

## Project Documentation

File: Start\_And\_Stop Conveyors.project

Date: 1/3/2024

Profile: CODESYS V3.5 SP18 Patch 2

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# 1 Device: Device

## Users and Groups

Users:

Groups

---

## Access Rights

View

Modify

Execute

Add/remove children

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## Symbol Rights

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## Information

Name: CODESYS Control Win V3 x64  
Vendor: 3S - Smart Software Solutions GmbH  
Categories: PLCs  
Type: 4096  
ID: 0000 0004  
Version: 3.5.19.50  
Order number: ???  
Description: CODESYS V3 Soft-PLC for Windows with non realtime capabilities (CODESYS Control Win V3 x64)

## *1.1 PLC Logic: Plc Logic*

## 1.1.1 Application: Application

### 1.1.1.1 Library Manager: Library Manager

```
#Standard
#BreakpointLogging
  #CmpLog
    SysTypes2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
#IecVarAccess
#Component Manager
  #CmpEventMgr
    CmpEventMgr Interfaces, * (System)
    #CmpEventMgr Implementation
      CmpEventMgr Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
  #CmpApp
    SysTypes2 Interfaces, * (System)
    #CmpEventMgr
      CmpEventMgr Interfaces, * (System)
      #CmpEventMgr Implementation
        CmpEventMgr Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
#SymbolicVarsBase
  #CmpApp
    SysTypes2 Interfaces, * (System)
    #CmpEventMgr
      CmpEventMgr Interfaces, * (System)
      #CmpEventMgr Implementation
        CmpEventMgr Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
  #SysMem
    SysTypes2 Interfaces, * (System)
    Base Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
    CmpErrors2 Interfaces, * (System)
    IecVarAccess3 Interfaces, * (System)
#StringUtils
```

```
#SysMem
  SysTypes2 Interfaces, * (System)
#SysTimeRtc
  #SysTimeCore
    SysTypes2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
#Component Manager
  #CmpEventMgr
    CmpEventMgr Interfaces, * (System)
    #CmpEventMgr Implementation
      CmpEventMgr Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
  #CmpApp
    SysTypes2 Interfaces, * (System)
    #CmpEventMgr
      CmpEventMgr Interfaces, * (System)
      #CmpEventMgr Implementation
        CmpEventMgr Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
#Component Manager
  #CmpEventMgr
    CmpEventMgr Interfaces, * (System)
    #CmpEventMgr Implementation
      CmpEventMgr Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
  #CmpApp
    SysTypes2 Interfaces, * (System)
    #CmpEventMgr
      CmpEventMgr Interfaces, * (System)
      #CmpEventMgr Implementation
        CmpEventMgr Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
Collections Interfaces, * (System)
#CmplecVarAccess
  CmplecVarAccess Interfaces, * (System)
  #CmplecVarAccess Implementation
    Base Interfaces, * (System)
```

```
    lecVarAccess3 Interfaces, * (System)
    Collections Interfaces, * (System)
    CmplecVarAccess Interfaces, * (System)
#SysCpuHandling
    #SysMem
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
    CmpOPCUAStack Interfaces, * (System)
    CmpUserMgr, 3.5.17.0 (System)
#CmpEventManager
    CmpEventManager Interfaces, * (System)
    #CmpEventManager Implementation
        CmpEventManager Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
Base Interfaces, * (System)
SysTypes2 Interfaces, * (System)
CmpErrors2 Interfaces, * (System)
lecVarAccess3 Interfaces, * (System)
Collections Interfaces, * (System)
#CmplecVarAccess
    CmplecVarAccess Interfaces, * (System)
    #CmplecVarAccess Implementation
        Base Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        lecVarAccess3 Interfaces, * (System)
        Collections Interfaces, * (System)
        CmplecVarAccess Interfaces, * (System)
    CmpOPCUAServer Interfaces, * (System)
    CmpOPCUAStack Interfaces, * (System)
    lecVarAccessOpcUaMetaData Interfaces, * (System)
    CmpUserMgr, 3.5.17.0 (System)
#Standard
#CmpLog
    SysTypes2 Interfaces, * (System)
#CmpApp
    SysTypes2 Interfaces, * (System)
    #CmpEventManager
        CmpEventManager Interfaces, * (System)
        #CmpEventManager Implementation
            CmpEventManager Interfaces, * (System)
            CmpErrors2 Interfaces, * (System)
            SysTypes2 Interfaces, * (System)
            SysTypes2 Interfaces, * (System)
            CmpErrors2 Interfaces, * (System)
    #SysMem
        SysTypes2 Interfaces, * (System)
#IoStandard
    Base Interfaces, * (System)
```

```
CmpErrors2 Interfaces, * (System)
#CmpIoMgr Implementation
    CmpErrors2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
    CmpIoMgr Interfaces, * (System)
    Base Interfaces, * (System)
    CmpIoMgr Interfaces, * (System)
#3SLicense
#CmpLog
    SysTypes2 Interfaces, * (System)
#CAA Types
    #SysCpuHandling
    #SysMem
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
#Standard
#Component Manager
    #CmpEventManager
        CmpEventManager Interfaces, * (System)
        #CmpEventManager Implementation
            CmpEventManager Interfaces, * (System)
            CmpErrors2 Interfaces, * (System)
            SysTypes2 Interfaces, * (System)
            SysTypes2 Interfaces, * (System)
            CmpErrors2 Interfaces, * (System)
    #CmpApp
        SysTypes2 Interfaces, * (System)
        #CmpEventManager
            CmpEventManager Interfaces, * (System)
            #CmpEventManager Implementation
                CmpEventManager Interfaces, * (System)
                CmpErrors2 Interfaces, * (System)
                SysTypes2 Interfaces, * (System)
                SysTypes2 Interfaces, * (System)
                CmpErrors2 Interfaces, * (System)
            SysTypes2 Interfaces, * (System)
    #CmpApp
        SysTypes2 Interfaces, * (System)
        #CmpEventManager
            CmpEventManager Interfaces, * (System)
            #CmpEventManager Implementation
                CmpEventManager Interfaces, * (System)
                CmpErrors2 Interfaces, * (System)
                SysTypes2 Interfaces, * (System)
                SysTypes2 Interfaces, * (System)
                CmpErrors2 Interfaces, * (System)
    #CmpCodeMeter
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
        CmpEventManager Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
```

```

#SysCpuHandling
  #SysMem
    SysTypes2 Interfaces, * (System)
    SysTypes2 Interfaces, * (System)
    CmpErrors2 Interfaces, * (System)
#CmpEventMgr
  CmpEventMgr Interfaces, * (System)
#CmpEventMgr Implementation
  CmpEventMgr Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
#CAA Device Diagnosis
#CAA Behaviour Model
#CAA Types
  #SysCpuHandling
    #SysMem
      SysTypes2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
#CAA TickUtil
  #CAA Types
    #SysCpuHandling
      #SysMem
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
#CAA Tick
  #CAA Types
    #SysCpuHandling
      #SysMem
        SysTypes2 Interfaces, * (System)
        SysTypes2 Interfaces, * (System)
        CmpErrors2 Interfaces, * (System)
#IoStandard
  Base Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
#CmpIoMgr Implementation
  CmpErrors2 Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  CmpIoMgr Interfaces, * (System)
  Base Interfaces, * (System)
  CmpIoMgr Interfaces, * (System)
#CAA Types
  #SysCpuHandling
    #SysMem
      SysTypes2 Interfaces, * (System)
      SysTypes2 Interfaces, * (System)
      CmpErrors2 Interfaces, * (System)
#CmpEventMgr

```



```
#CmpEventMgr Implementation
  CmpEventMgr Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  SysTypes2 Interfaces, * (System)
  CmpErrors2 Interfaces, * (System)
IoDriver Interfaces, * (System)
Base Interfaces, * (System)
CmpErrors2 Interfaces, * (System)
SysTypes2 Interfaces, * (System)
#CmpAsyncMgr
  SysTypes2 Interfaces, * (System)
#CommFB
#SysMem
  SysTypes2 Interfaces, * (System)
IoDriver Profibus2 Interfaces, * (System)
```

### 1.1.1.2 POU: PLC\_PRG

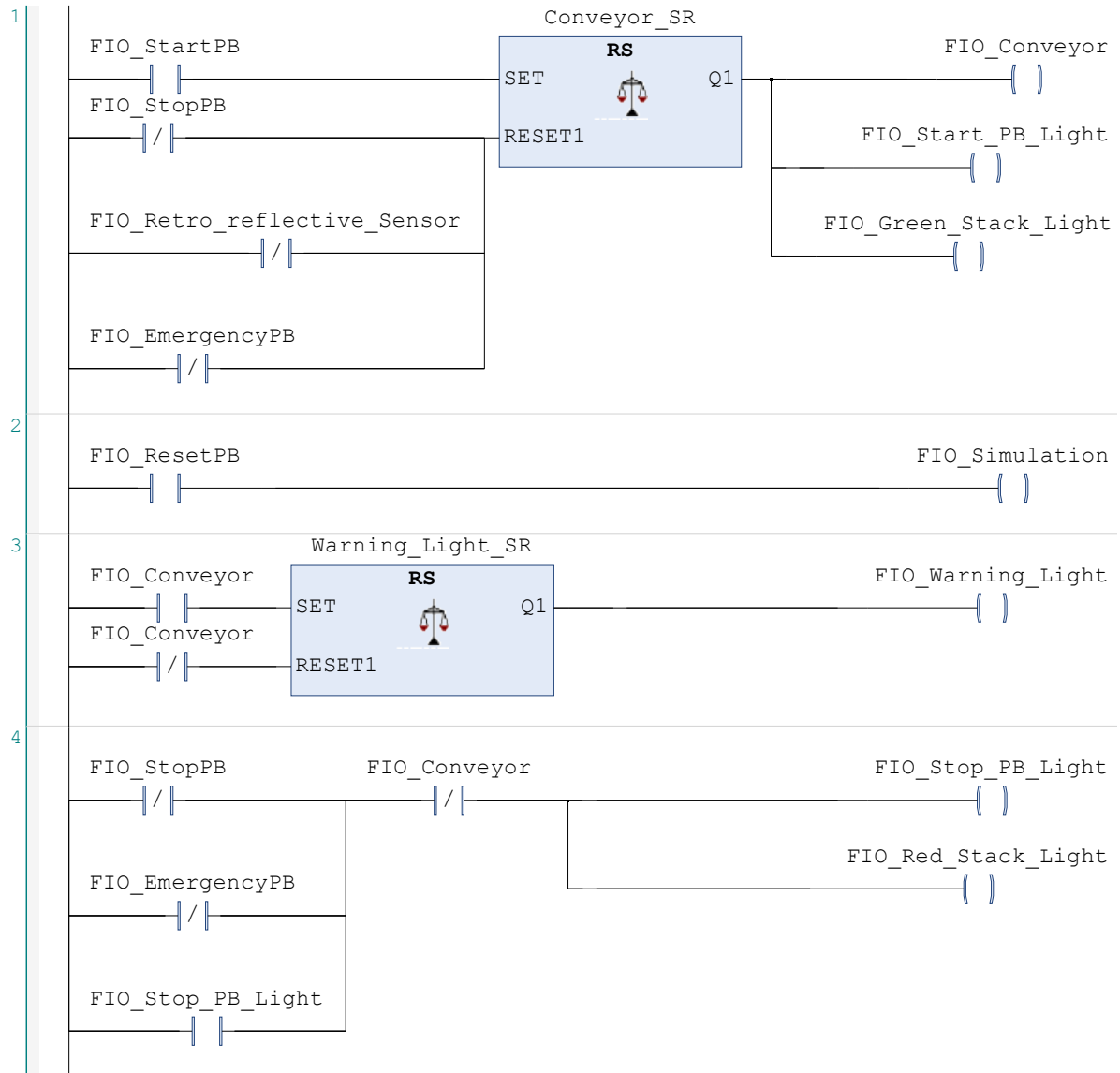
```
1  PROGRAM PLC_PRG
2  VAR
3      //*****INPUTS *****//
4      //This are push buttons
5      FIO_StartPB      :  BOOL ;  //COLOR GREEN
6      FIO_StopPB       :  BOOL ;  //COLOR RED
7      FIO_ResetPB      :  BOOL ;  //COLOR YELLOW Resets the simulation environment
8      FIO_EmergencyPB  :  BOOL ;
9      //Sensor
10     FIO_Retro_reflective_Sensor :  BOOL ;
11
12     //**** End ****//
13
14     //*****OUTPUTS*****//
15     FIO_Start_PB_Light  :  BOOL ;  //push button light
16     FIO_Stop_PB_Light   :  BOOL ;  //push button light
17     //FIO_Reset_PB_Light :  BOOL; //push button light
18
19     //Stack lights
20     FIO_Green_Stack_Light :  BOOL ;
21     FIO_Red_Stack_Light   :  BOOL ;
22     FIO_Yellow_Stack_Light :  BOOL ;
23
24     //
25     FIO_Conveyor        :  BOOL ;
26     FIO_Warning_Light    :  BOOL ;
27     FIO_Simulation      :  BOOL ;
28
29     //***End***//
30     // SET AND RESET Function block for controlling the conveyor
31     Conveyor_SR :  RS ;
32     // Reset -Set Function Block for the conveyor running warning lights
```

### 1.1.1.2 POU: PLC\_PRG

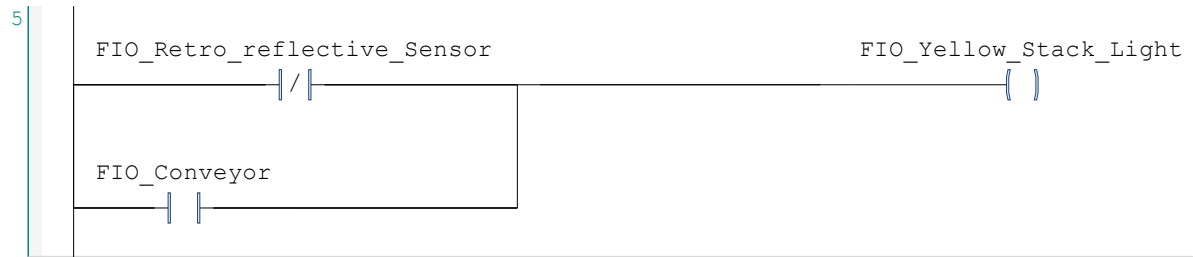
```

33     Warning_Light_SR : RS ;
34     END_VAR
35

```









### **1.1.1.3 Symbol Configuration: Symbols**

### **1.1.1.4 Task Configuration: Task Configuration**

Max. number of tasks: 100  
Max. number of cyclic tasks: 100  
Max. number of freewheeling tasks: 100  
Max. number of event tasks: 100  
Max. number of status tasks: 100

System Events:

#### **1.1.1.4.1 Task: MainTask**

Priority: 1  
Type: Cyclic  
Interval: t#20ms Unit: ms  
Watchdog: Inactive  
POUs: PLC\_PRG

##### **1.1.1.4.1.1 Program Call: PLC\_PRG**