SC52 QUICK START

EPEC SC52 Safety Control Unit



REQUIRED INSTALLATIONS

1. CODESYS IDE version 3.5 SP10 (3.5.10.0)

• With safety projects this is the exact version that needs to be used

2. CODESYS SIL2 3.5.10.0 package

- Double-clicking the package installs using CODESYS 3.5 package manager
- 3. Epec SDK 2.9 or newer
- 4. Epec CANmoon 3.1.0.2 or newer



FIRST SC52 APPLICATION

Open MultiTool and create a new projectAdd SC52 device to the project





CREATE CODESYS PROJECT





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CONTROL SAFETY SWITCH

- To use outputs (and have green LED blinking), output group safety switch has to be energized
- Control output group's safety switch according to global status variables G_StatusFlags_Safe.S_SafeOperationEnable and G_StatusFlags.SystemOk
 - If statuses are TRUE, set the output group safety switch to TRUE



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START CAN GATEWAY FOR C3.5 UNITS

- Start Epec CAN gateway for C3.5 units application
 - This is needed for CODESYS 3.5 and SC52 CAN connection
- Gateway application starts as a hidden application, it can be found from the system tray





DOWNLOADING THE APPLICATION

- 1. Set the *Bit rate* (default 250 kbit/s)
- 2. Set *Port* to be the same as in CODESYS gateway settings
- 3. Define *Gateway node ID* to an unique value on the CAN bus
- 4. Set used CAN card
- 5. Select Start server



Note!

Once in a while, the gateway needs to be restarted. Select **Stop server** and **Start server** again if CODESYS scan cannot find the device

SCAN NETWORK

- Double click the *Device* in CODESYS 3.5 device tree
- Select Scan Network





SELECT DEVICE

- Select Device popup lists found devices with the same target ID
- The device name is constructed with SC52_ prefix and device's serial number





AUTHENTICATION

- Double-click the found device
 Give username and password
 User name: User
 Password: 4 last digits from serial number
 - Note, that the password is asked twice (CODESYS feature)

Device User Logon X							
P	You are currently not authorized to perform this operation on the device. Please enter the name and password of an user account which has got the sufficient rights.						
	Device Name:						
	Device Address:	0001.A0CD.A07F					
	<u>U</u> ser Name:	User					
	Password:	••••					
		OK Cancel					



ENTER DEBUG MODE...

- The device needs to be set to debug mode before application download can be done
- Select SIL2 > Enter debug mode...
- When the device is set to debug mode, download new application with Online > Login







START APPLICATION

 Set the application to running mode by selecting Debug > Start (F5)





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USING OUTPUTS

The output group cannot be enabled when
the device is set to debug mode
an application is downloaded
→ Outputs cannot be used
To be able to use outputs, the safety control unit needs to be power cycled



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POWER CYCLE AND LOGIN

 Debug mode is not required when going online with an up-todate application

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MAKING CHANGES TO MULTITOOL PROJECT

- Changes in MultiTool project are easily updated to CODESYS 3.5 project
 - Make MultiTool System Export using short cuts or using Project > System Export





IMPORT CHANGES TO CODESYS PROJECT

- To import MultiTool project changes to the CODESYS project,
 - Open CODESYS project
 - Select Tools > Scripting > Execute Script File...
 - Select *project_update.py* file from the unit's directory created by MultiTool



Choose script file to open								
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EPEC DOCUMENTATION

Epec Extranet, Programming Manuals

- CODESYS Safety SIL2 User manual (PDF)
- SC52 Safety Manual (PDF)
- Programming and Libraries Manual (HTML, CHM)

Epec Programming And Libraries Manual

- SDK installs to C:\Program Files (x86)\Epec\SDKDocumentation
 - Open via MultiTool > Help
- Programming book
 - Programming Safety Projects
 - Programming SC52 Safety Control Unit
- Libraries book
 - *S Series Specific Libraries*
 - Common Libraries for Safety Project



Thank you!

Any questions?

Contact our technical support techsupport@epec.fi

