Application Note AN-VTC- 30

Using the second deceleration ramp time

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- ***General:***

In some applications it may be required to have two independent deceleration ramp times. Typically the first is for the normal operation and another for the emergency or fast-stop operation. This document describes how to activate the second deceleration ramp time.

- ***Parameters:***

P2-25 Second deceleration ramp time

This parameter specifies the second deceleration ramp time. The default value for this parameter is 30s. This parameter should be set to the required deceleration ramp time. Note that the deceleration ramp time is defined as the time required to decelerating from rated speed (P1-09) to zero.

- ***Description :***

The second deceleration ramp time can be enabled in the following ways.

1) In terminal control mode (P1-12 = 0)

If the digital input settings in P2-01 = 15 or 16, then in normal operation, the drive will use the first deceleration ramp time (P1-04) when digital input 3 is open and use the second deceleration ramp time when it is closed.
If the digital input settings in P2-01 = 7, 8, 9 or 10, the second deceleration ramp time will be selected only when digital input 1 and digital input 2 are closed together, in which case the drive will ramp to stop using the second deceleration ramp time.

2) In keypad control mode (P1-12 = 1 or 2)

If the digital input settings in P2-01 = 15, then in normal operation, the drive will use the first deceleration ramp time (P1-04) when digital input 3 is open and use the second deceleration ramp time when it is closed.

3) Mains supply loss – automatic fast-stop

If parameter P1-05 = 2, interrupting or disconnecting the mains supply to the drive during normal operation, then the drive will automatically ramp to stop using the second deceleration ramp time.
Note: In this case, if the second deceleration ramp time in P2-25 = 0, then the drive output will be disabled immediately on mains supply loss.

Note that the default value for this parameter is set to 0 from firmware version 2.21

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