



### Example 2: Change between single start of an open cam and POSA

#### Task:

- Open curve with standstill range at the beginning and at the end
- Digital input starts run through curve once
- Digital input starts positioning movement on slave cycle
- Connection to encoder

#### Corresponding files:

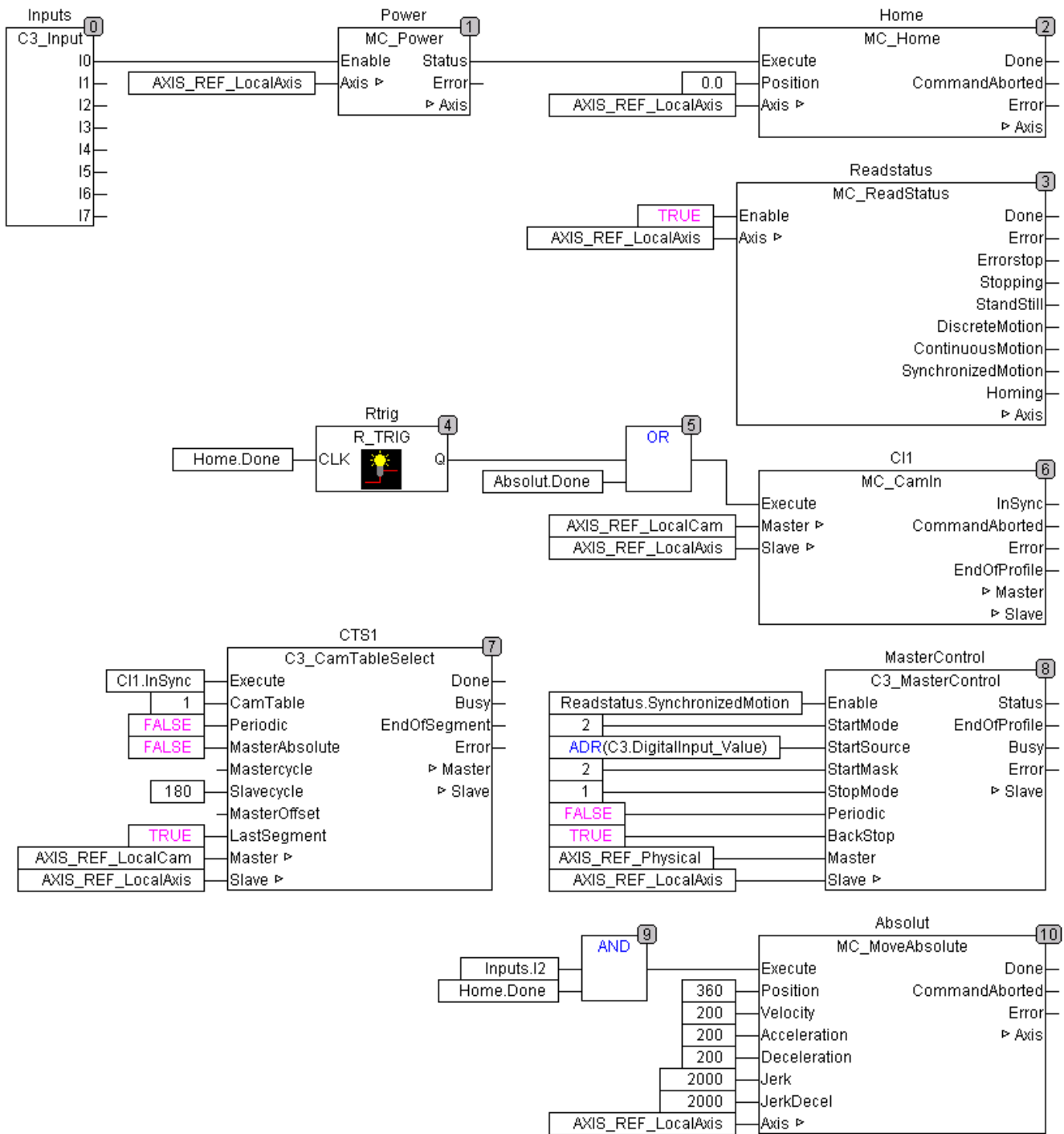
CamExample02.C3P (Compax3 project on the Compax3 CD:\Examples\Example2)

CamExample02.pro (CoDeSys project on the Compax3 CD:\Examples\Example2)

#### Control interface:

Input	Function
I0	Energize axis, homing, curve generator, starting and coupling axis
I1	Starting detection in single mode
I2	Start of the absolute movement
I3	Free
I4	Free
I5	Free
I6	Free
I7	Free

#### Solution:



**Explanation:**

- The repeated turning up of the single start during the run through curve must not disturb the operation.
- Single start during positioning must not disturb, curve must not start:  
This is prevented by the fact that the enable of the master position detection is only started, if the drive is in the "Synchronized Motion" state.
- If a positioning is executed, the axis is in the "discrete Motion" state. When MC-CamIn is executed, the axis will switch into the "Synchronized Motion" state; the axis is now synchronous with the curve generator.
- Master detection is started with an external event (input I1).
- In order to do this the C3\_MasterControl module: is assigned to following value: ADR(C3.DigitalInput\_Value = object for the digital inputs).  
In order to select the 2nd bit from this value the input StartMask receives the value 2.
- The axis is coupled after Homing (MC\_CamIn), then the curve generator (C3\_CamTableSelect) starts, after that the master position acquisition is started via the external input (C3\_MasterControl).

As the output Home.Done is permanently present, this output must be put to CI1 with an edge module. This ensures that CI1 (MC\_CamIn) can be activated again.

- The absolute movement is not executed in the "Synchronized Motion " status (MC\_MoveAbsolut reports an error), so this is automatically blocked.