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Quick Guide to Starting up a Honeywell Smart VFD

- 1) Make sure that either a relay (for remote start/stop) or jumper wire is connected from **Pin 6** to **Pin 8** on the drive.
- 2) If using a 4-20mA signal with the P7640, make sure there is a jumper wire connected between **Pin 5** and **Pin 7** on the drive.
- 3) Enable the Auto-Reset feature to auto-reset the VFD upon a fault. If the fault is still present after multiple tries, the VFD will not reset. This feature can be enabled by going to menu M3.10.1 (Parameters > Automatic Reset > Automatic Reset > Edit) and set to enabled. Other factors can be changed in the Automatic Reset menu. Please consult the Application Manual for more information.
- 4) For more information on the PID Wizard, refer to the VFD Application Manual.

PID Mini-Wizard

The PID mini wizard is activated in the Quick Setup menu. This wizard presupposes that you are going to use the PID controller in the "one feedback / one setpoint" mode. The control place will be I/O A and the default process unit "%".

The PID mini wizard asks for the following values to be set:

1	Process unit selection	
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There are several possible selections. For the P7640, you would select "in wg". For the PWT, you would select PSI.

If any other process unit than "%" is selected the following questions appear: if not the wizard will directly jump to step 5.

2	Process unit min	
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For the P7640 set for bidirectional, this would be a negative number opposite of the max. For example, a P7640 selected on the 0-5 in.-w.c. and unidirectional, the minimum would be 0 and the maximum would be 5.

3	Process unit max	
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Set for the maximum to match maximum selected on the transducer.

4	Process unit decimals	0..4
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If you have a 0-5" range and wish to have the HVFDS display 2.5", you would select 1 to show one place beyond the decimal.

5	Feedback 1 source selection	
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This is typically AI1 or AI2. AI1 is typically 0-10 VDC. AI2 is typically 4-20mA. These are configured by dip switches under the cover of the HVFDS.

If one of the analogue input signals is selected, then question 6 appears. Otherwise you will be taken to question 7.

6	Analogue input signal range	0 = 0...10V / 0...20mA 1 = 2...10V / 4...20mA
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If you are using AI2 with 4-20mA signal, then you would choose a value of 1. If you are using AI1 with 0-10VDC signal, then you would choose a value of 0.

7	Error inversion	0 = Normal 1 = Inverted
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In a typical application, this is left at 0 = Normal. When the pump/fan speeds up, the pressure goes up. In an exhaust application where if the speed goes up, the pressure decreases, then you would invert the error signal.

8	Setpoint source selection	
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If one of the analogue input signals is selected, then question 9 appears. If you are not using an analogue input as your setpoint source then select Keypad SP 1 for local control. You will then be taken to question 10.

9	Analogue input signal range	0 = 0...10V / 0...20mA 1 = 2...10V / 4...20mA
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10	Keypad setpoint	
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Here is where you select the setpoint. For example 2.5 in.-wg.

11	Sleep function?	No Yes
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If option 'Yes' is selected you will be prompted for three more values:

12	Sleep frequency limit 1	0.00...320.00 Hz
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13	Sleep delay 1	0...3000 seconds
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14	Wake-up level 1	Range depends on selected process unit
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Additional Settings

Adjust the Accel time and Decel time:

It is recommended that the Accel time and the Decel time be adjusted so that you will not get a motor overtemperature fault. Follow the instructions below to make the changes.

- 1) Press the "Back" button multiple times until you get to the Main Menu
- 2) Press the "OK" button to enter the "Quick Setup" menu
- 3) Scroll down to "Accel Time 1" (P1.13) and click on the "OK" button
- 4) Click on the "OK" button to edit the value
- 5) Enter a value of 40 seconds for a fan or 10 seconds for a pump and click on the "OK" button to accept the value
- 6) Click the "Back" button which will bring you to the "Quick Setup" menu
- 7) Scroll down to "Decel Time 1" (P1.14) and click on the "OK" button
- 8) Click on the "OK" button to edit the value
- 9) Enter a value of 40 seconds for a fan or 10 seconds for a pump and click on the "OK" button to accept the value

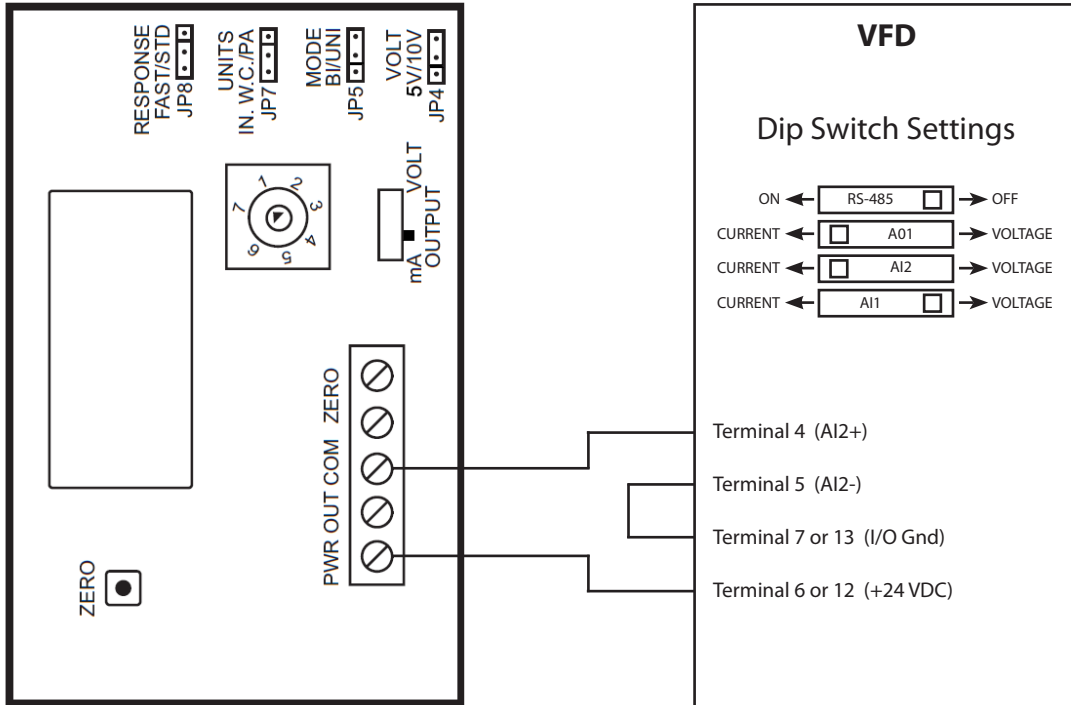
Alternative Fire and Smoke Mode:

An alternative method of controlling the VFD during fire & smoke is to control the "Ready State" of the VFD. This can be controlled by configuring a digital input that will be tied to the alarm system. Below are the steps to configure the digital input.

- 1) It is recommended that DI4 (Preset Speed B0) be used, but any unused digital input could be used.
- 2) Click the "Back" button until you reach the Main Menu
- 3) Scroll down to "Parameters" (M3) and click the "OK" button
- 4) Scroll down to "I/O Configure" (M3.5) and click the "OK" button
- 5) Scroll down to "Digital Inputs" (M3.5.1) and click the "OK" button
- 6) Scroll down to Preset Speed B0 (P3.5.1.16) and click "OK"
- 7) Click the "OK" button to edit the value
- 8) Change the value from DigIN SlotA.4 to DigIN Slot0.1 and click "OK" to accept the value
 - DigIN Slot0.1 is equal to "OFF" and DigIN Slot0.2 is equal to "ON"
- 9) Click on the "Back" button to go back to the Digital Inputs screen
- 10) Scroll up to Run Enable (P3.5.1.10) and click "OK"
- 11) Click the "OK" button to edit the value
- 12) Change the value from DigIN Slot0.2 to DigIN SlotA.4 and click "OK" to accept the value
- 13) If you are satisfied with the change, click the "Back" button until you reach the Main Menu
- 14) Now Digital Input 4 can be used to control Run Enable when the alarm system is OK by running 24VAC from terminals 6 or 12 through the Alarm system normally closed relay contact back to DI4 (terminal 14).

P7640 To VFD Wiring For 4-20 mA Control

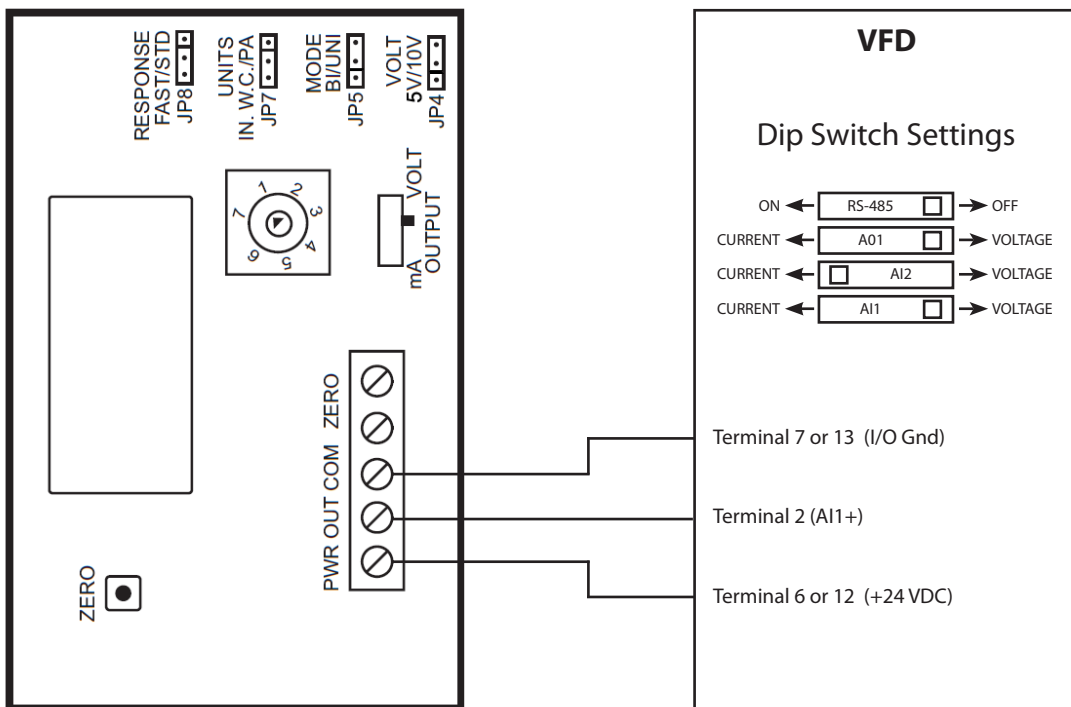
Used for Static Differential Pressure Control



The P7640 is powered from the VFD terminals

P7640 To VFD Wiring For 0-10 VDC Control

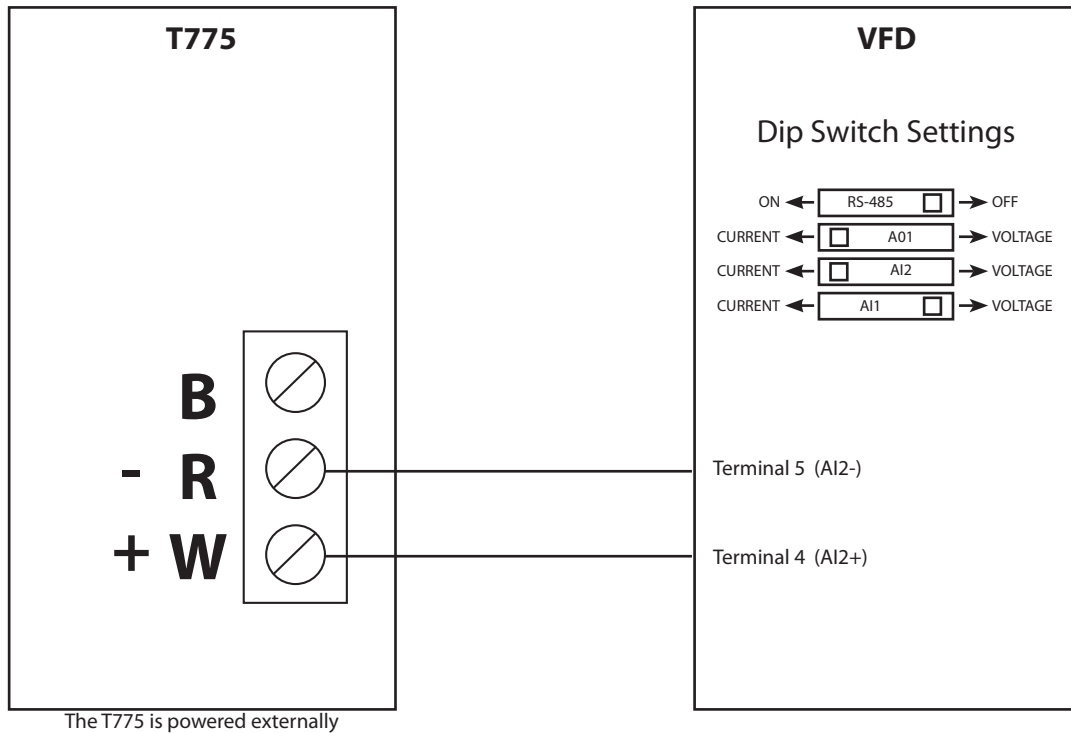
Used for Static Differential Pressure Control



The P7640 is powered from the VFD terminals

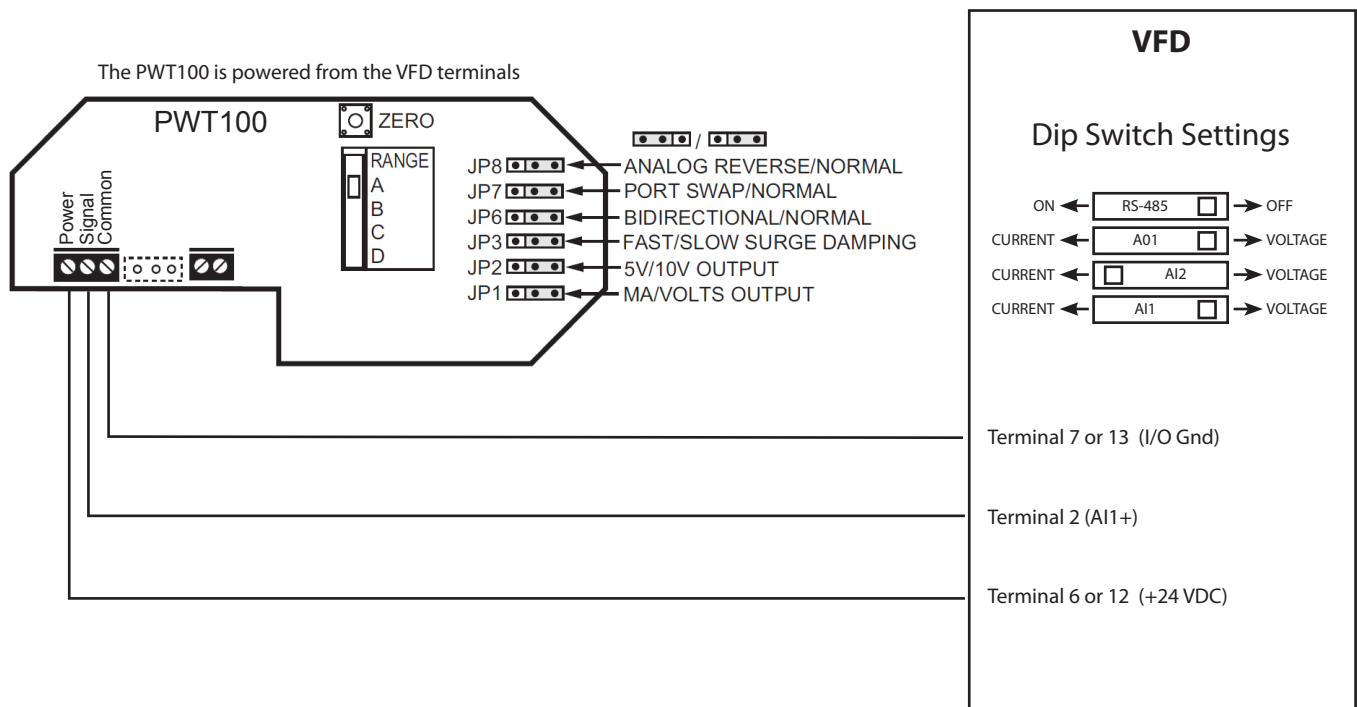
T775 To VFD Wiring For 4-20 mA Control

Used for Custom Control



PWT100 To VFD Wiring For 0-10 VDC Control

Used for Wet-To-Wet Differential Pressure Control



A/TT1K To VFD Wiring For 2-10 VDC Control

Used for Temperature Control

