



Automotive Inverter Trainer

Order No. 112020310

The inverter, also called power electronics, converts the DC voltage of the high-voltage battery into AC voltage for the electric motor. The innovative laboratory trainer allows detailed investigation of this conversion and control of an electric motor.

At a glance

Features

- Large didactically designed engine and color printed, clear presentation of the transistor circuit
- Manual mode: Individual on and off switching of the transistors in the inverter
- Automatic mode: precise control of the drive to a standstill
- LED's in each of the three phases indicate the direction of current to and from the engine - and thus the magnetization of the coil
- LED's in each transistor indicate the status
- Voltage measurement points in the three phases including additional current-measuring points with an integrated shunt, measuring socket in starpoint
- Low voltage for safe handling

Learning Objectives

- acquire knowledge about the interaction of the electronic components in the inverter and electric motor
- pressing the switches in the correct order will move the motor gradually to work out the basic function
- deepen your expertise to optimally adjust oscilloscopes and evaluate the presentations
- represent pulse width modulated signals and sinusoidal waveforms in detail with the oscilloscope, also between individual phases

Equipment

- Laboratory trainer in console housing for use on the table or in A4 supporting frame
- 1 x signal generator with precision regulator
- 1 x key switch for selecting the mode
- 6 x pushbutton for IGBT transistors, 6 x two-color LED for status indication
- 9 x test sockets, 4 x sockets for power supply with 12V
- detailed documentation and extensive worksheets for teachers and students

Technical Specifications

Power supply: 12 Volt DC

Dimensions: L x W x H 297 x 266 x 110 mm

Weight: about 4 kg

Changes reserved!