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**Product Name :**  
DC Motor Speed Control

**Product Code :**  
LBNY-0005-1260006



#### **Description :**

Speed measuring with a generator or with an encoder via frequency/voltage converter. Speed reference set by means of potentiometer or selector switches and under PLC control. The system has been designed for the study of programmable logic control techniques in the control of the speed of a separately excited DC motor. Possibility of acceleration and deceleration ramps programming. Pointer meters for motor speed, voltage and armature current connection to PLC through terminals or connectors. The speed regulation includes two control loops: hardware current loop with over current limiting and speed loop with external PLC control. The PI controller modulates the PWM circuit that drives the power stage consisting of switching transistor.

#### **Technical Specification :**

Power: 48 Vdc, 5 A.  
Power supply: single-phase from mains.  
Tachometric signal: 180 V at 3000 rpm.  
The student will be able to study the following:  
Open loop speed control  
Use of the PLC for the speed measuring  
Acceleration and deceleration ramps programming  
Duty cycle monitoring  
Closed loop speed control.

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# Laboratory Instrument India

