

Overview

**SIMATIC PCS 7 AS mEC RTX**

The SIMATIC PCS 7 AS mEC RTX equipped with a WinAC RTX software controller is a rugged automation system in compact S7-300 format, and is designed for the lower and medium performance ranges of SIMATIC PCS 7.

The SIMATIC PCS 7 AS mEC RTX is suitable for maintenance-free 24-hour continuous operation at ambient temperatures between 0 and 50 °C. Since it works without fans or rotating storage media, it is relatively insensitive to vibration and shock.

A particular advantage for users is the centralized expandability by means of adding up to eight S7-300 I/O modules on the same mounting rail. As a result, controller and I/Os are merged into a low-cost compact unit.

Application

As a result of its exceptional physical properties, small dimensions, and centralized expandability, the SIMATIC PCS 7 AS mEC RTX automation system is particularly suitable for small applications at plant level and as OEM products, e.g. in package units.

Design

The SIMATIC PCS 7 AS mEC RTX automation system is based on a system-specific SIMATIC S7 modular embedded controller EC31 with the following configuration:

- 1.2 GHz Intel Core Duo processor
- 1 GB RAM
- Integrated Ethernet interface 10/100 Mbps (1 port), can be used for connection to the SIMATIC PCS 7 plant bus
- Integral PROFINET interface 10/100 Mbit/s (2 ports)
- 2 USB interfaces
- 1 slot for multimedia card
- LEDs for status and error
- 4 GB flash memory with the following pre-installed software:
 - Windows Embedded Standard 2009 operating system
 - WinAC RTX 2010 controller software
- AS Runtime license for 100 POs



SIMATIC PCS 7 AS mEC RTX with S7-300 I/O modules

The SIMATIC PCS 7 AS mEC RTX can be mounted together with up to 8 S7-300 I/O modules on a horizontal DIN rail. The I/O modules are positioned on the right of the automation system.

The following S7-300 I/O modules can be used together with the SIMATIC PCS 7 AS mEC RTX:

Name		Article number
SM 321	DI 16, 24 V DC	6ES7321-1BH02-0AA0
	DI 32, 24 V DC	6ES7321-1BL00-0AA0
	DI 16, 24 to 48 V DC	6ES7321-1CH00-0AA0
	DI 16, 48 to 125 V DC	6ES7321-1CH20-0AA0
	DI 8, 120/230 V AC	6ES7321-1FF01-0AA0
	DI 16, 120/230 V AC	6ES7321-1FH00-0AA0
	DI 16, 24 V DC, for isochronous mode; diagnostics/hardware interrupt	6ES7321-7BH01-0AB0
SM 322	DO 8, 24 V DC, 2 A	6ES7322-1BF01-0AA0
	DO 16 x 24 V DC / 0.5 A	6ES7322-1BH01-0AA0
	DO 32 x 24 V DC / 0.5 A	6ES7322-1BL00-0AA0
	DO 16, 120/230 V AC, 1 A	6ES7322-1FH00-0AA0
	DO 8, relay contacts, 2 A	6ES7322-1HF01-0AA0
	DO 8, relay contacts, 5 A	6ES7322-1HF10-0AA0
	DO 16, relay contacts	6ES7322-1HH01-0AA0
SM 323	DI 8 / DO 8	6ES7323-1BH01-0AA0
SM 331	AI 8; diagnostics/hardware interrupt	6ES7331-7KF02-0AB0
	AI 8; enhanced resolution 16 bits	6ES7331-7NF00-0AB0
	AI 8; enhanced resolution 16 bits, 4-channel mode	6ES7331-7NF10-0AB0
	AI 8, for thermal resistors	6ES7331-7PF01-0AB0
	AI 8, for thermocouples	6ES7331-7PF11-0AB0
SM 332	AO 4; resolution 11/12 bits; diagnostics interrupt	6ES7332-5HD01-0AB0
	AO 8	6ES7332-5HF00-0AB0
	AO 4; resolution 16 bits	6ES7332-7ND02-0AB0

These I/O modules can be selected in the chapter "Process I/Os", section "ET 200M for SIMATIC PCS 7".

Sensors/actuators integrated via distributed ET 200SP and ET 200M remote I/O stations can be connected via PROFINET IO.

The SIMATIC PCS 7 AS mEC RTX can only be operated with 24 V DC. For example, a PS 305 or PS 307 load power supply can be used (see chapter "Process I/Os", section "ET 200M for SIMATIC PCS 7, Power Supply", page 11/17).

An additional uninterruptible power supply (UPS) permits data retentivity for all process values.

Ordering data	Article No.	Article No.	
Analog output modules			
SM 332 modules for current and voltage outputs			
2 outputs in 2 channel groups - Resolution 12 bit/11 bit + sign - Voltage 1 ... 5 V, 0 ... 10 V; ±10 V (2 channels; 2 or 4 wires) - Current 0/4 ... 20 mA; ±20 mA (2 channels; 2 wires) - Configurable substitute value output in case of CPU stop - Wire break monitoring (only for current) - Short circuit monitoring (only for voltage) - Internal module diagnostics - Front connector required: 20-pin	6ES7332-5HB01-0AB0		
4 outputs in 4 channel groups Redundancy optional (channel-granular redundancy) - Resolution 12 bit/11 bit + sign - Voltage 1 ... 5 V, 0 ... 10 V; ±10 V (4 channels; 4 wires) - Current 0/4 ... 20 mA; ±20 mA (4 channels; 2 wires) - Configurable substitute value output in case of CPU stop - Wire break monitoring (only for current) - Short circuit monitoring (only for voltage) - Internal module diagnostics - Front connector required: 20-pin	6ES7332-5HD01-0AB0		
		8 outputs in 8 channel groups Redundancy optional (channel-granular redundancy) - Resolution 12 bit/11 bit + sign - Voltage 1 ... 5 V, 0 ... 10 V; ±10 V (8 channels; 4 wires) - Current 0/4 ... 20 mA; ±20 mA (8 channels; 2 wires) - Configurable substitute value output in case of CPU stop - Wire break monitoring (only for current) - Short circuit monitoring (only for voltage) - Internal module diagnostics - Front connector required: 40-pin	6ES7332-5HF00-0AB0
		4 outputs in 4 channel groups - Resolution 14/15/16 bit - Voltage 1 ... 5 V, 0 ... 10 V; ±10 V (4 channels; 4 wires) - Current 0/4 ... 20 mA; ±20 mA (4 channels; 2 wires) - Configurable substitute value output in case of CPU stop - Isolated by channel - Internal module diagnostics - Front connector required: 20-pin	6ES7332-7ND02-0AB0