

Application Note

AN-ODP-13

## ***How to use the zero speed holding function***

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- **General:**

Optidrive Plus provides the user with a zero speed holding function. This function could be used where mechanical brakes are installed and need to engage before the drive output is disabled at zero speed.

The zero speed holding function will enable drive to open relay contacts when the speed reaches zero speed, but to continue to deliver motor torque for the period set in the zero speed holding parameter P2-16.

This document describes how to set up this zero speed holding function.

- **Parameters:**

### **P2-16 Zero speed holding time**

If P2-16=0, then zero speed holding function is disabled. If P2-16 > 0, zero speed will be held for the time defined in P2-16 prior to disabling the drive output.

The range available is from 0.1s to a maximum time of 60s.

### **P2-13 Relay control function**

Usually zero speed holding time function will be used with the relay output control function. Typically, setting P2-13 = 0 results in the relay contacts closing when the drive is enabled and opening when disabled. This is a typical setting for an application where a mechanical brake is needed.

- **Example:**

If we set P2-16=1s and P2-13=0, P2-15=0, then the relay contact will close when the drive is enabled. When the drive is disabled, the motor speed will reduce at specified ramp rate to zero, and the relay will open as soon as motor speed reaches zero. The drive will maintain torque on the motor, holding zero speed for a further 1s before the drive output is disabled.

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