

## ACD-40 AC Variable Frequency Drive



### **An AC Drive Training System Featuring The Allen-Bradley PowerFlex 40**

The ACD-40 is a complete AC Drive Training System featuring the Allen-Bradley PowerFlex 40 Variable Frequency Drive. The ACD-40 provides for hands-on study of a typical industrial AC variable frequency drive. With the included courseware package, the trainee gains hands-on experience using an AC drive in an application-oriented setting with a range of activities demonstrating real life industrial motor control situations. The system includes a student activity manual and instructor's guide that provide a thorough knowledge of the practical use of a motor control system.

The training curriculum begins with basic AC motor and drive fundamentals; moves on to programming the PowerFlex 40 using parameter flow charts and the included Human Interface Module with keypad and display; and finishes by outlining various troubleshooting techniques, focusing specifically on fault troubleshooting with drive system fault simulation to demonstrate the process. There are practice exercises and testing, which enable tracking of learning progress.

## SPECIFICATIONS

The ACD-40 training system is mounted upright on a metal frame with stainless steel front panel for easy learner access to hardware and convenient interfacing to other TII training systems. The Allen-Bradley PowerFlex 40 Variable Frequency Drive is embedded into the top center of the panel and all features have been silkscreened for ease of identification. The ACD-40 is designed for tabletop or bench use. There is a large work space in front of the panel making the ACD system configuration appear "L-shaped".

All control panel components, lights, and switches can be accessed through banana jacks. This system design flexibility enables the user to easily interface the ACD-40 with other control devices.

### Control Panel:

- Motor Control Application:  
220 VAC Motor with 6" Fan
- Four two-position push button Drive control switches - Start, Stop, Reverse, Enable
- Two two-position toggle switches for remote/manual programmable Drive input control
- Relay output indicator light
- Remote potentiometer with 0 to 10 V panel meter for INPUT display
- Second 0 to 10 V panel meter for OUTPUT display
- Series of banana jacks for external electrical interfacing with PLCs or other devices
- Fuse protected

### System Dimensions:

Frame Size: 20.5" x 14.5" x 4"  
Front Tray: 20.5" x 10"  
Shipping Weight: 40 lbs.

### POWERFLEX 40 Drive:

Operates on 110 single-phase VAC with built-in 110 to 220 VAC transformer; other voltage configurations available

Input: 0.4 kW

Output: 2.3 A (0.5 HP); voltage is adjustable from 0 V to input voltage

### Inputs/Outputs:

Two Analog Inputs  
Four Digital Inputs  
One Analog Output  
Two Opto-transistor Outputs  
One Relay Output

Programming via built-in Human Interface Module - LCD display and keypad

### Drive Control:

Volts per Hertz  
Sensorless Vector  
Skip Compensation

### Programmable Applications:

Linear Curves  
"S" Acceleration/Deceleration Curves  
Step Logic  
PID Control  
Skip/Preset Frequencies  
Input/Output Variables  
Troubleshooting

### Optional Communications Adapters:

Ethernet  
Device Net  
Profibus  
Serial

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