



## BRUSHLESS DC MOTOR TRAINER



**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.

### 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.

### **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



# AUTOMATION AND CONTROL



## Driver features:

- Power supply : 24Vdc
- RS232 communication

## I/O:

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

## BLDC motor:

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

## 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.