SIEMENS

Product Information on the Manual

Edition 12.2004

- **S7-300 Programmable Controller; Module Specifications, as of Edition 02/2004 (A5E00105505)**

- **ET 200M Distributed I/O Device Signal Modules for Process Automation, as of Edition 10/2004 (A5E00085262)**

- **S7-300, ET 200M Programmable Controller, Modules with Intrinsically-Safe Signals, as of Edition 08/2003 (A5E00172008)**

Introduction

Parameterizable signal modules of the S7-300 product family mentioned in this product information document can be reparameterized online using STEP7 *HWCONFIG* in RUN mode of the CPU.

In other words, the module parameters can be changed without switching the CPU to STOP mode or affecting other modules.

The following prerequisites must be met in order to use this function:

- STEP7 as of Version 5.2

- Distributed use of the S7-300 modules described in the S7-400 programmable controller (CPUs as of V3.1 or CP 443-5 extended as of V5.0).

- Use of the ET 200M with the IM 153-2 as of 6ES7153-2BA00-0XB0 or 6ES7153-2BB00-0XB0

- Use of the IM 157 as of 6ES7157-0AA82-0XA00

You will find a detailed description of the prerequisites and principles of operation in the manual *Modifying the System during Operation via CiR* (visit `http://www.siemens.com/automation/service&support` and enter the entry ID: 14044916).

Reparameterization steps in RUN mode

Observe the reparameterization steps described in the above manual.

Note the peculiarities of certain modules described in the table.

Example 1:

To change a measuring range for modules, proceed as follows:

1. Change the user program so that the channel to be reparameterized is no longer evaluated, and download it to the CPU.

2. Change the measuring range for the module in HWCONFIG, and download the changed configuration to the CPU.

3. Adapt the user program to the changed channel, and download it to the CPU.

Example 2:

When reparameterizing certain modules (see the table), you should ensure that there is no pending diagnostic event (e.g. a wire break message) before carrying out reparameterization, since otherwise it may happen in some cases that outgoing diagnostic events are no longer reported. As a result, the SF LEDs on the CPU, IM, or module will continue to shine, for example, although the reparameterized module is working correctly. If such a situation does arise, however, the module must be removed and then plugged in again.

Notes on the table

There is a separate table for each manual that describes the technical specifications of the signal modules of the S7-300 product family.

The "Behavior of the Inputs/Outputs" column indicates the behavior of the inputs/outputs when reparameterization is carried out in RUN mode, provided they are not affected by reparameterization.

Module	Behavior of the inputs/outputs	Peculiarities when reparameterizing
S7-300 module specifications		
6ES7 321-7BH00-0AB0 **6ES7 321-7BH80-0AB0** SM 321; DI 16×DC 24 V; with hardware interrupt and diagnostic interrupt	Supply the last valid process value before parameterization	---
6ES7 321-7BH01-0AB0 SM 321; DI 16×DC 24 V; with hardware interrupt and diagnostic interrupt, clocked		
6ES7 322-8BF00-0AB0 **6ES7 322-8BF80-0AB0** SM 322; DO 8×DC 24 V/ 0.5 A; with diagnostic interrupt	Output the last valid output value before parameterization	---
6ES7 322-5FF00-0AB0 SM 322;DO 8×AC 120/230V/ 2A ISOL		
6ES7 322-5GH00-0AB0 SM 322; DO 16×UC 24/48V		
6ES7 322-5HF00-0AB0 SM 322; DO 8×Rel. AC 230V/5A		
6ES7 331-7NF00-0AB0 SM 331; AI 8×16 Bit	Supply the last valid process value before parameterization	SF LED shines: If there was a pending diagnosis before reparameterization, the SF LEDs (on the CPU, IM, or module) may still be shining although there is no longer a pending diagnosis and the module is working correctly. Remedy: • Only reparameterize when there is no pending diagnosis on the module, or • Remove the module, and then plug it in again
6ES7 331-7NF10-0AB0 SM 331; AI 8×16 Bit		
6ES7 331-7PF00-0AB0 SM 331; AI 8×RTD		
6ES7 331-7PF10-0AB0 SM 331; AI 8×TC		

Module	Behavior of the inputs/outputs	Peculiarities when reparameterizing
6ES7 332-5HD01-0AB0 SM 332; AO 4 × 12 Bit	Output the last valid output value before parameterization	SF LED shines: If there was a pending diagnosis before reparameterization, the SF LEDs (on the CPU, IM, or module) may still be shining although there is no longer a pending diagnosis and the module is working correctly. Remedy: • Only reparameterize when there is no pending diagnosis on the module, or • Remove the module, and then plug it in again
6ES7 332-5HB01-0AB0 **6ES7 332-5HB81-0AB0** SM 332; AO 2 × 12 Bit		
6ES7 332-5HF00-0AB0 SM 332; AO 8 × 12 Bit		---
6ES7 332-7ND00-0AB0 **6ES7 332-7ND01-0AB0** SM 332; AO 4 × 16 Bit		---

Module	Behavior of the inputs/outputs	Peculiarities when reparameterizing
ET 200M signal modules for process automation (PCS7)		
6ES7 321-7TH00-0AB0 SM 321; DI 16 × NAMUR	Supply the last valid process value (including the value status) before parameterization	SF LED shines: If there was a pending diagnosis before reparameterization, the SF LEDs (on the CPU, IM, or module) may still be shining although there is no longer a pending diagnosis and the module is working correctly. Remedy: • Only reparameterize when there is no pending diagnosis on the module, or • Remove the module, and then plug it in again
6ES7 322-8BH00-0AB0 SM 322; DO 16 × DC 24 V/0,5A	Output the last valid output value before parameterization	

Module	Behavior of the inputs/outputs	Peculiarities when reparameterizing
S7-300, ET 200, I/O modules with intrinsically-safe signals		
6ES7 321-7RD00-0AB0 SM 321; DI 4 × NAMUR	Supply the last valid process value before parameterization	SF LED shines: If there was a pending diagnosis before reparameterization, the SF LEDs (on the CPU, IM, or module) may still be shining although there is no longer a pending diagnosis and the module is working correctly. Remedy: • Only reparameterize when there is no pending diagnosis on the module, or • Remove the module, and then plug it in again
6ES7 322 5RD00-0AB0 SM 322; DO 4 × 15V/20mA	Output the last valid output value before parameterization	---
6ES7 322-5SD00-0AB0 SM 322; DO 4 × 24V/10mA		
6ES7 331-7RD00-0AB0 SM 331; AI 4 × 0/4...20mA	Supply the last valid process value before parameterization	---
6ES7 331-7SF00-0AB0 SM 331; AI 8 × TC/4 × RTD		---
6ES7 331-7TB00-0AB0 SM 331; AI 2 × 0/4...20mA HART		---
6ES7 332-5RD00-0AB0 SM 332; AO 4 × 0/4...20mA	Output the last valid output value before parameterization	SF LED shines: If there was a pending diagnosis before reparameterization, the SF LEDs (on the CPU, IM, or module) may still be shining although there is no longer a pending diagnosis and the module is working correctly. Remedy: • Only reparameterize when there is no pending diagnosis on the module, or • Remove the module, and then plug it in again
6ES7 332-5TB00-0AB0 SM 332; AO 2 × 0/4...20mA HART		---