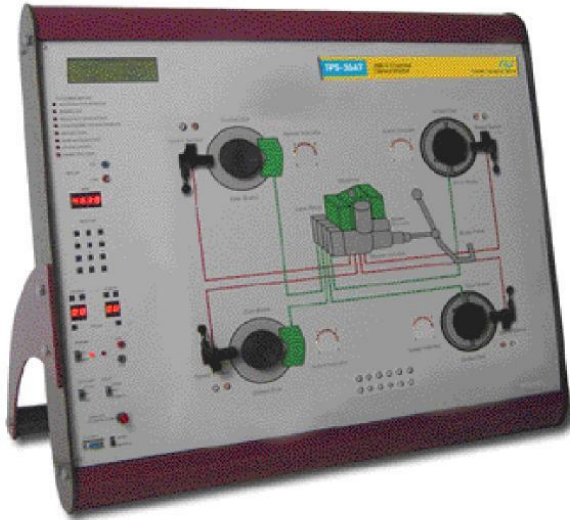


S E R I E S
TPS-3547

ABS 4 CHANNELS

SYSTEM DEMONSTRATOR



Objectives

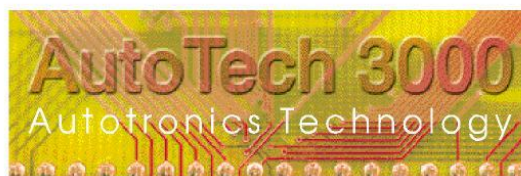
The TPS-3547 Automotive ABS 4 Channel System Training Demonstrator is designed to provide students with automotive training program introducing various systems and real components in modern cars.

The demonstrator brings a comprehensive view of the entire system in the car, the system's actual components and their interconnection, functions, operation, signals, diagnosis and repair methods under hands-on safe activities.

Description

The demonstrator includes real and simulated components controlled by internal controller that produces the signals for measurement according to its internal simulating program or according to PC simulation programs.

The demonstrator's panel is with colored graphics clearly presenting the system components, connections and inter-relations with test points for real measurements and LEDs describing the component status.



S E R I E S

TSP-3547

ABS 4 Channel System Demonstrator

Technical Characteristics

The demonstrator is in a wide metal case with a colored printed circuit experiment panel (80 x 60 x 10 cm), which ensures easy handling and good visibility of the components and the simulation part.

The demonstrator includes real components and simulation components modules. The experimenting panel includes the system drawings with test points and banana sockets.

The demonstrator can be operated as a stand-alone system without a PC, guided by experimental book using built in oscilloscope or an external oscilloscope.

The demonstrator can be connected to a PC in serial communication (RS232 or USB) using SES-CBT courseware and SESCOPE software for signal display.

Student PC can be connected to the teacher PC for monitoring, course management and records by SESML software (optional).

The system includes

- A power switch with indicating light
- SESLAB 2 channel digital oscilloscope
- 7 segment display and control switches, one for fault insertion unit and one for selecting simulation mode
- Eight (8) LEDs to indicate troubleshooting state
- Status mode switches and display
- Warning indicating light
- Graphic and Alphanumeric LCD display 64X240 pixels used for scope, stopwatch and diagnostic
- Numeric keyboard
- CAN-BUS interface
- Serial or USB communication interface with the PC
- PC / MANUAL switch
- 12V Power adapter
- Digital multimeter
- Operating and simulation switches
- Simulation potentiometers

- ABS Electronic Control Unit (ECU) simulation module
- Inductive wheel rpm sensors
- Four wheels with slotted disks driven by motors with analog and digital outputs
- 3 digital Hall effect sensors near 3 disks
- LED indicators for the operation with or without ABS
- LEDs simulation of the brake hydraulic operation
- Accelerator
- Ignition-starting switch
- Brake pedal with force meter
- ABS warning light
- ABS wiring with test points
- Stopwatch assembly
- Diagnostic unit with Leds and ABS wiring with test points

Experiments

This system enables the student to perform several experiments and covers the following topics:

- Brake main system
- Components
- Basic construction
- Electronic brake control
- Inductive RPM sensors
- Wheel speed calculation
- Vehicle acceleration
- Vehicle braking process
- Wheel lock
- Hydraulic Modulator
- ABS basic principles and operation □ Controls and measurements
- ABS electrical circuits
- ABS control cycles
- Faults-diagnosis and repair
- Operation in various drive conditions

An experiment manual for the student and instructor manual



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