



Sciencetech 2426 Speed Control of DC Motor by PLC has a DC Motor driver which works on PWM technique. Today's industries are increasingly demanding process automation in all sectors. Automation results into better quality, increased production at reduced costs. Variable speed drives, which can control the speed of AC/DC Motors, are indispensable controlling elements in automation systems. Depending on the applications, some of them are fixed speed and some of the variable speed drives. There are several methods to control the speed of a DC Motor, out of which the PWM based DC Motor driver gives the best results. This circuit smoothly controls the speed of a general purpose DC Motor. The Permanent Magnet DC Motor (PMDC) is the most commonly used type of small Direct Current Motor available producing a continuous rotational speed that can be easily controlled. Small DC Motors are ideal for use in applications where speed control is required such as in Camera Position Control, Robots and other such electronic circuits.

Features

- Slotted disk for speed measurement
- Separated unit for Motor in see through cabinet
- Precise Signal conditioning
- Sensitive, stable and accurate
- User friendly and powerful instruction sets
- Easy to operate
- Ready to use application board
- Online Product Tutorial

Scope of Learning

Study and use of:

- DC Motor.
- PWM (Pulse Width Modulation) and Voltage to Frequency Convertor.
- MOV instructions.
- DC Motor control by PLC using ladder program.
- Running DC Motor in clockwise and anticlockwise direction.
- Changing the speed of DC Motor.

Technical Specifications

Analog Input ranges : 0-10V approximately

Analog Output range : 0-10V

DC Motor:

Supply Voltage:12V DC

Speed range :2400 RPM

Speed sensing : IR Sensor

Digital Output pin Voltage : 5VDC when particular O/P is activated from PLC

Output of F/V Convertor : 0-10Vmax 0 to 2400 RPM

Mains Supply : 100-240V AC, 50/60 Hz

Dimension (mm) : W 255 × D 155 × H 80

Weight : 1.2kg (approximately)

Operating Conditions : 0-40°C, 85% RH

Included Accessories : Patch cords 8”(2mm) - 6nos.

Mains cord-1 no.

Connecting Cable-1no.

Cabinet for Motor assembly-1no.

Product Tutorial : Online on www.ScientechLearning.com

Note: This module requires analog input. Scientech 2426 can be directly interfaced with Scientech 2400A/B/C/E/GN/J. If you want to interface Scientech 2426 with Scientech2400G, Scientech 2400N is required.