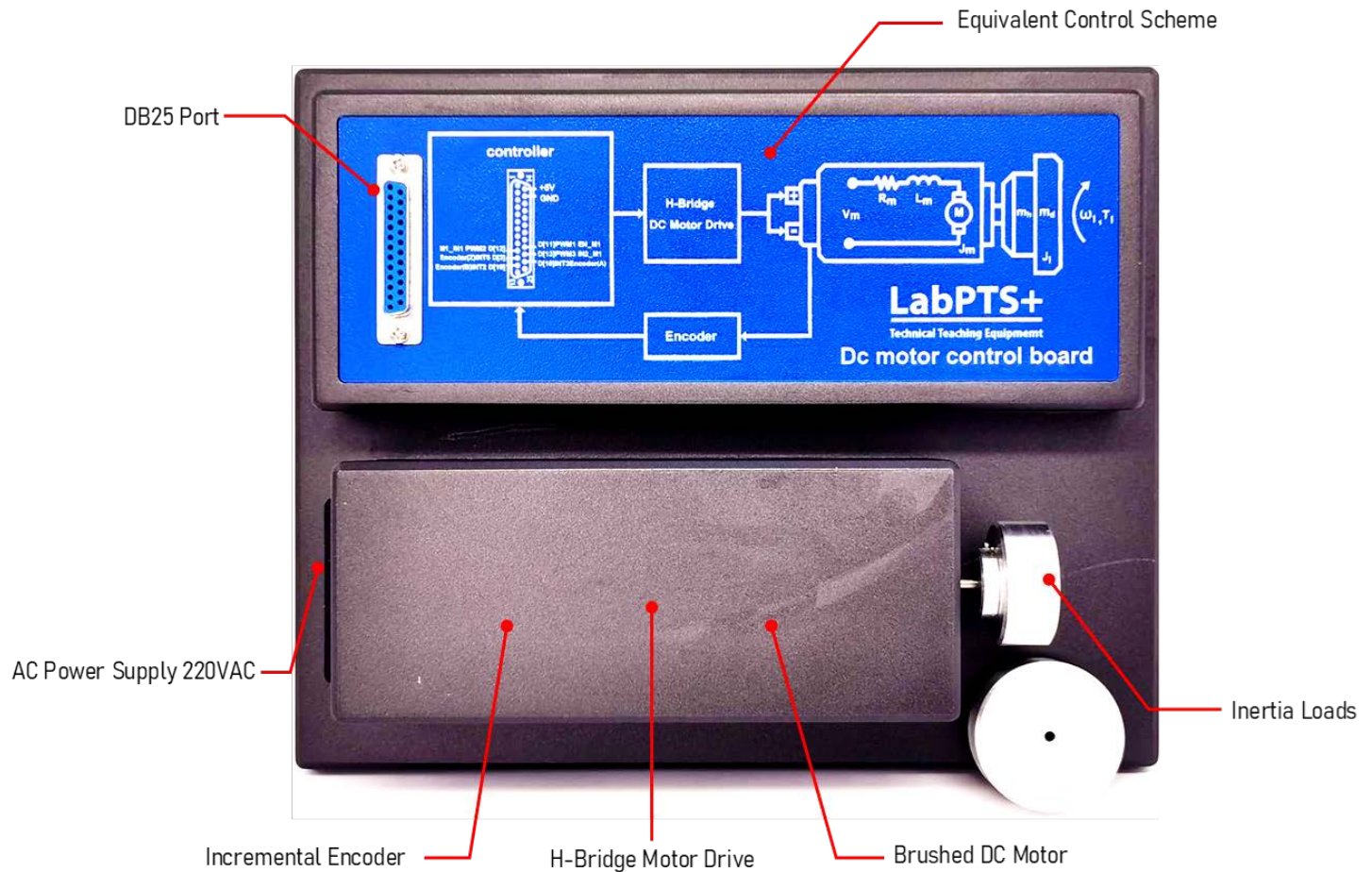


BRUSHED DC MOTOR CONTROL SYSTEM LAB KITS V1.0

FOR EDUCATION IN EMBEDDED CONTROL SYSTEM FIELDS



FEATURE DETAIL

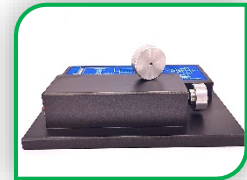
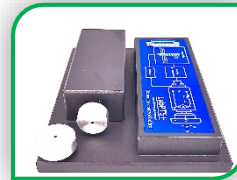
- Brushed DC Motor Control System Lab Kits V1.0 is designed as add-on for co-working with the xMCU development board V1.0 so suitable undergraduate degree or vocational/diploma education.
- Cover the lesson comprehensive to Open loop control, Closed loop control such as Conventional PID control, Fuzzy Logic Control.
- Easy to use, the pin's function modules are reserved by not wiring so just the coding and then upload into development board.
- Support for Arduino IDE, LabVIEW, MATLAB/Simulink Software development and other (due to microcontrollers/processing unit series).
- Learning about principle of electromechanical machine behavior.
- The permanent magnet has high-power and high-speed properties.
- The package is made from PVC material so portable, compact size, lightweight and dimension 250x200x50 mm.

ACCESSORIES LAB KITS

- Brushed DC Motor Control System Lab Kits V1.0 .
- AC Power Cable.
- Inertia Loads.
- Arduino IDE Software (Open source).
- C-Code Example (Only Arduino).
- Worksheet Document.

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SYSTEM CONFIGURATIONS

Module Interface	Description	Remark
Brushed DC Motor		
<ul style="list-style-type: none"> - Model - Construction - Commutation - Continuous Current - Torque - Operating Voltage - Speed - Output Shaft Length - Shaft Diameter - Motor Diameter - Applications 	<p>CHR-3162 ABHL DC motor</p> <p>Permanent magnet</p> <p>Brush</p> <p>110-350 mA</p> <p>100-200 g.cm</p> <p>12 VDC</p> <p>4,000 rpm</p> <p>19 mm.</p> <p>3 mm.</p> <p>31 mm.</p> <p>Robots, mechanical equipment, automatic rotating equipment, etc.</p>	N/A
Brushed DC Motor Drive		
<ul style="list-style-type: none"> - Type - Operating Mode - IC Drive - Protection - Operating Supply Voltage - DC Current - Others 	<p>Dual H-bridge motor drive (Bidirectional control)</p> <p>Stop, forward, reverse</p> <p>L298</p> <p>Over temperature protection</p> <p>Up to 35 VDC</p> <p>Total up to 3 A (only single motor)</p> <p>Integrated 5VDC power regulator</p>	N/A
Encoder		
<ul style="list-style-type: none"> - Type - Pulse outputs of rotation - Power Supply Voltage - Basic Function - Encoder Interface Type - Output Signal Type - Response Frequency - Basic Pulse Number - Poles of Magnetic Ring 	<p>AB dual phase incremental encoder</p> <p>Basic pulse 11 PPR</p> <p>3.3/5.0 VDC</p> <p>With the pull up shaping resister, the single-chip microcomputer can be used</p> <p>PH2.0 (standard wiring)</p> <p>Square wave AB phase</p> <p>100 kHz</p> <p>11 PPR</p> <p>22 Poles (11 pairs of poles)</p>	
Inertia Loads		
<ul style="list-style-type: none"> - Material 	Aluminum/Iron (2 pieces)	N/A