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Product Name :	**Product Code :**
Fuzzy Control Carrier Vehicle with Inverted Pendulum	LBNY-0005-1090004

Description :

This experimental unit forms part of a series of teaching systems developed in collaboration with the Department of Automation and Information Technology at the Harz University of Applied Studies and Research. A rotary encoder determines the position of the vehicle from the rotation of its wheels. This in turn activates an actuator, the drive motor on the vehicle. A vehicle with an inverted rod pendulum acts as a mechanical multi-variable system. A fuzzy control moves the rod pendulum to the centre position, where it is held in position, and at the same time controls the position of the vehicle. A joystick can be used to control the system manually. This allows the degree of difficulty of the control process to be estimated very accurately. The control process is made more difficult by the fact that the vehicle can only move to a limited extent from its original position.

Technical Specification :

Inverted rod pendulum with vehicle as mechanical multi-variable system, MISO (Multiple Inputs - Single Output)
Fine tuning of a fuzzy control system with strong coupling and use of micro-controller technology
FSH-Shell development software for designing and optimising the fuzzy controller
Rotary encoder as vehicle position sensor
Part of the structured learning concept: level 3
Rotary potentiometer as pendulum inclination sensor
Switchable between fuzzy and manual mode
Motor to drive the vehicle as actuator.

Laboratory Instrument India