

Twincat Library: EndSwitch Limit function using Tama

Application Note

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1 Target and Purpose

The Triamec TwinCat library comes with basic sample codes for NCI and CNC. This application note describes a drive side code extension (tama) suitable for a TwinCAT system.

State handling such as stopping is usually done in the PLC code. This extension assures that the drive stops immediately, when a positive or negative end marker is reached.

2 Function

This sample code implements a stop if the axis reaches an end-position.

- if the positive side (In4) is reached, any further negative move is aborted
- if the positive side (In5) is reached, any further positive move is aborted

The code is compiled and then runs at 10kHz on the drive

3 Scope

Prerequisites TAM SDK Version

- The project assumes TAM SDK 1.26 is installed at the default location.
- If you have another version, please edit the version.properties file in the ProjectTama\Properties folder by replacing 1.26 by your version at tag "TamSdkVersion".

4 Installation Guide

Tama Code

- Open the solution file with Microsoft Visual C# (Express)
- Edit Code at [TamaTask(Task.AsynchronousMain)]
- Build the code

The compiled tama binary code is at

- ProjectTama\bin\Release\ProjectTama.TSX51_RLID4.TamaTwinCatEndswitches.tama for TS351, TS151 (one axis)
- ProjectTama\bin\Release\ProjectTama.TSX50_RLID5.TamaTwinCatEndswitches.tama for TS350, TS150 (two axes)

Open the TAM System Explorer

- Set the tama binary path using Device/Tama Manager/Assign Tama Assembly
- download the binary using Device/Tama Manager/Download Tama Assembly
- run the binary using Device/Tama Manager/Enable isochronous Tama VM
- make this code run after next restart too using Device/Startup settings

Be aware that loading a TAM System Explorer configuration that contains a tama code reference will cause downloading the tama code and the actual tama program execution is stopped. Just restart using Device/Tama Manager/Enable isochronous Tama VM.