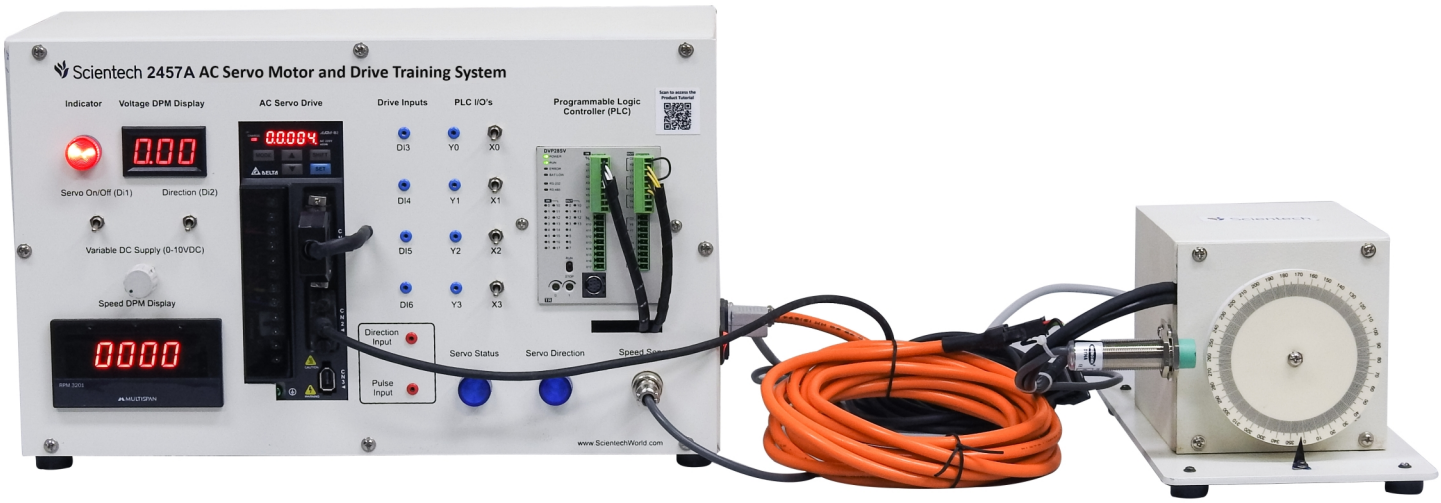
Scientech

AC Servo Motor and Drive Training System

Scientech 2457A



The integration of AC Servo Motors and Drives with PLCs plays a vital role in achieving precise and efficient motion control in modern industrial automation systems. This combination provides accurate control over motor speed, position, and torque, ensuring superior performance, reliability, and repeatability in automated operations. Such systems form the backbone of advanced applications in robotics, CNC machinery, packaging, and material handling, where precision and productivity are critical to success.

The **Scientech 2457A AC Servo Motor and Drive Training System** is a state-of-the-art, compact, and fully integrated training platform designed to deliver in-depth practical knowledge of AC Servo Motor operation, control, and performance analysis. The system allows learners, engineers, and researchers to explore both speed and position control through hands-on experimentation and observation, bridging the gap between theoretical concepts and real-world industrial applications.

An integrated PLC module with multiple digital inputs and outputs enables users to perform diverse automation and control experiments. The Scientech 2457A provides a robust and user-friendly environment for mastering the principles of servo control and industrial automation, making it an invaluable tool for technical education, skill development, and applied research.

Features

- The System provides complete understanding of AC Servo Motor operation, drive control.
- All components are neatly integrated into a user-friendly training setup.
- Study of Speed and Position Control.
- Equipped with a PLC featuring multiple digital inputs and outputs for automation and control experiments.
- Includes dedicated Speed and Voltage DPM displays for accurate monitoring of motor performance parameters.
- Features an inductive proximity sensor for precise feedback and motion detection.
- Ideal for technical institutions and training centers to demonstrate concepts of servo control and automation.
- Epoxy coated MS control panel with separate motor unit.

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Scope of Learning's

- Study and use of AC Servo motor and drive.
- Study and use of AC Servo motor in manual mode using analog input.
- Study and use of auto gain tuning mode in AC Servo drive motor.
- Study and use of AC Servo motor in Jog mode.
- Study and use of Speed control of Servo motor using PLC.
- Study and use of Position control of Servo motor using PLC.

Technical Specifications

AC Servo motor	:	1 no.
Power	:	400W
Rated Voltage	:	220V
Rated Speed	:	0 to 3000 r/min.
Current	:	1Ampere
Control type	:	PWM control using Drive
Encoder	:	2048 / 2500 / 10000 Pulse / Rev. (Incremental, Absolute)
Dynamic brake	:	Servo/Controller off Operable with the built-in alarm
Servo Drive System	**:**	**1 no.**
LED display	:	5 digit seven segment display
Function key	:	5 nos. (mode, shift , up, down , set)
PLC	**:**	**1 no.**
Digital inputs	:	4 nos.
Digital outputs	:	4 nos.
Communication	:	USB
Speed DPM display		
Display	:	Single
Display	:	4-digit, 0.56'', 7-segment, red LED display
Range	:	4 to 5000 RPM
Input	:	PNP switch
Supply	:	100 to 270V AC
Inductive Proximity Sensor	**:**	**1 no.**
Type	:	M12
Output	:	PNP/NPN NO
Sensing distance	:	4 mm
Voltage DPM display	**:**	**1 no.**
Measuring range	:	0-10VDC
Variable DC Supply (0-10V) Potentiometer	**:**	**1 no.**
Measuring range	:	0-10VDC
Toggle switch	:	6 nos. (One for Servo on/off , One for direction, four for PLC inputs.)
Indicator	:	2 nos. (One for servo status and one for direction)
Power Indicator	:	1 no.

Subject to Change

Designed and Manufactured in India by -

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