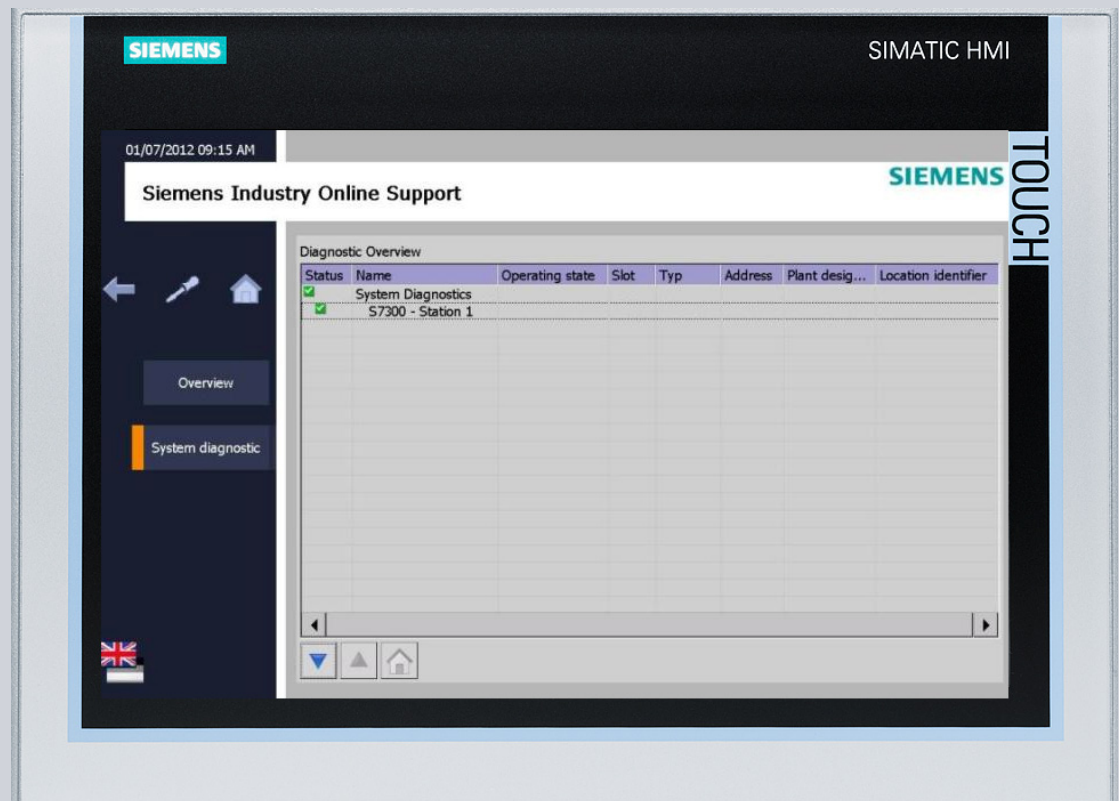


# System Diagnostics View with WinCC (TIA Portal) and SIMATIC Comfort Panels

TIA Portal V11 and SIMATIC Comfort Panel

Application Description • August 2012



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<http://support.automation.siemens.com/WW/view/en/61910954>

### **Caution:**

The functions and solutions described in this entry are mainly limited to the realization of the automation task. In addition, please note that suitable security measures in compliance with the applicable Industrial Security standards must be taken if your system is interconnected with other parts of the plant, the company's network or the Internet. More information can be found under entry ID 50203404.

<http://support.automation.siemens.com/WW/view/en/50203404>

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<http://www.siemens.de/forum-applications>

# SIEMENS

## SIMATIC System Diagnostics View with WinCC (TIA Portal) in SIMATIC Comfort Panels

WinCC (TIA Portal), SIMATIC Comfort Panel

**Task**

**1**

**Solution**

**2**

**Functional Mechanisms**

**3**

**Configuration and  
Settings in TIA Portal**

**4**

**Starting up the  
Application**

**5**

**Operation of the  
Application**

**6**

**Links & Literature**

**7**

**History**

**8**

## Warranty and Liability

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# Preface

## Objective of this application

The objective of this application is to show you the principle of operation and the integration of the "System diagnostics view" Control in WinCC (TIA Portal). The application describes all the respective settings and configuration steps necessary.

## Validity

The application is adjusted especially to WinCC (TIA Portal) in connection with the SIMATIC Comfort Panel and is based on the "WinCC Advanced V11.0 SP2" manual.

The implementation of the application additionally requires STEP 7 V11 Professional.

You can also download the manuals on WinCC Advanced and STEP 7 V11 Professional under the following links:

[WinCC\\_Advanced\\_V11\\_SP2](#)  
[STEP 7 Professional V11.0 SP2](#)

# Table of Contents

<b>Warranty and Liability .....</b>	<b>4</b>
<b>Preface .....</b>	<b>5</b>
<b>1 Task.....</b>	<b>7</b>
<b>2 Solution.....</b>	<b>8</b>
2.1 Overview of the general solution .....	8
2.2 Description of the core functionality .....	10
2.3 Hardware and software components used.....	13
<b>3 Functional Mechanisms .....</b>	<b>15</b>
3.1 “System diagnostics view” Control .....	15
3.1.1 Device view .....	15
3.1.2 Details view .....	15
3.1.3 Matrix view .....	15
3.1.4 Contents of the diagnosis.....	15
3.1.5 Symbols of the System diagnostics view .....	16
3.2 Function of the diagnosis indicator.....	16
3.3 Background on diagnostic capability.....	17
3.3.1 Information on Pdiag .....	17
3.3.2 Information on ProAgent .....	17
3.4 Data exchange .....	18
<b>4 Configuration and Settings in TIA Portal .....</b>	<b>19</b>
4.1 Preparatory measures for the configuration.....	19
4.1.1 IP addresses .....	19
4.1.2 Addresses, parameters and passwords used.....	19
4.2 Configuration of CPU 315-2 PN/DP.....	20
4.3 Configuration of the SIMATIC Comfort Panel .....	24
<b>5 Starting up the Application.....</b>	<b>28</b>
5.1 Preparing measures .....	28
5.2 Commissioning.....	28
<b>6 Operation of the Application .....</b>	<b>29</b>
6.1.1 “000.0_Startscreen” screen.....	29
6.1.2 “001.0_Overview” screen .....	30
6.1.3 “001.1_Thema_A” screen .....	31
6.1.4 “002.0_Support_Overview” screen .....	32
6.1.5 “000.1_System” screen .....	33
<b>7 Links &amp; Literature .....</b>	<b>34</b>
7.1 Literature .....	34
7.2 Internet links .....	34
<b>8 History.....</b>	<b>35</b>

# 1 Task

## Introduction

In many areas of automation technology detailed diagnostic information of hardware states are helpful. Wherever quick error removals and quick restart of the plant are an advantage or necessary in particular, monitoring the automation hardware is recommended.

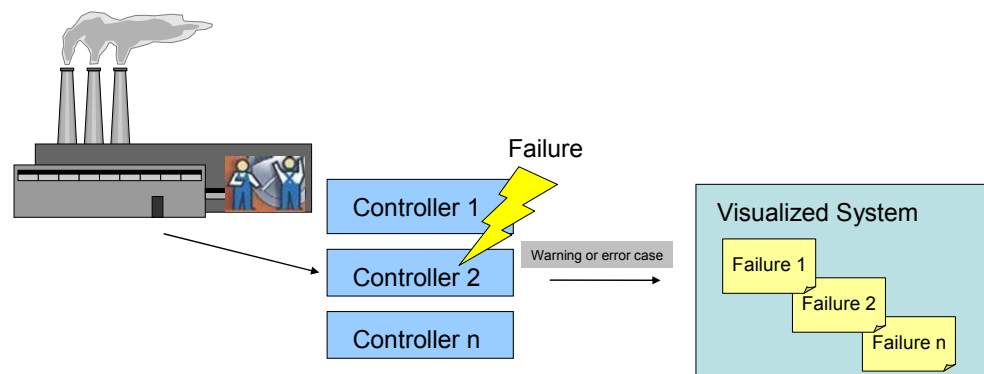
In this example, failures of the diagnostics-capable CPU and the connected I/O shall be displayed using standard mechanisms.

## Overview of the automation task

The figure below provides an overview of the automation task.

Figure 1-1

Automation Process



## Description of the automation task

The aim of the automation task is to provide the operator or user with the diagnostic information of the automation module. The diagnostic information can help find the failure quicker and minimize the related downtimes.

## 2 Solution

### 2.1 Overview of the general solution

#### Schematic layout

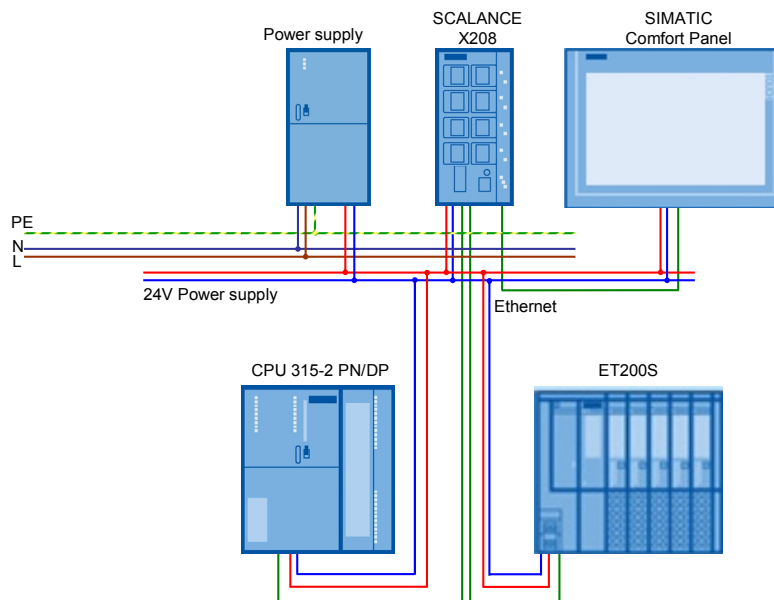
This application was created with the following hardware:

- SIMATIC Comfort Panel
- Distributed I/O ET200S
- SIMATIC S7-300 Controller
- SCALANCE X208

The figure below shows the wiring of the solution:

Figure 2-1

#### System Diagnosis with WinCC Advanced and Comfort Panel



#### Structure

An SIMATIC Comfort Panel with connected automation devices (e.g. ET 200S, CPU 315-2 PN/DP) is located in an industrial plant.

To provide the operator with a diagnosis of the configured automation devices for quick error diagnosis, the "System diagnostics view" Control was configured in the SIMATIC Comfort Panel.

This control provides the operator with detailed information of the configured automation devices.



### Advantages

The application on hand offers you the following advantages:

- Low configuration workload for realization in the own plant
- Implementation with TIA Portal standard tools
- Detailed description of the “control” to be implemented
- Description for evaluating the delivered diagnostic functions

This application significantly helps you save time during configuration in the TIA Portal.

### Topics not covered by this application

For a better overview, the application will only give information necessary for the reproduction of this example.

Where necessary, the document provides references to related links and manuals.

- This application does not include information on the following topics:
  - “Safety notes and standards”
  - “Directives and approvals”
  - “Operational safety”, etc.
- This application does not include a description of the TIA Portal engineering tool.
- It only describes the settings of the used hardware and software components that are necessary for the application.
- This application does not discuss the STEP 7 Professional software in greater detail.

Basic knowledge of the topics listed above is assumed. For detailed information, please refer to the associated device manuals.

### Assumed knowledge

Basic knowledge of the topics listed above is assumed. For detailed information, please refer to the associated “WinCC Advanced V11.0 SP2” and “STEP 7 Professional V11.0 SP2” device manuals.

## 2.2 Description of the core functionality

The core of this application is to show the user the procedure for configuring the “System diagnostics view” Control in WinCC (TIA Portal).

When a configured automation device generates a diagnostic message due to a failure, this diagnostic message will be displayed in the configured “System diagnostics view” Control.

This control offers the user to precisely determine the location of the automation device from which the diagnostic message was generated. This saves the plant operator much time when localizing and removing the error.

### What can the application perform?

The program example included contains

- An instruction for configuring the “System diagnostics view” Control and the connected automation devices.
- A WinCC (TIA Portal) project with the following components
  - SIMATIC Comfort Panel for visualizing the system diagnostics messages
  - STEP 7 Professional V11 program which contains the integrated automation hardware for generating the system diagnostics messages

You can use the program as a template for your applications.

### Note

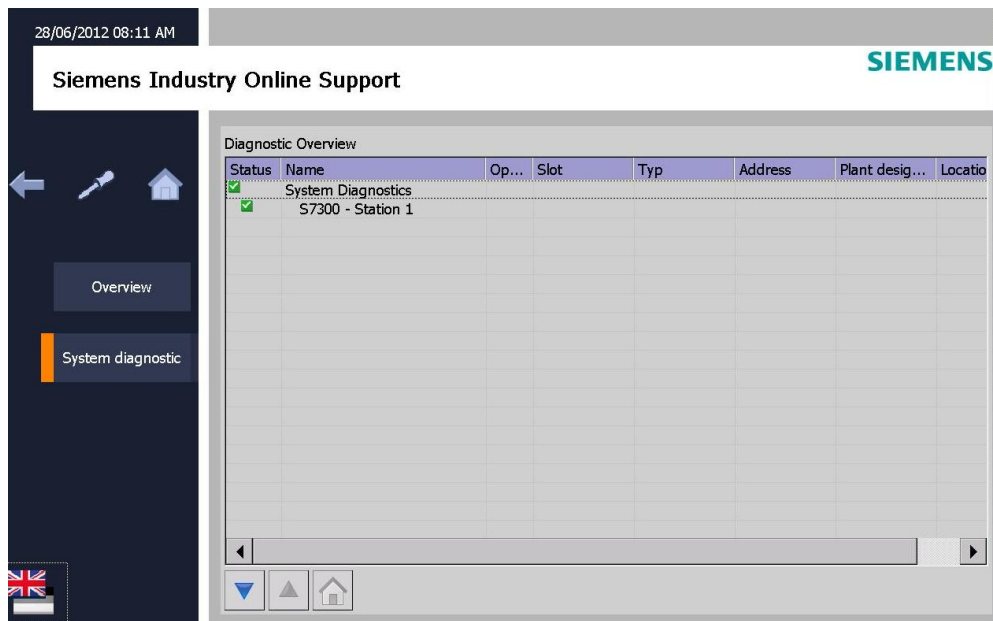
The system diagnostic display is only available in connection with SIMATIC Comfort Panels.

### Overview and description of the user interface

The example project contains a visualization. It displays the operating state and diagnostic information of the connected and diagnostics-capable automation devices.

The below screen of the SIMATIC Comfort Panel, which was configured with WinCC (TIA Portal), shows the “System diagnostics view” Control with the status of the configured automation devices.

Figure 2-2



**Principle of the core functionality**

The figure below gives you an overview of the path from generating a system diagnostics message up to visualizing the message in the “System diagnostics view” Control.

Figure 2-3

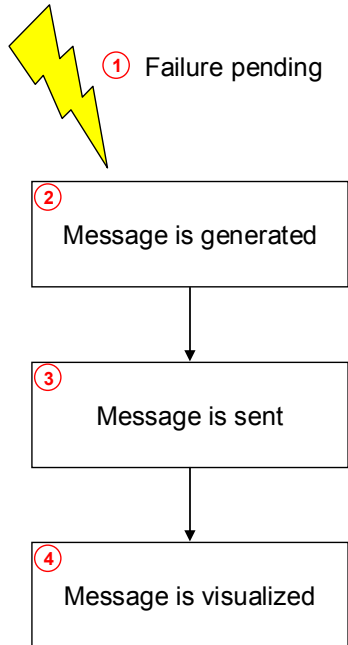


Table 2-1

	Action	Note
1.	Failure is pending	Due to a failure (e.g. a plugged ET 200S module fails) an error is generated.
2.	Message is generated	System diagnostics message is generated by the affected automation device.
3.	Message is sent	The generated system diagnostics message is sent for visualization at the SIMATIC Comfort Panel.
4.	Message is visualized	The generated system diagnostics message is visualized in the “System diagnostics view” Control at the SIMATIC Comfort Panel.

## 2.3 Hardware and software components used

The application document was generated using the following components:

### Hardware components

Table 2-2

Component	Qty.	Order number	Note
POWER SUPPLY PS307 24 V/2 A	1	6ES7307-1BA00-0AA0	Alternatively, any other 24V power supplies can also be used.
SCALANCE X208	1	6GK5208-0BA10-2AA3	Alternatively, any other SCALANCE can also be used.
CPU315-2 PN/DP, 1,5 MB	1	6ES7315-2EH14-0AB0	Alternatively, any other diagnostics-capable SIMATIC controllers can also be used.
ET200S, INTERFACEMODUL IM151-3 PN HF	1	6ES7151-3BA23-0AB0	
ET200S, POWERMODUL PM- E, DC24V	1	6ES7138-4CA01-0AA0	
ET200S, EL-MOD., 4DI HF, DC 24V	1	6ES7131-4BD01-0AB0	
ET200S, EL-MOD., 4DO HF, DC24V, 2A	1	6ES7132-4BD30-0AB0	
ET200S, EL-MOD., 2AI U HF, +/-10V, 1..5V	1	6ES7134-4LB02-0AB0	
SIMATIC HMI TP1200 COMFORT	1	6AV2124-0MC01-0AX0	Alternatively, any other SIMATIC Comfort Panels can also be used.

**Note** The System diagnostics view is only available for SIMATIC Comfort Panels.

### Diagnostics-capable controllers or I/O

For information on whether your used controller or I/O is diagnostics-capable, please refer to the respective operating instructions.

**Standard software components**

Table 2-3

Component	Qty.	Order number	Note
SIMATIC WinCC Comfort V11	1	6AV2101-0AA01-0AA5	See note below
SIMATIC WinCC Advanced V11	1	6AV2102-0AA01-0AA5	See note below
SIMATIC WinCC Professional 512 PowerTags V11	1	6AV2103-0DA01-0AA5	See note below
SIMATIC WinCC (TIA Portal) <b>SP2</b>	1	See Technical Support pages <a href="#">Link</a>	Software is available for downloading.
SIMATIC WinCC (TIA Portal) SP2 <b>Update 3</b>	1	See Technical Support pages <a href="#">Link</a>	Software is available for downloading.
STEP 7 Professional V11, Floating License	1	6ES7822-1AA01-0YA5	
STEP 7 Professional V11 SP2 <b>Update 3</b>	1	See Technical Support pages <a href="#">Link</a>	Software is available for downloading.

**Note**

You can either configure the Control or the SIMATIC Comfort Panel with “SIMATIC WinCC Comfort V11”, “SIMATIC WinCC Advanced V11” or “SIMATIC WinCC Professional 512 PowerTags V11”. For “SIMATIC WinCC Professional 512 PowerTags V11” a version with several PowerTags can also be used.

## 3 Functional Mechanisms

This chapter describes the required Control and the data flow from the connected I/O to the visualization in the SIMATIC Comfort Panel.

### 3.1 "System diagnostics view" Control

The System diagnostics view offers you an overview of all available devices in your plant. You navigate directly to the cause of the error and to the respective device. You have access to all diagnostics-capable devices which you have configured in the "Devices & Networks" editor.

The System Diagnostics window enables you to reach the highest-possible degree of detail for the diagnostic data. A precise diagnosis is possible since all available data is displayed. It gives you the system status of the entire plant at a glance.

Three different views are available to you in the System diagnostics view:

- Device view
- Details view
- Matrix view (only for master systems, PROFINET, PROFIBUS)

#### 3.1.1 Device view

The Device view of the System diagnostics view shows all available devices of one level in a table. Double-clicking on a device opens either the lower level device or the Details view. Symbols in the first column provide information on the actual state of the device.

#### 3.1.2 Details view

The Details view displays detailed information on the selected device and the pending errors. In the Details view you check whether the data is correct. Error texts cannot be sorted in the Details view.

#### 3.1.3 Matrix view

The Matrix view is only available for master systems. In the matrix view you immediately see the status of the subdevices.

- In PROFIBUS, the numbers assigned by PROFIBUS are used as identification (DP station number).
- In PROFINET, the IO Devices are numbered consecutively starting with 1.












#### 3.1.4 Contents of the diagnosis

The properties that can be diagnosed depend on the used hardware. The properties to be diagnosed (such as short-circuit, wire break, etc.) are available in the manual of the employed hardware.

**3.1.5 Symbols of the System diagnostics view**

The following table gives you an overview of the symbols in the System diagnostics view:

Table 3-1

No.	Function	Figure
1.	Device in operation	
2.	Device not accessible	
3.	Device error	
4.	Device deactivated	
5.	Maintenance required	
6.	Maintenance recommended	
7.	overlapping symbol shows the subordinate status	
8.	Running configuration	
9.	Stop e.g. update, bootstrapping, automatic initialization	
10.	Halt	
11.	Simulation	

**3.2 Function of the diagnosis indicator**

The system diagnosis indicator is a predefined graphic symbol of the library which points out the errors in your plant. The library object shows two states:

1. No error
2. Error

For additional information on the diagnosis indicator, please refer to the following [Link](#):

**Note**

Please note, that the diagnostic indicator can only be configured in connection with a SIMATIC Comfort Panel.



### 3.3 Background on diagnostic capability

For SIMATIC S7 controllers, there are currently two option packages, “S7-PDIAG” and “ProAgent”, for evaluating and visualizing diagnostic messages.

These two option packages or successors are not available in the TIA Portal.

The subsequent description of both option packages, “S7-PDIAG” and “ProAgent”, explains how for SIMATIC S7 controllers diagnostic messages have been evaluated and visualized so far.

#### 3.3.1 Information on Pdiag

The S7-PDIAG option package expands the function scope of STEP 7 basic software by the option of process diagnostics for the programming languages LAD/FBD/STL. The process diagnosis detects errors in the user process (production, distribution, manufacturing processes, etc.) and determines information on:

- the error type
- the error location and
- the error cause within the your process.

Furthermore, S7-PDIAG provides you with notes for error removal at the display device (HMI).

The task of the process diagnosis is to monitor the production facilities. The basic principle of monitoring is quite simple. A comparison is made between setpoint and actual state of the process signals. This can be, for example, performed in the form of a time monitoring (e.g. permitted runtime of a slider) or also in the form of a plausibility check (e.g. the two end position signals of a valve must never operate signal "1" at the same time). Such inspections can be used to check the entire chain from command memory over the output channel, terminals, cables, actuator, end switches and input channel.

Continuing information on S7-PDIAG is available in manual “Configuring S7-PDIAG for S7-300/400 process diagnostic”, which can be downloaded under the following [Link](#).

#### 3.3.2 Information on ProAgent

Using SIMATIC S7 controllers enables you to configure a capable process diagnosis. It helps you to quickly detect and repair potential failures. This way, you increase the availability of your plant, shorten downtimes and reduce costs.

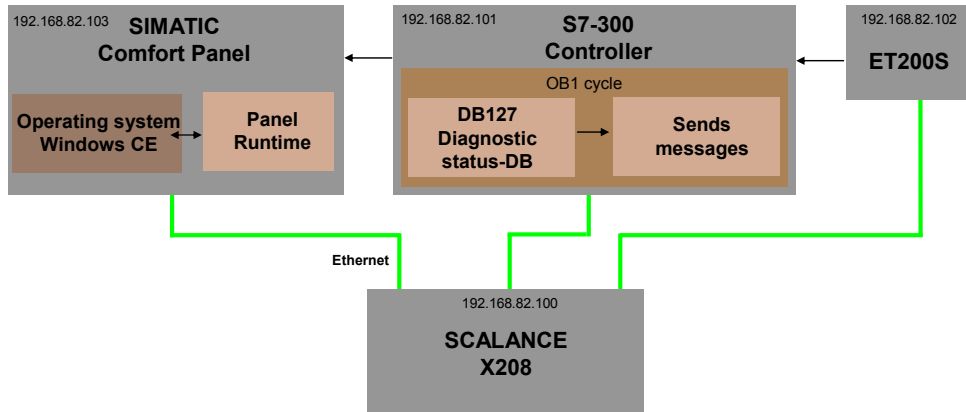
ProAgent is a universal system solution and designed for an optimal interaction between STEP 7, STEP 7 option packages and the WinCC flexible configuration software for operator panels. The configuration of the process diagnosis can be handled simply and quickly. This is irrespective of whether the process diagnosis must be integrated into a newly generated or an already existing project.

Continuing information on ProAgent is available in manual “SIMATIC HMI WinCC flexible 2008 ProAgent”, which can be downloaded under the following [Link](#).

### 3.4 Data exchange

The subsequent picture shows the communication (data exchange) between a diagnosis-capable device and the SIMATIC Comfort Panel.

Figure 3-1



## 4 Configuration and Settings in TIA Portal

### 4.1 Preparatory measures for the configuration

Before you start with the configuration, determine the addresses of the individual hardware components.

#### 4.1.1 IP addresses

Define the IP addresses of the individual Ethernet nodes.  
The following table lists the IP addresses used for the application.

Table 4-1

Device	IP address
SCALANCE X208	192.168.82.100
S7-300 controller (CPU 315-2 PN/DP)	192.168.82.101
Distributed I/O (ET 200S)	192.168.82.102
SIMATIC Comfort Panel (TP1200 Comfort)	192.168.82.103

#### 4.1.2 Addresses, parameters and passwords used

Table 4-2


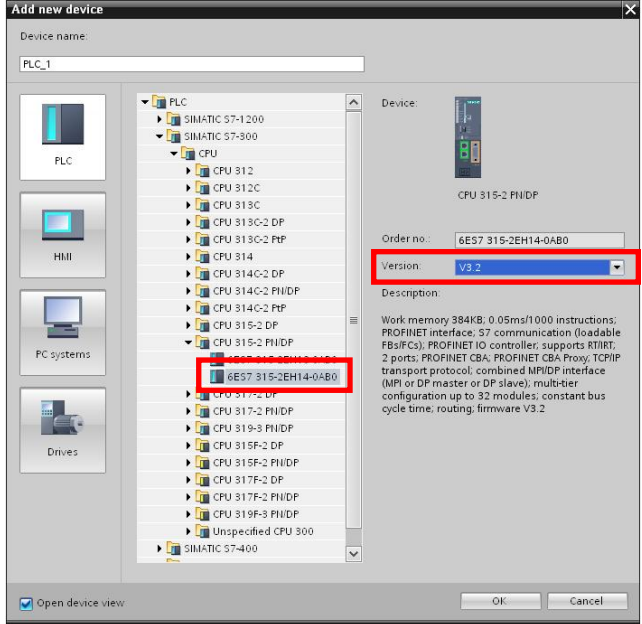
Parameter	Address, name and password
<b>Terminating Panel Runtime:</b>  For terminating Panel Runtime on the SIMATIC Comfort Panel, it is necessary to enter a password. In the configuration software of SIMATIC WinCC (TIA Portal) the user can change the password in the configuration software at any time.	User: Administrator Password: 100

**Note** [Chapter 2.3](#) contains the respective order numbers or the links for downloading the software components.

## 4.2 Configuration of CPU 315-2 PN/DP

Proceed as described below to configure CPU 315-2 PN/DP and to activate the system diagnosis.

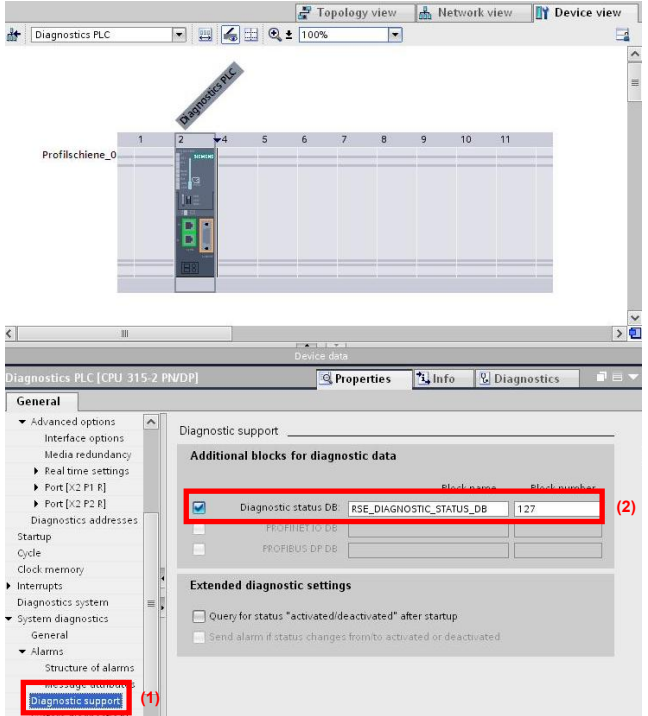
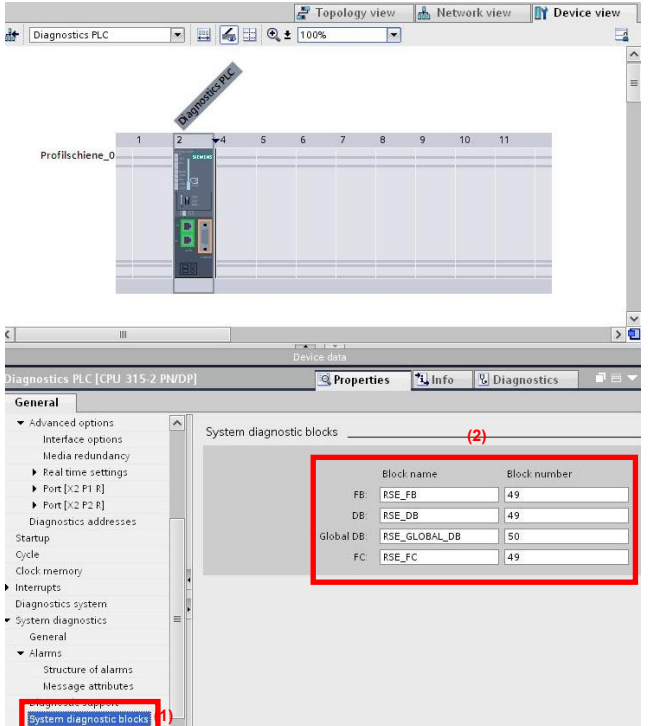
Table 4-3

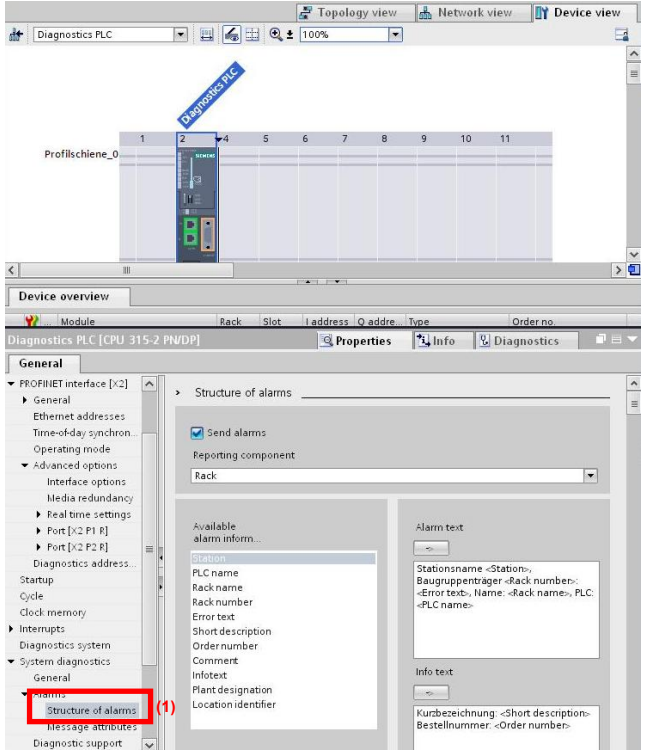
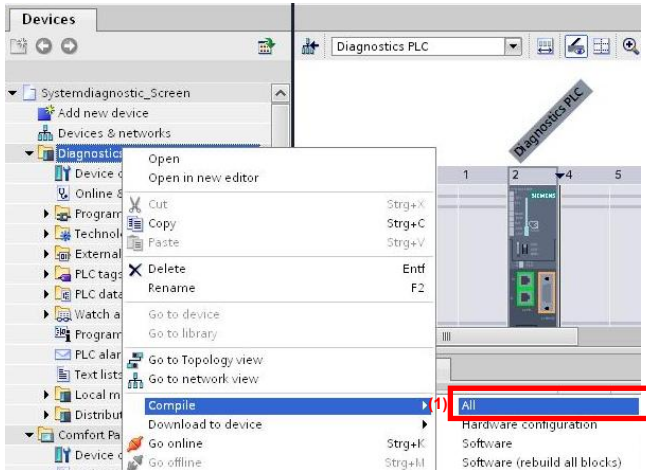
No.	Action	Screens
1.	<p><b>Creating a project:</b></p> <p>Create a new project in the TIA Portal.</p>	
2.	<p><b>Creating an S7-300 controller:</b></p> <p>Click the “Add new device” button in the project tree.</p>	
3.	<p><b>Creating an S7-300 controller:</b></p> <p>A selection box opens from which you can select the CPU to be used.</p> <p>In this example: “6ES7 315-2EH14-0AB0”</p> <p><b>Notice:</b> Please ensure configuring the correct CPU version.</p>	

No.	Action	Screens
4.	<p><b>Parameterizing the CPU:</b></p> <p>Select the created CPU from the Project tree and open “<b>Device view</b>”.</p> <p>Select the “<b>CPU</b>” (1) and click on the “<b>Properties</b>” (2) tab.</p> <p>In the subnavigation you click on “<b>General</b>” (3). Assign a name for the CPU. Under this name, you find the CPU in the System diagnostics view.</p> <p>“<b>Diagnostics PLC</b>” (4) in this example.</p>	
5.	<p><b>Parameterizing the CPU:</b></p> <p>In the subnavigation you click on “<b>System diagnostics</b>” (1).</p> <p>Activate the two checkboxes “<b>Activate system diagnostics for this PLC</b>” and “<b>Send alarms</b>” (2).</p>	

## 4 Configuration and Settings in TIA Portal

### 4.2 Configuration of CPU 315-2 PN/DP

No.	Action	Screens										
6.	<p><b>Parameterizing the CPU:</b></p> <p>In the subnavigation you click on <b>“System diagnostics”</b> (1). Activate the <b>“Diagnostic status DB”</b> (2) checkbox. The specified DB (in this example <b>“DB127”</b>) is created automatically.</p>	 <p>The screenshot shows the 'Diagnostics PLC' configuration window. In the left-hand navigation tree, 'Diagnostic support' is highlighted with a red box and labeled (1). In the main configuration area, under 'Additional blocks for diagnostic data', the 'Diagnostic status DB' checkbox is checked, and the 'Block number' is set to '127', both highlighted with a red box and labeled (2).</p>										
7.	<p><b>Parameterizing the CPU:</b></p> <p>In the subnavigation you click on <b>“System diagnostics &gt; System diagnostic blocks”</b> (1). For the automatically created system diagnostics block you assign free block numbers which have not yet been assigned in your project (2).</p>	 <p>The screenshot shows the 'Diagnostics PLC' configuration window. In the left-hand navigation tree, 'System diagnostic blocks' is highlighted with a red box and labeled (1). In the main configuration area, under 'System diagnostic blocks', a table is shown with the following entries, all highlighted with a red box and labeled (2):</p> <table border="1" data-bbox="1023 1491 1353 1621"> <thead> <tr> <th>Block name</th> <th>Block number</th> </tr> </thead> <tbody> <tr> <td>FB: RSE_FB</td> <td>49</td> </tr> <tr> <td>DB: RSE_DB</td> <td>49</td> </tr> <tr> <td>Global DB: RSE_GLOBAL_DB</td> <td>50</td> </tr> <tr> <td>FC: RSE_FC</td> <td>49</td> </tr> </tbody> </table>	Block name	Block number	FB: RSE_FB	49	DB: RSE_DB	49	Global DB: RSE_GLOBAL_DB	50	FC: RSE_FC	49
Block name	Block number											
FB: RSE_FB	49											
DB: RSE_DB	49											
Global DB: RSE_GLOBAL_DB	50											
FC: RSE_FC	49											

No.	Action	Screens
8.	<p><b>Parameterizing the CPU:</b></p> <p>In the subnavigation you click on <b>“System diagnostics &gt; Structure of alarms”</b> (1). In this settings mask you can define the details for the message text or the info text.</p>	
9.	<p><b>Save settings:</b></p> <p>In the project tree you select the created CPU. Press the right mouse button and select <b>“Compile &gt; All”</b> (1). The system data and the specified blocks are generated for “System diagnostics”.</p>	


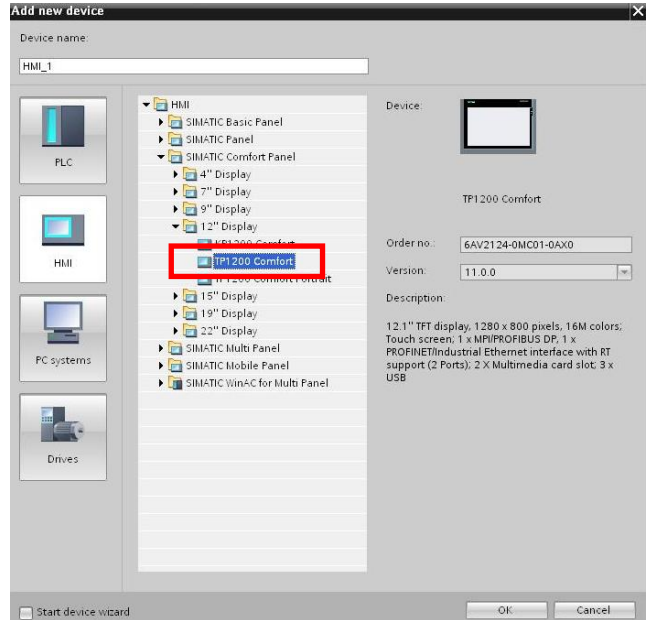

**Note** Please note that **not** all S7-300 CPUs support System diagnostics.

To configure the distributed ET 200S periphery, proceed analog to the configuration of CPU 315-2 PN/DP.

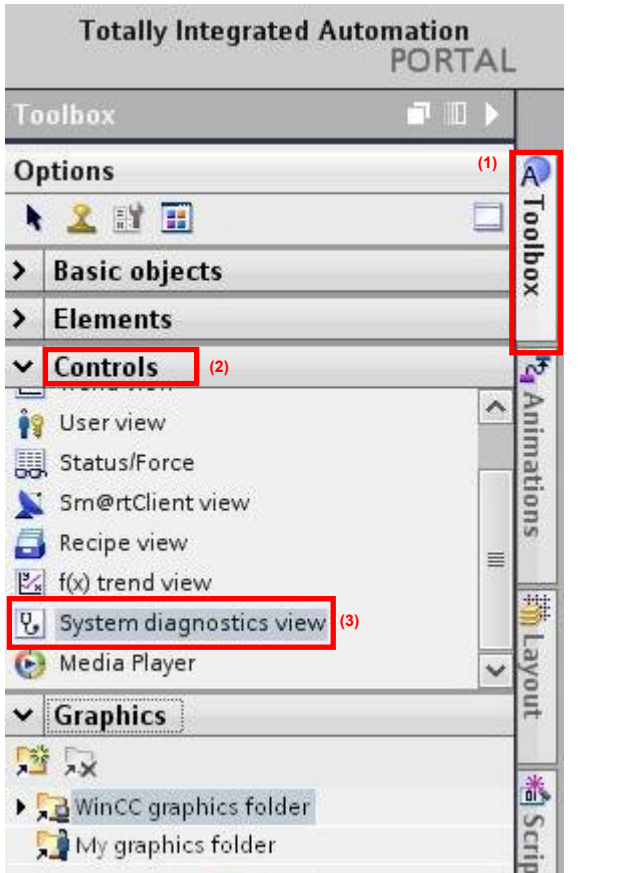
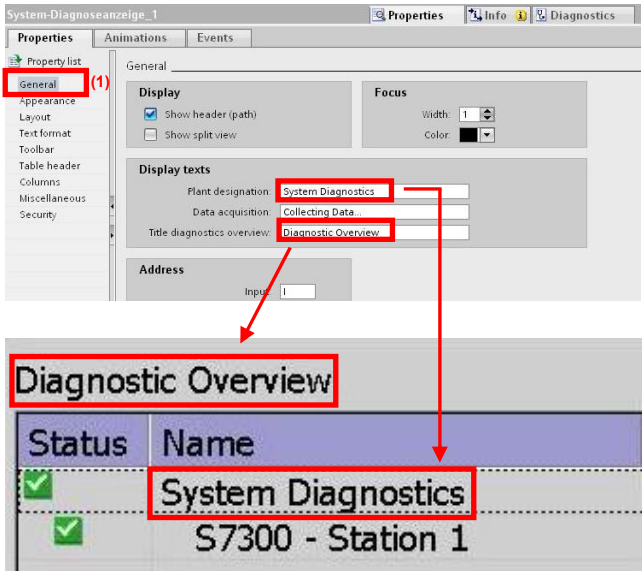
### 4.3 Configuration of the SIMATIC Comfort Panel

Please proceed as follows to configure the SIMATIC Comfort Panel “TP1200 Comfort”

Table 4-4

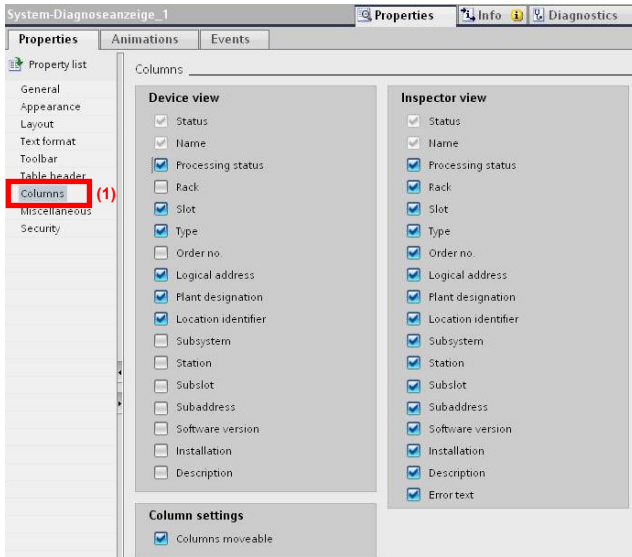
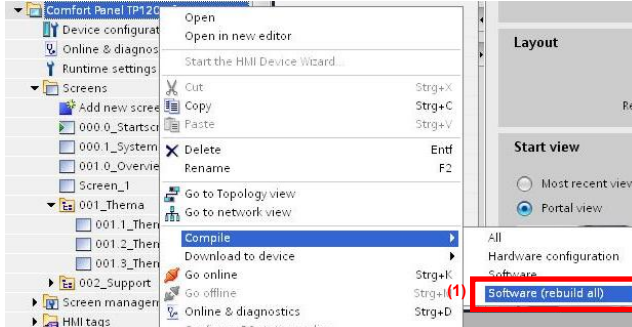
No.	Action	Screens
1.	<p><b>Creating SIMATIC Comfort Panel:</b></p> <p>Click the “Add new device” button in the project tree.</p>	
2.	<p><b>Creating SIMATIC Comfort Panel:</b></p> <p>A selection box opens from which you can select the SIMATIC Comfort Panel to be used.</p> <p>In this example: “TP1200 Comfort”</p>	
3.	<p><b>Creating a screen:</b></p> <p>In the project tree you click on the “Screens” folder and then on “Add new screen”.</p> <p>A new screen will be created.</p>	



No.	Action	Screens
4.	<p><b>Inserting a Control (System diagnostics view)</b></p> <p>On the right side you open the “<b>Toolbox</b>” (1) task card and then the „<b>Controls</b>” (2) palette.</p> <p>Use drag &amp; drop to insert the “<b>System diagnostics view</b>” (3) Control into your created screen.</p>	
5.	<p><b>Configuring a Control (System diagnostics view)</b></p> <p>In the subnavigation you click on “<b>General</b>” (1).</p> <p>In this settings mask you can specify the name under which the control is to be displayed on the SIMATIC Comfort Panel.</p>	 <p><b>Visualization of the control on the SIMATIC Comfort Panel</b></p>

## 4 Configuration and Settings in TIA Portal

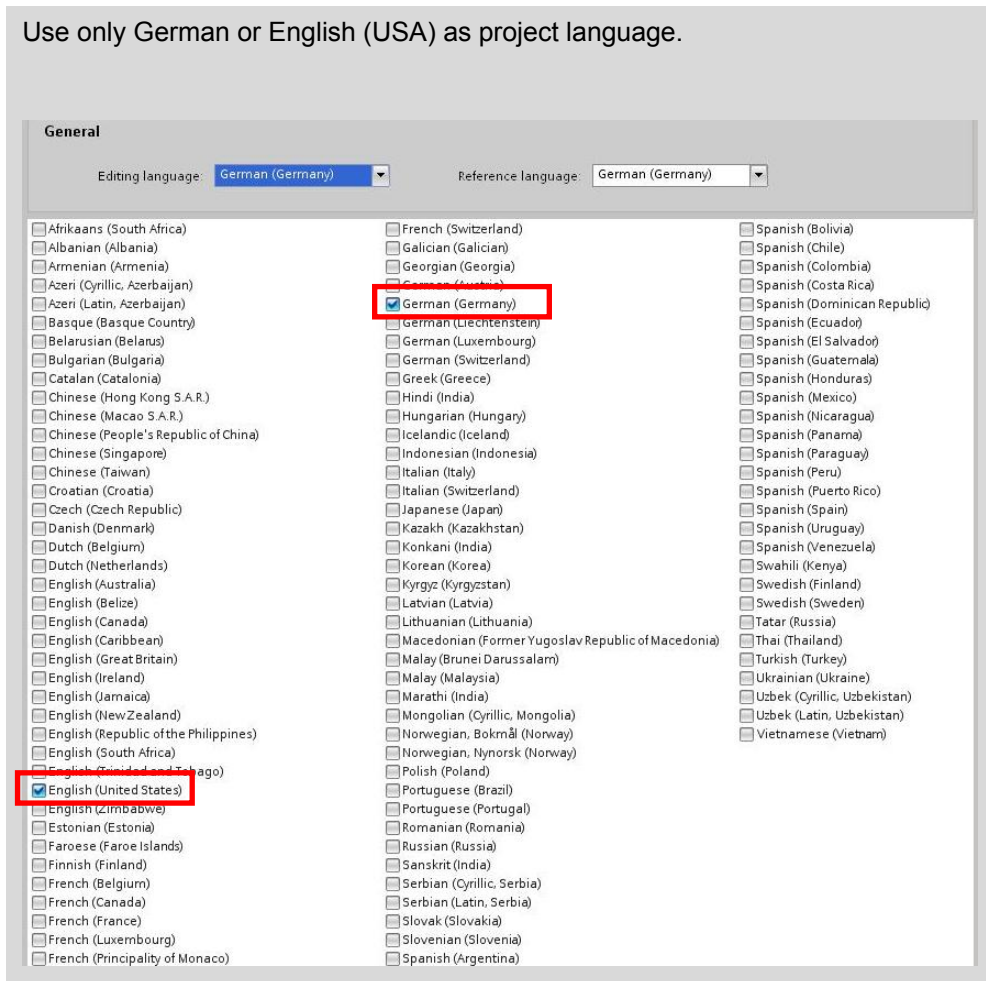
### 4.3 Configuration of the SIMATIC Comfort Panel

No.	Action	Screens
6.	<p><b>Configuring a Control (System diagnostics view)</b></p> <p>In the subnavigation you click on <b>“Column”</b> (1).</p> <p>Under this settings mask you can specify the settings to be displayed in the Device view or in the Details view.</p>	
7.	<p><b>Save settings:</b></p> <p>Select the SIMATIC Comfort Panel in the Project tree via right-click and select <b>“Software (rebuild all)”</b> (1).</p>	

4.3 Configuration of the SIMATIC Comfort Panel

**Note**

Use only German or English (USA) as project language.



## 5 Starting up the Application

### 5.1 Preparing measures

Table 5-1

No.	Action
1.	<b>Linking all nodes:</b>  Link all nodes through the Ethernet and make sure that there is a connection to all nodes.
2.	<b>Creating the power supply:</b>  Supply all nodes with their respective network voltage and switch on the devices.
3.	<b>Transferring S7 configuration:</b>  Transfer the STEP 7 Professional configuration to the controller (S7-300 CPU). Make sure that the PLC controller is subsequently in the "RUN" mode.
4.	<b>Transferring the WinCC (TIA Portal) configuration:</b>  Transfer the WinCC (TIA Portal) configuration to the SIMATIC Comfort Panel.

### 5.2 Commissioning

After completing the preparatory measures, the SIMATIC Comfort Panel establishes a connection with the controller using the started Panel Runtime.

The status of the connected, diagnostics-capable modules is displayed in the "System diagnostics view" control on the SIMATIC Comfort Panel.

## 6 Operation of the Application

### WinCC (TIA Portal) configuration

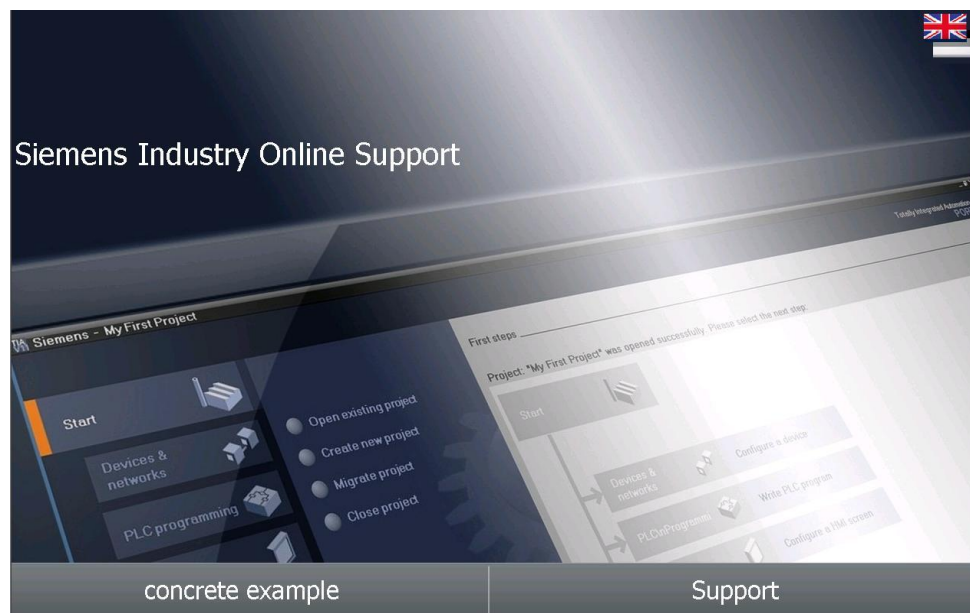
A SIMATIC Comfort Panel with WinCC (TIA Portal) was configured for this application. The project consists of the following screens.

#### 6.1.1 “000.0\_Startscreen” screen

When the Panel Runtime is started on the SIMATIC Comfort Panel, this screen comes up first. From this screen, further screens can be accessed.

The “concrete example” button takes you to the application, and general support information is provided to you via the “Support” button.

Figure 6-1



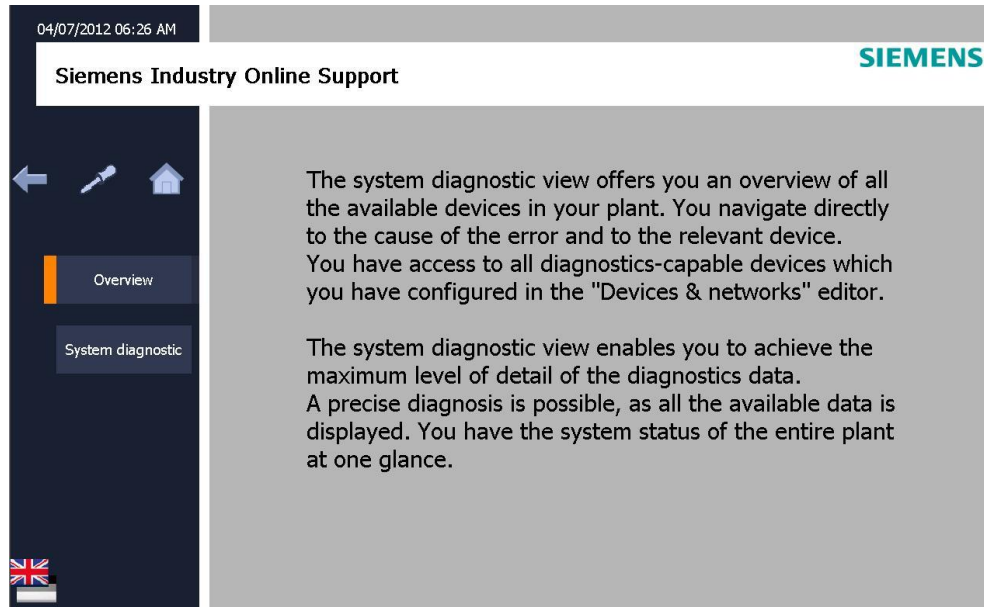
#### 6.1.2 “001.0\_Overview” screen

Clicking the “concrete example” button in the “000.0\_Startscreen” screen takes you to this screen. This screen contains the general information on the application.

Clicking the “System Diagnose” button in this screen takes you to the screen in which the “System diagnostics view” Control is configured.

There you find the diagnostic information of the connected diagnostics-capable devices.

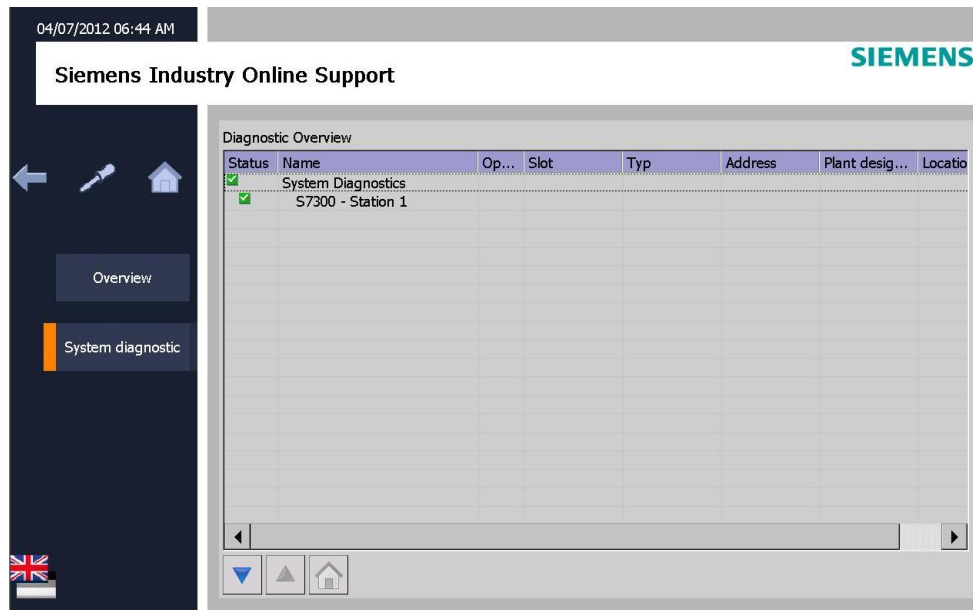
Figure 6-2



### 6.1.3 “001.1\_Thema\_A” screen

Clicking the “System diagnostic” button in the “001.0\_Overview” screen takes you to this screen. In this screen, you find the configured “System diagnostics view” Control. The control supplies you with the diagnostic information of the connected diagnostics-capable devices.

Figure 6-3

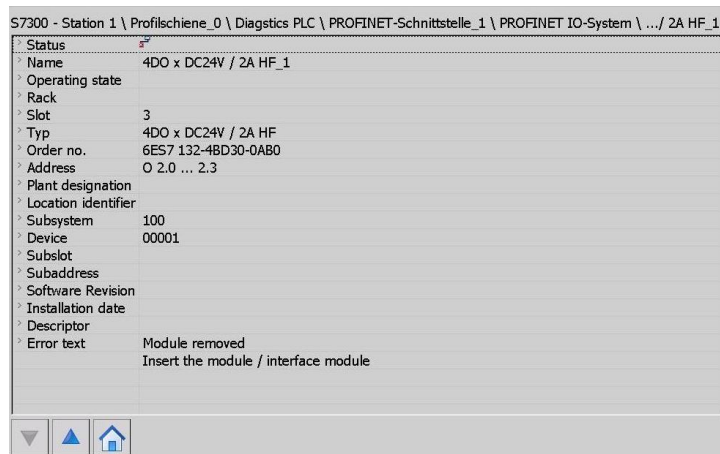


#### Operation

When a diagnostic message is pending, the symbol changes according to the message. (see [Chapter 3.1.5](#))

To receive continuing diagnostic information, click on the name in the control for which the error is displayed. You have to click down the levels until you get to the error. In the subsequent screen you see how an error (Module removed) is displayed in the configured control.

Figure 6-4

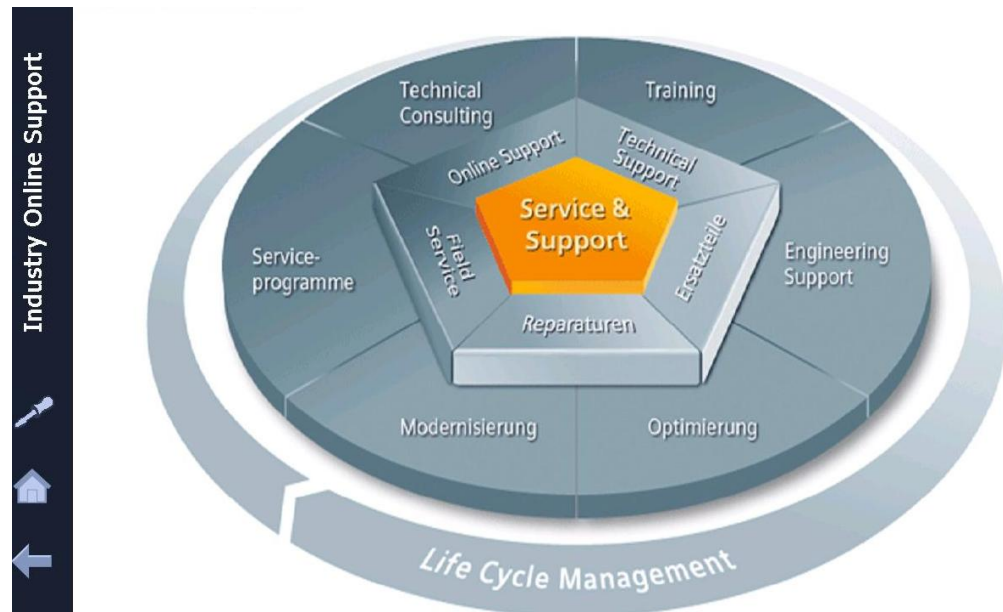


### 6.1.4 “002.0\_Support\_Overview” screen

Clicking the “Support” button in the “000.0\_Startscreen” screen takes you to this screen.

In this screen, the general support information is available: If you wish further information, then click on the individual areas in this screen.

Figure 6-5



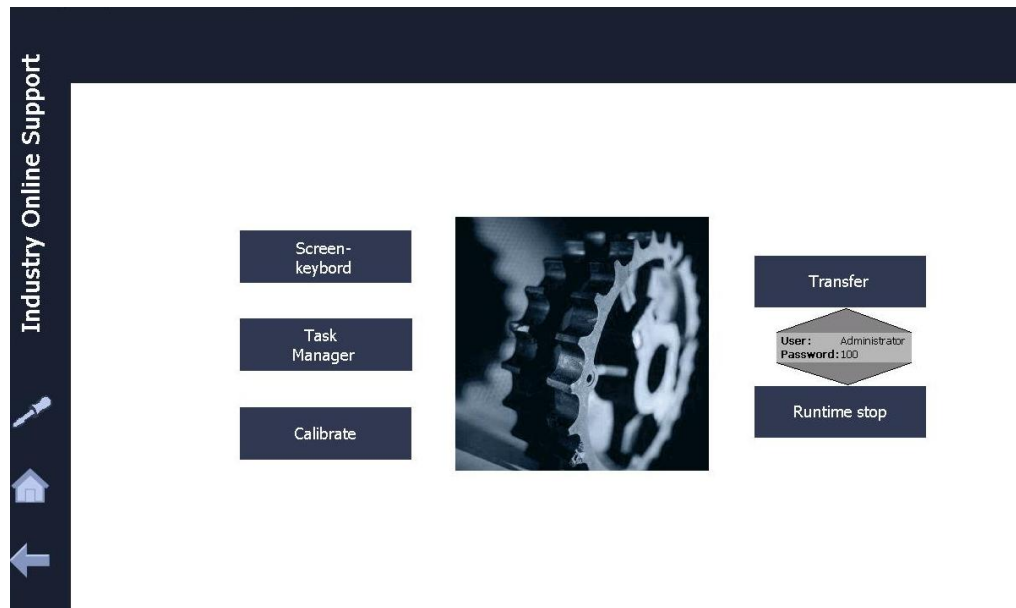


### 6.1.5 “000.1\_System” screen

You get to this screen by clicking on the “screw-driver” icon.  
The user has the following options in this screen:

- Show the screen keyboard
- Start the Task Manager
- Calibrate the touch panel
- Go to transfer mode
- Terminate runtime

Figure 6-6



## 7 Links & Literature

### 7.1 Literature

The following list is by no means complete and only provides a selection of appropriate information.

Table 7-1

No.	Topic	Title
1.	STEP7 SIMATIC S7-300	Automating with SIMATIC S7-300 inside TIA Portal Author: Hans Berger Publicis MCD Verlag ISBN: 978-3-89578-357-9
2.	STEP7 SIMATIC S7-400	Automating with SIMATIC S7-400 inside TIA Portal Author: Hans Berger Publicis MCD Verlag ISBN: 978-3-89578-372-2
3.	STEP7 SIMATIC S7-1200	Automating with SIMATIC S7-1200 Author: Hans Berger Publicis MCD Verlag ISBN: 978-3-89578-355-5

### 7.2 Internet links

The following list is by no means complete and only provides a selection of appropriate sources.

Table 7-2

	Topic	Title
1.	Link to this document	<a href="http://support.automation.siemens.com/WWW/view/en/61910954">http://support.automation.siemens.com/WWW/view/en/61910954</a>
2.	Siemens Industry Online Support	<a href="http://support.automation.siemens.com">http://support.automation.siemens.com</a>
3.	"WinCC Advanced V11 SP2" Manual	<a href="http://support.automation.siemens.com/WWW/view/en/57358923">http://support.automation.siemens.com/WWW/view/en/57358923</a>
4.	"STEP 7 Professional V11.0 SP2" Manual	<a href="http://support.automation.siemens.com/WWW/view/en/57185407">http://support.automation.siemens.com/WWW/view/en/57185407</a>
5.	SIMATIC WinCC (TIA Portal) <b>SP2</b>	<a href="http://support.automation.siemens.com/WWW/view/en/56897511">http://support.automation.siemens.com/WWW/view/en/56897511</a>
6.	SIMATIC WinCC (TIA Portal) SP2 <b>Update 3</b>	<a href="http://support.automation.siemens.com/WWW/view/en/59604410">http://support.automation.siemens.com/WWW/view/en/59604410</a>
7.	STEP 7 Professional V11 SP2 <b>Update 3</b>	<a href="http://support.automation.siemens.com/WWW/view/en/59604410">http://support.automation.siemens.com/WWW/view/en/59604410</a>
8.	System diagnostics indicator	<a href="https://www.automation.siemens.com/mdm/default.aspx?DocVersionId=37364590091&amp;Language=de-DE&amp;TopicId=21593680011">https://www.automation.siemens.com/mdm/default.aspx?DocVersionId=37364590091&amp;Language=de-DE&amp;TopicId=21593680011</a>
9.	S7-PDIAG Manual	<a href="http://support.automation.siemens.com/WWW/view/en/16531809">http://support.automation.siemens.com/WWW/view/en/16531809</a>
10.	ProAgent Manual	<a href="http://support.automation.siemens.com/WWW/view/en/34594937">http://support.automation.siemens.com/WWW/view/en/34594937</a>

## 8 History

Table 8-1

Version	Date	Revisions
V1.0	08/2012	First issue