

SIEMENS

SIMATIC

S7-1200

S7-1200 Signal modules and spare parts

Product Information

S7-1200 Signal modules (SM)

Siemens is pleased to announce the following new and improved S7-1200 signal modules for use with STEP 7 V11 w/HSP Basic and Professional software (HSP_V11SP2_0033_001_S71200_SM_2.0).

The order numbers of the signal modules are shown below. The old order numbers are also shown for reference.

Signal module	Old order number	New order number
SM 1221 8 x 24 VDC Input (Sink/Source)	6ES7 221-1BF30-0XB0	6ES7 221-1BF32-0XB0
SM 1221 16 x 24 VDC Input (Sink/Source)	6ES7 221-1BH30-0XB0	6ES7 221-1BH32-0XB0
SM 1222 8 x 24 VDC Output (Source)	6ES7 222-1BF30-0XB0	6ES7 222-1BF32-0XB0
SM 1222 16 x 24 VDC Output (Source)	6ES7 222-1BH30-0XB0	6ES7 222-1BH32-0XB0
SM 1222 8 x Relay Output	6ES7 222-1HF30-0XB0	6ES7 222-1HF32-0XB0
SM 1222 8 x Relay Output (CO)	6ES7 222-1XF30-0XB0	6ES7 222-1XF32-0XB0
SM 1222 16 x Relay Output	6ES7 222-1HH30-0XB0	6ES7 222-1HH32-0XB0
SM 1223 8 x 24 VDC Input (Sink/Source) / 8 x 24 VDC Output (Source)	6ES7 223-1BH30-0XB0	6ES7 223-1BH32-0XB0
SM 1223 16 x 24 VDC Input (Sink/Source) / 16 x 24VDC Output (Source)	6ES7 223-1BL30-0XB0	6ES7 223-1BL32-0XB0
SM 1223 8 x 24 VDC Input (Sink/Source) / 8 x Relay Output	6ES7 223-1PH30-0XB0	6ES7 223-1PH32-0XB0
SM 1223 16 x 24 VDC Input (Sink/Source) / 16 x Relay Output	6ES7 223-1PL30-0XB0	6ES7 223-1PL32-0XB0
SM 1223 DI 8 x 120/230 VAC Input (Sink/Source) / 8 x Relay Output	6ES7 223-1QH30-0XB0	6ES7 223-1QH32-0XB0
SM 1231 4 x Analog Input	6ES7 231-4HD30-0XB0	6ES7 231-4HD32-0XB0
SM 1231 8 x Analog Input	6ES7 231-4HF30-0XB0	6ES7 231-4HF32-0XB0
SM 1232 2 x Analog Output	6ES7 232-4HB30-0XB0	6ES7 232-4HB32-0XB0
SM 1232 4 x Analog Output	6ES7 232-4HD30-0XB0	6ES7 232-4HD32-0XB0
SM 1234 4 x Analog Input / 2 x Analog Output	6ES7 234-4HE30-0XB0	6ES7 234-4HE32-0XB0

Improved feature sets

These signal modules now have the following features:

- 4-20 mA range added to the analog input and output modules listed above. Refer to the S7-1200 System Manual (04/2012), table A-135 for Analog input representation for current. The new table for Analog output representation for current is shown below.
- Wirebreak detection when using 4-20 mA added to the analog input modules listed above
- Connector keying to prevent errors when plugging in field wiring connectors added to the modules with relay outputs, listed above

Table 1 Analog output representation for current

System		Current Output Range		
Decimal	Hexadecimal	0 mA to 20 mA	4 mA to 20 mA	
32767	7FFF	See note 1	See note 1	Overflow

System		Current Output Range		
Decimal	Hexadecimal	0 mA to 20 mA	4 mA to 20 mA	
32512	7F00	See note 1	See note 1	
32511	7EFF	23.52 mA	22.81 mA	Overshoot range
27649	6C01			
27648	6C00	20 mA	20 mA	Rated range
20736	5100	15 mA	16 mA	
1	1	723.4 nA	4 mA + 578.7 nA	
0	0	0 mA	4mA	
-1	FFFF		4 mA to 578.7 nA	Undershoot range
-6912	E500		0 mA	
-6913	E4FF			Not possible. Output value limited to 0 mA.
-32512	8100			
-32513	80FF	See note 1	See note 1	Underflow
-32768	8000	See note 1	See note 1	

¹ In an overflow or underflow condition, analog outputs will take on the substitute value of the STOP mode.

Spare parts compatibility

The new signal modules (6ES7 2xx-xxx32-0XB0) replace existing signal modules (6ES7 2xx-xxx30-0XB0) and are compatible. You can employ the revised modules in place of the existing SM modules without any changes.

Software requirements

- To use the improved analog signal modules, you must configure the module with its new order number, and if applicable, with the corresponding HSP_V11SP2_0033_001_S71200_SM_2.0.
- Because uploading a module configuration from the device configuration editor cannot recognize the new signal modules, you must manually include them in your project. Drag and drop the signal modules from the hardware catalog into the device configuration.

New spare parts

The following spare parts are now available for use with the S7-1200 CPUs.

Item	Order number
Terminal block, keyed left, 7 contact	6ES7 292-1AG40-0XA1
Terminal block, keyed right, 7 contact	6ES7 292-1AG40-0XA0
Terminal block, keyed right, 8 contact	6ES7 292-1AH40-0XA0
Terminal block, keyed right, 11 contact	6ES7 292-1AL40-0XA0
Terminal block, keyed right, 12 contact	6ES7 292-1AM40-0XA0
Terminal block, keyed right, 14 contact	6ES7 292-1AP40-0XA0
Terminal block, keyed right, 20 contact	6ES7 292-1AV40-0XA0

Refer to the SIMATIC S7-1200 Programmable Controller System Manual for technical specifications for these signal modules, and for more information about the S7-1200 product family.

Additional assistance

For assistance in answering technical questions, for training on these products, or for ordering, contact your Siemens distributor or sales office.

Siemens AG
Industry Sector
Postfach 48 48
90026 NÜRNBERG

S7-1200 Signal modules and spare parts
A5E31295273-AA, 01/2013