AUTOMATION AND CONTROL

BRUSHLESS DC MOTOR TRAINER

DESCRIPTION

Brushless DC Motor Trainer developed to study the more important industrial disciplines: DC brushless motor, PLC and human Machine interface

It has been developed as an “open” system; each hardware component is independent from the other ones, allowing the study of each system in autonomous way, connecting other existing equipment of the laboratory.

FEATURES:

- It is easy to move with its portable structure,
- The trainer can be used to study three different didactic field: DC brushless, HMI, PLC,
- Trainer hardware characteristics permit to the students to study independently or together the parts of the trainer.

The trainer is composed of three different parts: PLC, HMI, BLDC system.

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PLC:

Advanced PLC that includes digital input, digital output, analogue input, analogue output and communication port

HMI:

- Display: TFT LCD, 4.3”, 480x272,
- Max Colours: 16.7M,
- Touch screen: 4.3 inch, 4-wire resistive,
- CPU and core logic: 32Bit RISC Cortex-8A 600MHz,
- DRAM: 128M,
- I/O: 1 serial port COM1 RS485 and 1 Ethernet Port,
- Power supply: 24Vdc.

BLDC SYSTEM:

Including two drivers and two BLDC motors connected between them with couplings.

Each BLDC motor can run separately and could be driver and load.

DRIVER FEATURES:

- Power supply ： 24Vdc,
- RS232 communication.

I/O:

- ON/OFF control,
- Direction control,
- Torque mode,
- Speed mode,
- Speed feedback,
- Direction feedback,
- Torque saturation.

BRUSHLESS CC MOTOR:

- Brushless DC motor,
- Power: 0.2kW,
- Rated Voltage: 24Vdc,
- Rated Speed: 3000 rpm,
- Rated Torque: 0.6 Nm.

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DIDACTIC EXPERIENCE:

- PLC digital I/O experiment,
- PLC analogue I/O experiment,
- PLC and HMI Communication Experiment,
- Brushless Motor Speed Control Experiment,
- Brushless Motor Torque Control Experiment,
- Speed feedback experiment,
- HMI-PLC - Brushless Motor Simulation Control Experiment,
- Drawing speed curve,
- Brushless motor starting torque measurement experiment,
- Brushless motor torque saturation experiment.

SOFTWARE APPLICATION:

The Brushless Dc Motor Trainer includes the following software: monitoring software of DC brushless, PLC software, HMI software.

ORDERING CODE

It is possible to order this product with two different codes.

The code's choice is based on the PLC type to be included with the trainer.

DL 2131-AB – Brushless DC Motor Trainer with PLC Alan Bradley.

DL 2131-1200 – Brushless DC Motor Trainer with PLC Siemens.

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