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Product	Optidrive Elevator

Title	STO (Safe Torque Off) and Run Up / Run Down Terminal Timings

Summary	This document gives information on the timings required between the switching of the STO and Run Up/Run Down terminals

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

The Invertek Optidrive Elevator drive incorporates a STO input (Safe Torque Off) (terminals 12 & 13) which has precedence over any run commands.

With the STO inputs disabled, the drives display will show **Inhibit**.

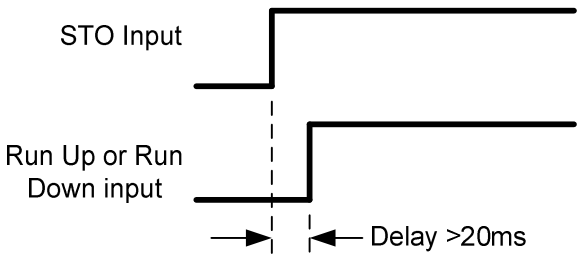
With the STO inputs enabled, the drives display will show **StoP**.

With the STO inputs disabled, the drive will not run no matter what terminals are switched.

The timing between the STO inputs being enabled and the Run Up or Run Down command being given is important.

As default, the Run Up and Run Down terminals (terminals 2 & 3) on the Invertek Optidrive Elevator drive are **Edge Triggered (P2-36 = EdgE-r)**. This means that the drives software needs to see a change in state from 0V to +24V to activate the Run Up & Run Down function.

With P2-36 = EdgE-r, if the STO input is enabled at the same time as the Run UP or Run Down command is given, the drive may not run. If this issue occurs, then a resolution is to have a small delay between the STO input enabling and the Run Up or Run Down command being given. A delay >20ms is sufficient.



Another resolution to this issue if it occurs is to change **P2-36 = AUto-0**. When P2-36 is set to Auto-0, the Run Up and Run Down terminals are level triggered. This means that the drives software just needs to see a +24V level to activate that function. With this setting, the timing between the STO signal and the Run Up or Run Down signals isn't important and the drive will Run Up or Run Down as soon as the terminals receives the run signal.

NOTE: Although setting P2-36 to AUto-0 maybe a resolution to this issue, it may not be desirable to make this change due to the fact that if Auto-0 is set, the drive may run inadvertently because of the level triggered inputs, if a relay/contactor welds closed. Therefore from an overall safety prospective, it may be worth leaving P2-36 at EdgE-r and making sure the terminal timings is sequenced correctly.