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Product	Optidrive Elevator

Title	Optidrive Elevator – Possible application causes of SP-Err trips

Summary	This document gives information on possible application causes of SP-Err (Speed error) trips.

Note: Please read in conjunction with the Optidrive Elevator User Guide.

When the Optidrive elevator is set up in closed loop, the drive measures the actual motor speed from the encoder speed feedback. The drive compares this value to the expected speed of the motor. As long as the difference between the encoder speed feedback and expected motor speed is within the value set in parameter P6-07 (Speed error trip level – default 5%) then the drive will run correctly.

If the difference between the encoder speed feedback and the expected motor speed is greater than the speed error trip level, the drive will trip on SP-Err.

Possible SP-Err causes

Is the motor and encoder running in the same direction?

- Run in open loop and check P0-25 (motor speed) & P0-58 (encoder speed feedback) match in speed and direction

Is the motor rated frequency (P1-09) and motor rated speed (P1-10) set correctly?

Is the encoder pulses per revolution (P6-06) set correctly?

Are the motor contactors closed when the drive is enabled and told to run?

- If the contactors are open when the drive is enabled and told to run, the drive will generate an output frequency but the motor won't turn. Therefore there will be an error between motor speed and encoder speed feedback.

Is the motor brake released when the drive is enabled and told to run?

- If the motor brake is still applied to the motor when the drive is enabled and told to run, the motor will remain stationary but the drive will generate an output frequency. (This could also generate O-I or I.t-trP trips (over current and motor overload trips)

Parameter P6-07 (Speed error trip level) can be increased above its 5% default value but this should only be done when other possible causes of SP-Err trips have been investigated.