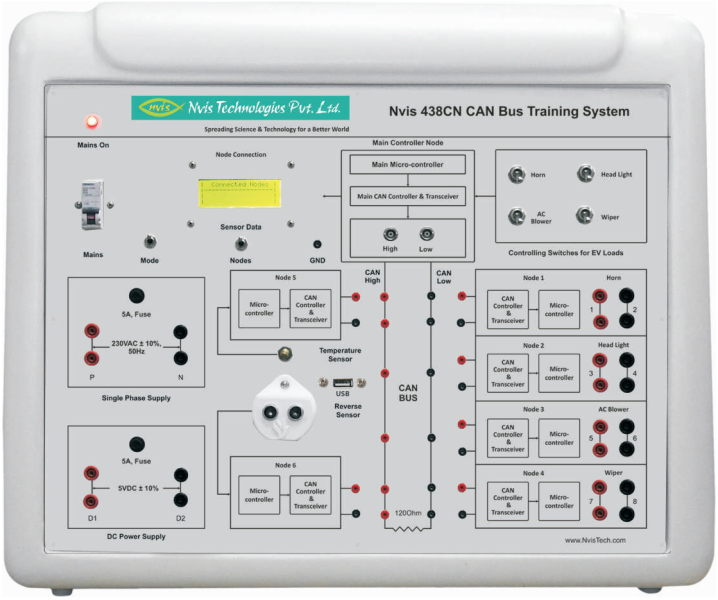
CAN BUS Training System

Nvis 438CN



New

CAN (Controller Area Network) bus technology is revolutionizing communication in automobile sector to meet the automobile industry needs. Before CAN system was introduced, each electronic device is connected to other devices using many wires to enable communication that relying on analog signals presented several limitations such as noise interference, slow data transfer and inability to easily integrate components from various manufacturers. CAN is a low cost, high-speed, serial communication protocol that allow ECUs (Electronic Control Unit) to communicate with each other without much complexity by just connecting each ECU to the common serial bus.

Nvis 438CN CAN BUS Training System is a versatile training system to explain the fundamentals of CAN BUS protocol used in automobile industries for data transmission between different sensors and control systems. It provides a comprehensive understanding of how various CAN nodes can be configured and control in vehicles. It includes a separate hardware which consists of various vehicle loads that can be controlled using CAN BUS system.

Features

- Complete understanding of CAN BUS protocols used in vehicles.
- Alphanumeric 20 x 4 Big Font LCD for better visibility
- Facility to detect connection & disconnection of vehicle nodes.
- Provided with vehicle loads like horn, cabin light, air conditioning blower, wiper.
- Diagrammatic representation for the ease of CAN operations.
- Equipped with vehicle sensors like thermo water temperature sensor, reversing radar sensor.
- Inbuilt SMPS based power supply for circuit operation
- Designed by considering all the safety standards

Scope of Learning

- Study of CAN BUS protocols in Automobiles.
- Study of data transmission of thermo water temperature Sensor using CAN BUS
- Study of data transmission of reversing radar sensor using CAN BUS.
- Study of connecting and controlling loads via CAN BUS.
- Study of the addition and removal of various nodes in a CAN BUS.

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Technical Specifications

Mains supply	:	230VAC ±10%, 50Hz
SMPS based power supply	:	5V, 5A & 12V, 10A
Protocol	:	Serial communication
Topology	:	Bus type
Differential Signaling	:	Two Wire
Signaling rate	:	125 kbps to 1 mbps
No of nodes	:	7Nos.
CAN Controller & Transceiver		
Input Supply voltage	:	5V
Working current	:	5 mA
Communication Rate	:	1 Mbps
Crystal oscillator	:	8 MHz
Controller		
No. of Pins	:	28
CPU	:	RISC 8-Bit AVR
Operating Voltage	:	1.8 to 5.5 V
Program Memory	:	32KB
Reversing radar sensor		
Operating voltage	:	5V
Operating current	:	30mA
Operating range	:	25cm ~ 4.5m
Detecting angle	:	< 70A^0
Thermo water temperature sensor		
Operating voltage	:	5V
Vehicle Load		
Cabin light operating voltage	:	12V
Horn operating voltage	:	12V
Frequency of horn	:	335/440 Hz
Sound level of horn	:	108dB
Air conditioning blower	:	
Operating voltage	:	12V
Wattage	:	30 Watts
Wiper system		
Operating voltage	:	12V
Degree of rotation	:	90^0 (Approximately)
MCB	:	10A

Subject to change - Version 2.0

Designed & Manufactured in India by

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