

# Pre-Test



Answer the following application questions based on this diagram.

## Multiple Choice

1. Which of the following is the most correct statement about 2-wire and 3-wire Start/Stops?
  - A. 2-wire uses 2 momentary switches, 3-wire uses 1 continuous switch
  - B. Both 2-wire and 3-wire start/stops use 2 momentary switches
  - C. 2-wire uses 1 continuous switch, 3-wire uses 2 momentary switches
  - D. Both 2-wire and 3-wire start/stops use 1 continuous switch
  - E. B and D are both correct.
  
2. The setting for the speed of a VFD is known as which of the following:
  - A. Setpoint
  - B. Reference
  - C. Control Point
  - D. Speed Point
  - E. All of the above are common names for the speed setting.

See notes for questions 3-5.

3. Assuming no friction losses, if a VFD is operating a pump at 30Hz,  $\frac{1}{2}$  the full speed, which of the following is the correct power consumption?
  - A. 50% power consumption
  - B. 33% power consumption
  - C. 25% power consumption
  - D. 12.5% power consumption
  - E. 6.7% power consumption
  
4. Limits are very important for a VFD operating a pump. Which of the following are the most commonly used limits for a pump?
  - A. 18Hz Minimum speed; 60Hz Maximum speed
  - B. 6Hz Minimum speed; 60Hz Maximum speed
  - C. 18Hz Minimum speed; 90Hz Maximum speed
  - D. 6Hz Minimum speed; 90Hz Maximum speed
  - E. 0Hz Minimum speed; 120Hz Maximum speed
  
5. Inside the VFD, acceleration, is also known as which of the following:
  - A. Increase Speed
  - B. Increase Setpoint
  - C. Speed UP
  - D. Run-Up
  - E. Ramp-Up



## ***How did you do?***

Answers:

1. C. 2-wire uses 1 continuous; 3-wire uses 2 momentary
2. B. Reference
3. D. 12.5% power consumption
4. A. 18Hz Minimum speed; 60Hz Maximum speed
5. E. Ramp-Up

If you got 4 or 5 right – skip this lesson and go to lesson 2

If you got 3 or less right, please review this lesson.