

Product Name :
Hydraulic Servo System Trainer

Product Code :
ELABHTOOLSUK480005



Description :

Hydraulic Servo System Trainer

Technical Specification :

Hydraulic systems are particularly suitable for applications where large actuation forces are required. The unit allows the operation of a hydraulic servo system to be investigated in detail. A carriage with a mass of 50kg is moved by a hydraulic cylinder. Additional springs and an adjustable hydraulic damper permit static and dynamic loads to be simulated. The displacement of the carriage is established using a potentiometric position sensor and compared against the reference variable. The control deviation is processed in a separate servo amplifier. Self-contained training system of a complete hydraulic position control loop with adjustable loading conditions. Oil circuit with hydraulic unit, hydraulic accumulator, 2 manometers, control valve and hydraulic cylinder to move a weighed carriage. Operation of the electromagnetic control valve for position control by proportional amplifier. Proportional amplifier with adjustable gain and 3- channel line recorder. All control variables available as voltage signals 0...10V. Potentiometric displacement sensor. Adjustable load conditions on carriage using two springs with hand wheel and adjustable damping. Low-friction ball bearing-mounted carriage. Mobile steel profile trolley with built-under unit. Hydraulic unit power output 1.1kW, flow rate 3.8L/min, head 1500m, tank capacity 10L. hydraulic accumulator capacity 2L, accumulator charging valve max.40L/min. hydraulic cylinder piston diameter $d = 40\text{mm}$, stroke 150mm, mass moved 50kg.

Control valve NG6 nominal flow rate 24L/min, activation +/- 10V, potentiometric position sensor measuring range 150mm, output 0...10V
Servo amplifier 230V,50Hz, 1 phase.

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