Product Name :	**Product Code :**
Electronics and Digital Technology In Automotive	LIM-CAT-L0072-00010

Description :

Electronics and Digital Technology In Automotive

Technical Specification :

Electronics and digital technology in automotive
Interactive Course: Electronics and digital technology in automotive.
The course offers an introduction to digital technology in vehicles. The course consists of an application software with animations and an experimental unit with pre-fabricated variable circuits. The course covers theory and practical experiments by using software based virtual instruments in connection with the interactive, PC based training hardware.
Learning contents:
Introduction to common designs ad properties of diodes, Identifying typical diode applications, Determining the valve and rectifier actions of diodes, Recording static and dynamic characteristics for various diodes, Determining diode parameters by measurement, Investigation of limiting circuits using Zener diodes (with and without load)
Introduction to basic transistor circuits, Design and investigation of a transistor switch, Experiment to set the operating point of a transistor, Measurement of gain and input/output resistances in common emitter and common collector circuits, Investigating the effect of resistive and capacitive feedback in a common emitter circuit, Introduction to basic logic circuits, Introduction to truth tables and symbols, logic equations and timing diagrams for each of the basic gates, Experimental derivation of Boolean functions and laws, Design of basic logic circuits using NAND gates and NOR-gates, Minimisation of logic circuits with the aid of Karnaugh maps with experimental testing, Introduction to the principle of a flip-flop.

Investigating the operation of a JK flip flop by measurement (static and dynamic input signal/single-pulse operation), Investigation of a counter circuit, Fault simulation (min 16 simulated faults activated by relay)
Including:
Experiment unit with diode circuits (Si, Ge and Zener diodes), transistors for building various circuit configurations (common emitter, common collector, with or without feedback), logic gates (NOT, AND, OR, NAND, NOR, EXOR, EXNOR) and a sequence of gates, JK flip-flop

Laboratory instruments manufacturers India