

Review



Multiple Choice

1) If you are controlling the AFD from the keypad mounted 3m (10feet) away this control arrangement inside the program of the drive is known as which of the following?

- A) Local Control
- B) Remote Control
- C) Serial Control
- D) Open Control
- E) Closed Control

2) In the picture below, what type of Control Arrangement is displayed?



- A) Local Control
- B) Remote Control
- C) Serial Control
- D) Open Control
- E) Closed Control

See notes for additional questions

3) Which of the following arrangements is the best way to control precise synchronization between five AFDs?

- A. Leader/Follower arrangement connecting all 5 AFDs.
- B. Master/Slave arrangement connecting all 5 AFDs.
- C. Multi-motor operation with all 5 motors attached to one AFD.
- D. Multi-motor operation with each AFD using a Sync-Pos Card.
- E. Serial Communications connecting all 5 AFDs.

4) If an RS-485 is the only connection that exists between 3 AFDs and a PLC, this control arrangement is known as which of the following?

- A. Multi-motor operation setup as a Leader/Follower
- B. Multi-motor operation each AFD using a Sync-Pos Card
- C. Local Control
- D. Remote Control
- E. Serial Communication

5) If a single AFD operates 3 motors, which of the following must be remembered?

- A. It must be connected in a Master/Slave arrangement.
- B. The AFD must use a Sync-Pos card.
- C. An RS-485 connection must be made between the AFD and motors.
- D. Each of the 3 motors must have overload protection.
- E. All of the above are required.

Review



Multiple Choice

6) Which of the following control arrangements are identified by one AFD sending a 4-20mA signal out its AO (Analog output) to the AI (Analog Input) of the other AFD?

- A) Local Control
- B) Remote Control
- C) Master/Slave
- D) Serial Comm.
- E) Multi-motor with Sync-Pos cards

7) If an end-user starts asking if it is possible to directly communicate with his Allen-Bradley PLC, in which of the following serial communication cards would he be most interested?

- A) Profibus
- B) DeviceNet
- C) Lon Works
- D) Modbus Plus
- E) Interbus

See notes for additional questions

8) A meter (0-20mA) is needed to indicate the feedback signal that is wired to an AI of an AFD. To which of the following AFD control wire connections should the meter be attached to show the proper readings?

- A. Analog Input
- B. Digital Input
- C. Analog/Digital Output
- D. Relay Output
- E. Both C and D are correct

9) A light is used to indicate when the AFD goes into an alarm condition. To which of the following AFD control wire connections should a 120Vac light be attached.

- A. Analog Input
- B. Digital Input
- C. Analog/Digital Output
- D. Relay Output
- E. Both C and D are correct

10) Three AFDs are operating via Serial Communications with a PLC. How many wire connections are needed on the AFD for serial communications?

- A. 2 wire
- B. 4 wire
- C. 9 wire
- D. 10 wire
- E. It depends on how much information is desired between the AFDs and PLC.

Review - Answers



- 1) A – Local Control
- 2) B – Remote Control
- 3) D - Multi-motor operation with each AFD using a Sync-Pos Card.
- 4) E - Serial Communication
- 5) D - Each of the 3 motors must have overload protection.
- 6) C - Master/Slave
- 7) B - DeviceNet
- 8) C - Analog/Digital Output
- 9) D - Relay Output
- 10) A - 2 wire

Objective:

The Student is able to identify 8 different ways to control an Adjustable Frequency Drive and give a brief explanation of each.

If you have any comments or questions, please contact:

Mark Peterson

Training Manager - Industrial

Danfoss Drives

4401 N. Bell School Rd

Loves Park, Illinois 61111 USA

phone: (815) 639-8721 or (800) 432-6367

fax: (815) 639-8987 or (815) 639-8002

Email: MarkPeterson@Danfoss.com