

Application Note

AN-VTC-12

Using standby mode to save energy

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- **General:**

In some applications, it may be beneficial to disable the drive output automatically when the drive output speed at zero or at minimum speed limit and to re-enable the output automatically when the requested speed increases back up from zero or minimum speed. For systems with a low duty cycle, this could effectively be offered as an energy saving option.

In order to satisfy this kind of application, Optidrive VTC provides a user Standby function that will enable the drive to drop into standby when minimum speed is requested for extended time periods.

This document describes how to use this Standby function.

- **Parameters:**

P2-16 Standby mode wake up speed

This parameter defines the speed level that must be reached for the drive to wake up from standby mode. It is expressed as a percentage value of P1-01. The drive will wake up from standby mode when the reference speed is larger than this value. Note that the specified limit should larger than the drive minimum speed (P1-02), otherwise this parameter will have no effect.

P2-20 Standby mode select

P2-20 =0: Standby function is disabled. Drive will continue to deliver energy to the motor even drive is running at minimum speed (P1-02) until the enable signal is removed.

P2-20=1~60 Drive will enter Standby mode when drive remains at minimum speed for a time period greater than that set in P2-20. In standby mode, the drive output is disabled automatically. As soon as the target speed reference is greater than the minimum speed limit (P1-02) or the value set in P2-16, whichever is the higher, the drive will automatically re-enable and ramp to the target speed.

Note that for drive firmware revisions prior to V2.21, the drive would only enter standby mode if the speed remained at 0Hz /rpm for the interval preset in P2-20.

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