The set consists of control panel, sensors and moving railed part is designed in a way that facilitates the practical usage .

The switch, analog and teach I/Os of the sensors are taken out of the surface of the panel via 4mm banana sockets and this makes the set appropriate with PLC use. The supplies of the sensors are done by 1/0 toggle switches. The connection ports of voltmeter and the relay outputs of the counter, which is added to the set to follow the steps of the encoder, are also taken out of the surface of the panel via 4mm banana sockets.

Railed sliding system is connected to the linear position transducer and this provides user to determine the distance at which the sensors sense the materials.

Available experiments, which can be applied with the sets are;
- Recognization of various sensors
- Which sensors respond to which materials?
- Determination of switching distance, hysteresis and frequency

The system consists of;
- Digital counter (for encoder)
- Digital voltmeter (for sensors with analog outputs)
- Railed sliding system (for distance measurement)
- Various interchangeable material samples (different colour and material alternatives)
- Capacitive sensor
- Inductive sensor
- Magnetic field sensor
- Ultrasonic sensor (0-10 V analog output)
- Encoder
- Linear position transducer (analog output)
- Fiber optic system
- Colour sensor
- Retro-reflective sensor for glass detection
- Diffuse mode photoelectric sensor (Background suppression)
- Through-beam photoelectric sensor