CODESYS Redundancy SL

An extension for CODESYS SoftPLC systems to realize redundant control systems.
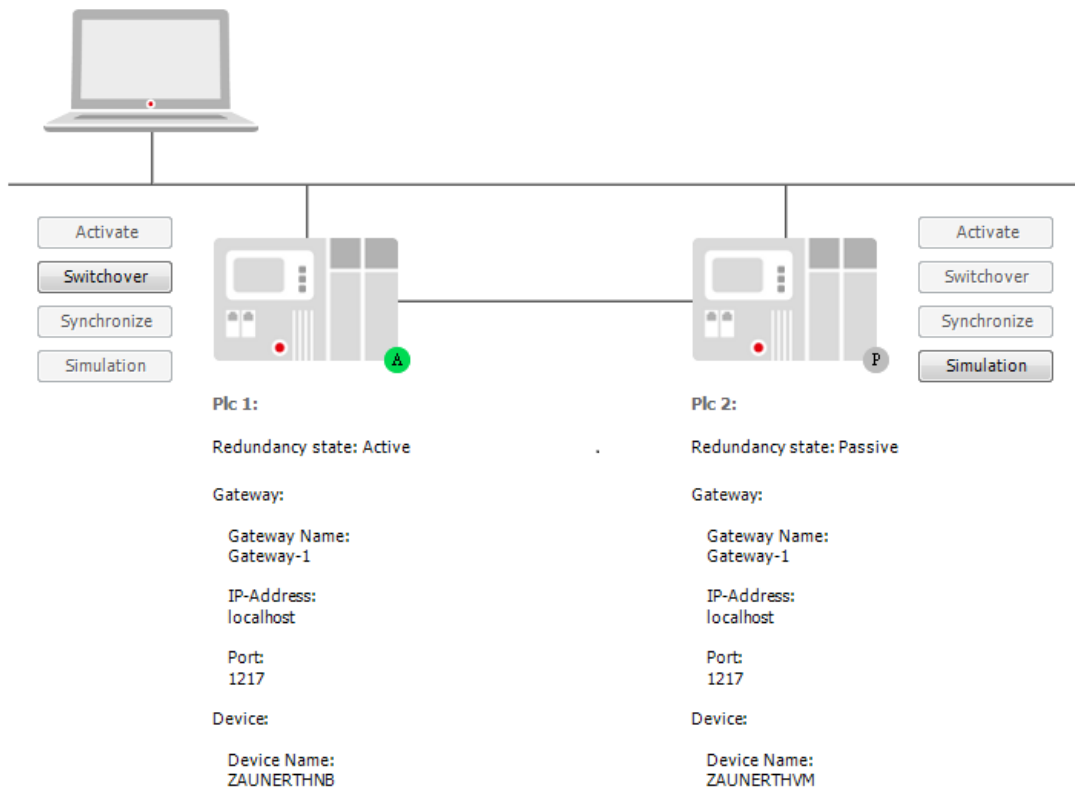
Product description

CODESYS Redundancy SL makes it possible to run one and the same IEC 61131-3 application on two independent soft PLC systems at the same time. If a control fails, the passive control is activated. The function enables the mutual monitoring and synchronization of two controllers.

The redundant cross-connection between the two controllers is implemented using a TCP/UDP-based protocol. The active controller controls the I/O system, while the passive controller monitors the active controller and synchronizes itself with it. When the redundant system is started up, the first PLC started goes into the "standalone" state until the second PLC is started and synchronized. Then the first changes to the active state, the second to the passive state (standby). If a control fails, there is an automatic switchover.

A manual switchover can be initiated via a function interface. The boot application and the memory are updated automatically. IEC timers are synchronized in each task cycle.

Configuration

The configuration in the CODESYS Development System is added in the project via the "Redundancy configuration" object. It provides a configuration editor in which you define the memory areas of the application to be controlled, the relevant task and the time monitoring. It also offers a display of the current status of the two PLC devices during runtime. You can switch the role from passive to active both in the configuration editor dialog and via a library function.

Fieldbus support

The following fieldbuses are supported for communication with I / O systems: * CODESYS EtherCAT * CODESYS CANopen

The required licenses are not part of the scope of delivery of CODESYS Redundancy SL. They are acquired with the CODESYS Soft PLC systems.

Redundant modes

The following modes are supported for the redundant controls:

- Passive
- Active
- Standalone
- Simulation
- Error
- Synchronization

Sample product options..

General information

Supplier:

CODESYS GmbH
Memminger Strasse 151
87439 Kempten
Germany

Support:

Technical support is not included with this product. To receive technical support, please purchase a CODESYS Support Ticket.

https://support.codesys.com

Item:

CODESYS Redundancy SL

Item number:

2302000040

Sales / Source of supply:

CODESYS Store
https://store.codesys.com

Included in delivery:

- License key

System requirements and restrictions

Programming System	CODESYS Development System Version 3.5.17.10 or higher
Runtime System	CODESYS Control V4.1.0.0 or higher
	CODESYS Control V3.5.17.10 or higher
Supported platforms and devices	• CODESYS SoftPLC systems • CODESYS HMI Note: Use the tool "Device Reader" to find out the supported features of your device (free of charge component of CODESYS Development System).
Additional Requirements	• Two SoftPLC systems of the same type in the same version • TCP / IP stack
Restrictions	• The synchronization is limited to one task. • IEC timers are locked during the execution of a task.

- During the synchronization phase, the application data are copied between two cycles.
- Pointers and other system resources must be stored locally on the respective device.

Licensing	
	Single Device License: The license can be used on the target device/PLC on which the CODESYS Runtime System is installed.
	Licenses are activated on a software-based license container (soft container), which is permanently connected to the controller. Alternatively the license can be stored on a CODESYS Key (USB-Dongle). By replugging the CODESYS Key, the license can be used on any other controller.
	Note: In demo mode, the software runs for two hours without a license. After that, a manual restart is required.
Required Accessories	Optional: CODESYS Key

Note: Technical specifications are subject to change. Errors and omissions excepted. The content of the current online version of this document applies.

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