

Application Note

AN-VTC-14

Switching speed reference from terminal to keypad via digital inputs

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· General:

Some applications require that the user is able to switch between keypad and terminal control for the speed reference setup. For example, switching between local keypad control where a remote keypad (Optiport Plus) is connected and a remote control system is connected to the analog input.

This document describes how to set up this mode of operation.

Note that this mode of operation is only available when terminal control mode is selected (P1-12=0) and the digital input function selection parameter P2-01 = 17 or 18.

· Parameters:

P2-01 = 17

The 4th digital input (Bipolar analog input) is used to switch between keypad speed reference and preset speed.

Digital input 4 closed (Logic 1):

The drive output speed will swap to the keypad reference speed. Depending on the setting in P2-19, the drive speed may keep at current speed or change to the last time keypad reference speed.

The motor speed can only be changed or adjusted through the keypad by pushing the up and down buttons. (Or the up and down button on the Optiport Plus)

The keypad START and STOP button has no function in this situation. And the user cannot change the speed direction by pressing the START button.

Digital input 4 open (Logic 0):

In this case, the motor speed will be controlled by the preset speed in P1-11.

Speed value in P1-11 must be set to a positive value in order to make this function work correctly.

P2-01 = 18

The fourth digital input, which is shared with bipolar analog input channel, is used to switch between the preset speed reference and keypad speed reference.

Digital input 4 closed (Logic 1):

The motor speed can be controlled / adjusted by pressing the UP and DOWN keys on the keypad. The keypad START and STOP button has no function.

Note that if the previous speed is negative, after switching, the motor speed will keep in negative direction. However once the keypad is used to reduce the speed to zero and increase the speed again, the speed can only be adjusted in a positive direction.

Digital input 4 open (Logic 0):

The drive will return to normal terminal control mode. In this case, the motor speed will be controlled by the combined status of digital input 2 and digital input 3, which gives a preset speed value.

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