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Product Name :	**Product Code :**
Fuzzy Control Ball-on-Beam	AR621

Description :

Fuzzy Control Ball-on-Beam

Technical Specification :

Fuzzy Control: Ball-On-Beam
Fuzzy methods are particularly suitable for systems that mathematics cannot describe adequately or easily. Fuzzy algorithms can offer major advantages, as the control strategy is developed not on the basis of exact mathematical modelling, but on a linguistic description of the process. Additional input variables and the rule base can be easily added.
Introduction to fuzzy control and microcontroller technology
Ball-beam as mechanical single-variable system, SISO (Single Input - Single Output)
Switchable between fuzzy and manual mode
Servo motor for beam drive as actuator
Microcontroller with usb port as fuzzy controller
FSH-Shell development software for design and optimisation of the fuzzy controller; software via USB under Windows 7, 8.1, 10 including PC1 Computer-System with 21" TFT-Monitor Win 10 engl.
Resistive measuring system with film potentiometer as ball position sensor
Potentiometer as beam inclination sensor
Part of the structured teaching concept: level 1 - basics

Technical Data:
Beam, U-profile
Length: 500mm
Material: aluminium

Ball
Diameter: 25,4mm
Weight: 66g
Servo motor
Operating voltage: 5,0V
Actuation torque, interpolated: 206Ncm
Actuator velocity, interpolated: 0,18s/60°
Microcontroller
8bit microcontroller Zilog Z8Encore
12-fold ADC 8bit
Film potentiometer
Resistance value: 12,5k Ohm ±30%
Electrical path: 500mm
230V, 50Hz, 1 phase

Naugralabequipments

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