

# What do I have to do to use the SIMATIC function "Report System Errors" with SINAMICS drives?

SIMATIC & SINAMICS

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## Service & Support

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### **Caution**

The functions and solutions described in this article confine themselves to the realization of the automation task predominantly. Please take into account furthermore that corresponding protective measures have to be taken up in the context of Industrial Security when connecting your equipment to other parts of the plant, the enterprise network or the Internet. Further information can be found under the Content-ID 50203404.

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

## Question

What do I have to do to use the SIMATIC function "Report System Errors" with SINAMICS drives?

## Answer

The instructions and notes listed in this document provide a detailed answer to this question.

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# 1 Introduction

## 1.1 What is “Report System Errors”?

When a system error occurs, hardware components and devices of other manufacturers (slaves whose properties are set by the GSD files) can trigger organization block calls. Here the hardware components provide information on the system error that has occurred.

With the “Report System Errors” function, STEP7 offers a convenient way to display diagnostic information supplied by the component in message form.

STEP7 generates the necessary blocks and message texts. All the user has to do is load the generated blocks into the CPU and transfer the texts to connected HMI devices.

To display diagnostics events graphically, for example on an HMI device or via a web server, you can generate one or more status DBs. These status DBs are updated by the system diagnostics blocks and then contain information on the current state of the system.

## 1.2 Requirement for using “Report System Errors” with SINAMICS drives

To get the messages from SINAMICS drives displayed on HMI devices or via the web server of the SIMATIC PLC, it is **mandatory** that the drives are configured via the corresponding **GSD file** when the function “Report System Errors” is used!

Table 1-1 PROFINET GSD files

Type of device	Link
SINAMICS S120/S150, G130/G150, GM150/GL150/SL150/SM120	<a href="http://support.automation.siemens.com/WW/view/en/49217480">http://support.automation.siemens.com/WW/view/en/49217480</a>
SINAMICS S110 CU305 PN	<a href="http://support.automation.siemens.com/WW/view/en/48924746">http://support.automation.siemens.com/WW/view/en/48924746</a>
SINAMICS G120D	<a href="http://support.automation.siemens.com/WW/view/en/60592893">http://support.automation.siemens.com/WW/view/en/60592893</a>
SINAMICS G120C	<a href="http://support.automation.siemens.com/WW/view/en/60602080">http://support.automation.siemens.com/WW/view/en/60602080</a>
SINAMICS G120	<a href="http://support.automation.siemens.com/WW/view/en/26641490">http://support.automation.siemens.com/WW/view/en/26641490</a>

Table 1-2 PROFIBUS GSD files

Type of device	Link
SINAMICS S120/S150, G130/G150, GM150/GL150/SL150/SM120, DCM	<a href="http://support.automation.siemens.com/WW/view/en/49216293">http://support.automation.siemens.com/WW/view/en/49216293</a>
SINAMICS S110 CU305 DP	<a href="http://support.automation.siemens.com/WW/view/en/42705323">http://support.automation.siemens.com/WW/view/en/42705323</a>
SINAMICS G120D	<a href="http://support.automation.siemens.com/WW/view/en/60292521">http://support.automation.siemens.com/WW/view/en/60292521</a>
SINAMICS G120C	<a href="http://support.automation.siemens.com/WW/view/en/60292416">http://support.automation.siemens.com/WW/view/en/60292416</a>
SINAMICS G120	<a href="http://support.automation.siemens.com/WW/view/en/23450835">http://support.automation.siemens.com/WW/view/en/23450835</a>

## 2 Configuration

### 2.1 Setting up “Report System Errors”

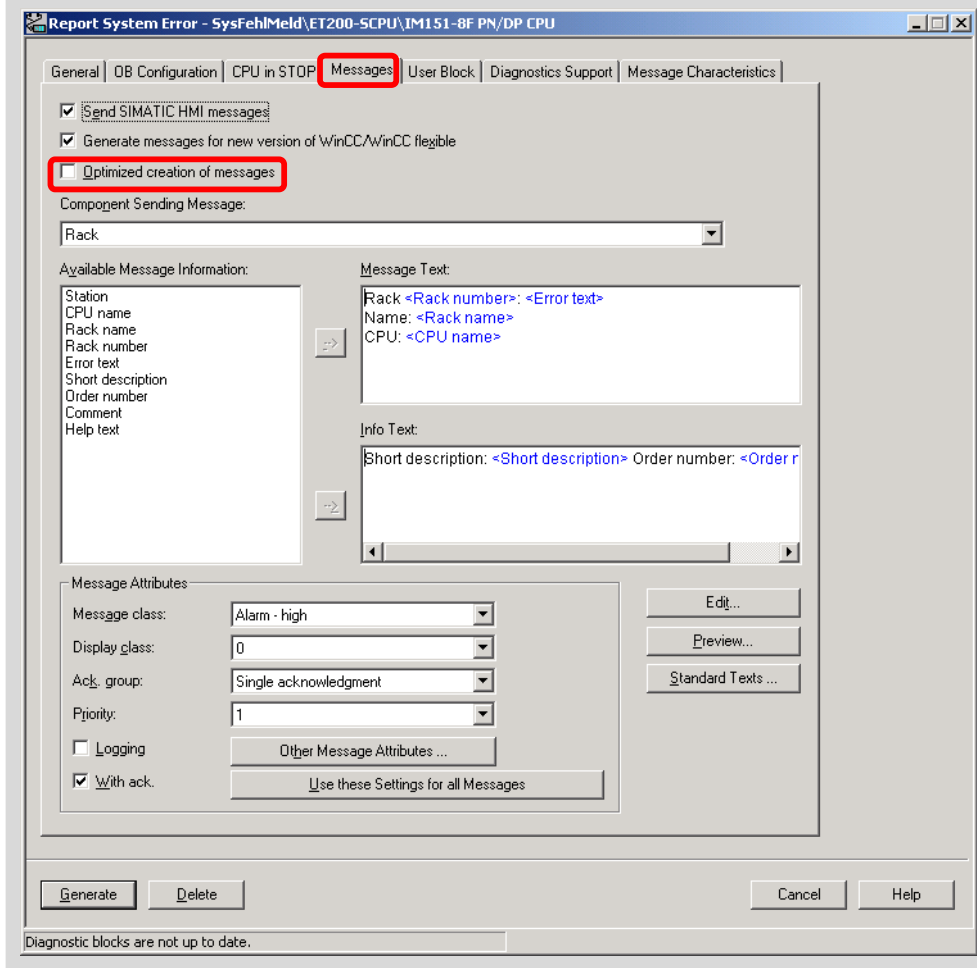
In the following manuals you will find instructions how to generally set up the function “Report System Errors” for SIMATIC PLCs:

- “Report System Errors” with **STEP7**  
Manual “SIMATIC Programming with STEP7 V5.5” (Chapter 16.9)  
<http://support.automation.siemens.com/WW/view/en/45531107>
- “Report System Errors” with **TIA Portal V12**  
Manual “STEP7 Professional V12.0” (Chapter 8.2.3)  
<http://support.automation.siemens.com/WW/view/en/68113685>

#### NOTE

In certain configurations it can be necessary to deactivate the optimized creation of messages.

For this purpose remove the check mark for “Optimized creation of messages” in the properties of the function “Report System Errors” in the “Messages” tab.



## 2.2 Activation of the advanced diagnostics for SINAMICS drives

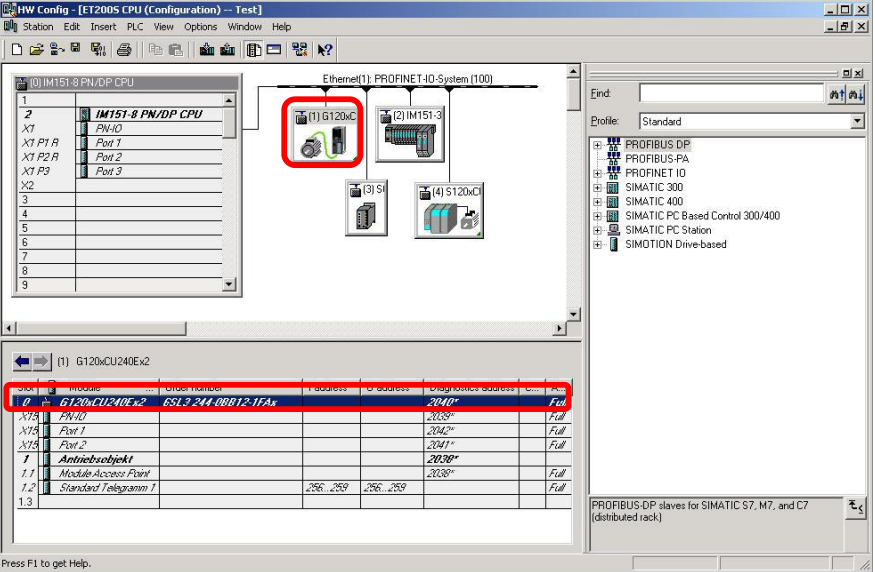
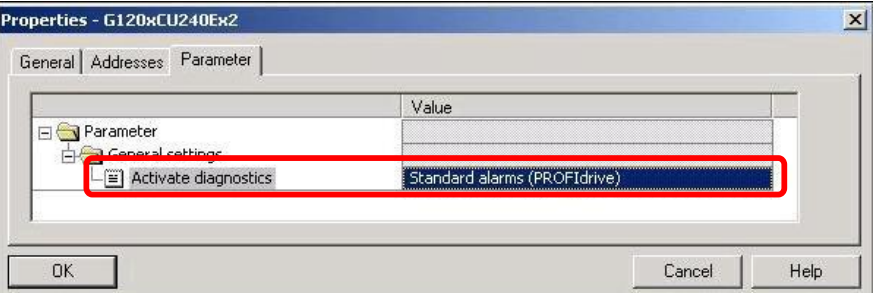
To get the complete capability of diagnostics for a SINAMICS drive the advanced diagnostics has to be activated in the configuration (STEP7 respectively TIA Portal V12).

By activating the advanced diagnostics, afterwards all PROFIdrive standard alarms are also forwarded from the SINAMICS drive to the SIMATIC PLC and will be displayed on HMI devices or via the web server.

**NOTE** The activation of the advanced diagnostics for SINAMICS drives is only possible as from firmware **V4.5!**

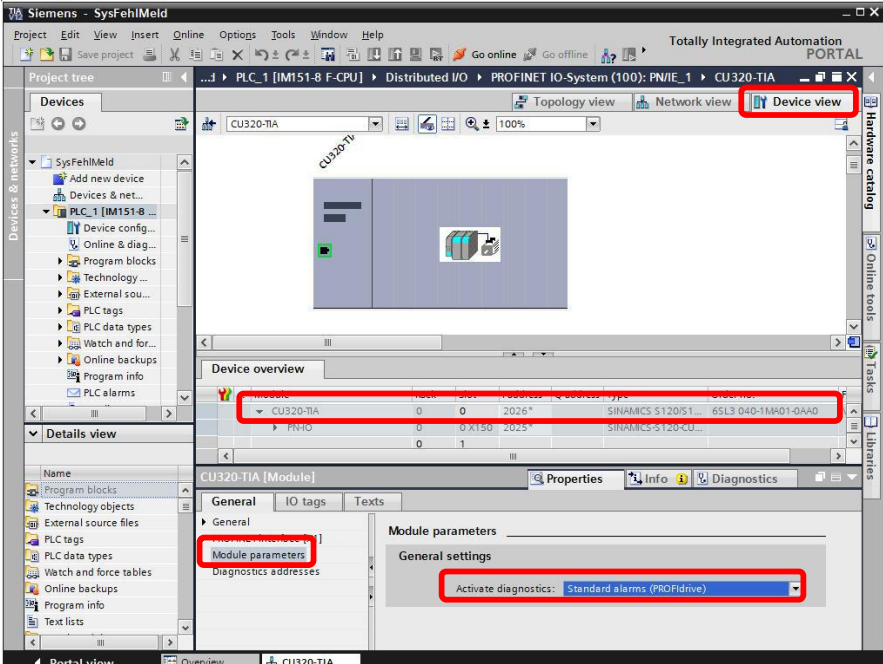
### Activation in STEP7

Table 2-1

Nr.	Action																																																															
1.	Open the HW configuration of the SIMATIC station.																																																															
2.	Select the SINAMICS drive, for which you would like to activate the advanced diagnostics.																																																															
3.	Open the drive's properties by performing a double click on slot "0".  <table border="1" data-bbox="475 1438 1050 1594"> <thead> <tr> <th>Slot</th> <th>Module</th> <th>Module ID</th> <th>IP Address</th> <th>MAC Address</th> <th>Diagnosis Address</th> <th>Com. Type</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>G120xCU240x2</td> <td>GS1.3.244.00D12-1FAx</td> <td></td> <td></td> <td>2040*</td> <td>Full</td> </tr> <tr> <td>X15</td> <td>PS4U</td> <td></td> <td></td> <td></td> <td>2039*</td> <td>Full</td> </tr> <tr> <td>X15</td> <td>Port 1</td> <td></td> <td></td> <td></td> <td>2042*</td> <td>Full</td> </tr> <tr> <td>X15</td> <td>Port 2</td> <td></td> <td></td> <td></td> <td>2041*</td> <td>Full</td> </tr> <tr> <td>7</td> <td>Antenneobjekt</td> <td></td> <td></td> <td></td> <td>2039*</td> <td>Full</td> </tr> <tr> <td>1.1</td> <td>Module Access Point</td> <td></td> <td></td> <td></td> <td>2039*</td> <td>Full</td> </tr> <tr> <td>1.2</td> <td>Standard Telegram 1</td> <td></td> <td>296, 299</td> <td>296, 299</td> <td></td> <td>Full</td> </tr> <tr> <td>1.3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Slot	Module	Module ID	IP Address	MAC Address	Diagnosis Address	Com. Type	0	G120xCU240x2	GS1.3.244.00D12-1FAx			2040*	Full	X15	PS4U				2039*	Full	X15	Port 1				2042*	Full	X15	Port 2				2041*	Full	7	Antenneobjekt				2039*	Full	1.1	Module Access Point				2039*	Full	1.2	Standard Telegram 1		296, 299	296, 299		Full	1.3						
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1.1	Module Access Point				2039*	Full																																																										
1.2	Standard Telegram 1		296, 299	296, 299		Full																																																										
1.3																																																																
4.	Activate the advanced diagnostics in the "Parameter" tab. 																																																															
5.	Perform a download of the changed HW configuration to the SIMATIC PLC.																																																															

Activation in TIA Portal V12

Table 2-2

Nr.	Action																								
1.	Change to the "Device view" of the SINAMICS drive, for which the advanced diagnostics should be activated.																								
2.	<p>Select slot "0", perform a click on the entry "Module parameters" in the properties and activate the advanced diagnostics.</p>  <p>The screenshot shows the Siemens TIA Portal V12 interface. The 'Device view' is selected in the top right corner. The 'Device overview' table shows the following data:</p> <table border="1"> <thead> <tr> <th>Module</th> <th>Slot</th> <th>Order</th> <th>Version</th> <th>Manufacturer</th> <th>Model</th> </tr> </thead> <tbody> <tr> <td>CU320-TIA</td> <td>0</td> <td>0</td> <td>2026*</td> <td>SINAMICS</td> <td>S120/S1... 6SL3 040-1MA01-0AA0</td> </tr> <tr> <td>PNIO</td> <td>0</td> <td>0 X150</td> <td>2025*</td> <td>SINAMICS</td> <td>S120/CU...</td> </tr> <tr> <td></td> <td>0</td> <td>1</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>The 'Module parameters' section is expanded, and the 'Activate diagnostics' dropdown is set to 'Standard alarms (PROFIdrive)'.</p>	Module	Slot	Order	Version	Manufacturer	Model	CU320-TIA	0	0	2026*	SINAMICS	S120/S1... 6SL3 040-1MA01-0AA0	PNIO	0	0 X150	2025*	SINAMICS	S120/CU...		0	1			
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	0	1																							
3.	Perform a download of the changed HW configuration to the SIMATIC PLC.																								

## 3 Contact person

*Application center*

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