

# SIMATIC S7-1500

## Technology modules

### TM PosInput 2 position detection module

#### Technical specifications (continued)

6ES7551-1AB00-0AB0 TM PosInput 2	
<b>Integrated Functions</b>	
Number of counters	2
Counter frequency (counter) max.	4 MHz; with quadruple evaluation
Counting functions	
• Can be used with TO High_Speed_Counter	Yes; only for pulse and incremental encoders
• Continuous counting	Yes
• Counter response can be parameterized	Yes
• Hardware gate via digital input	Yes
• Software gate	Yes
• Event-controlled stop	Yes
• Synchronization via digital input	Yes
• Counting range, parameterizable	Yes
• Comparator	
- Number of comparators	2; Per channel
- Direction dependency	Yes
- Can be changed from user program	Yes
Position detection	
• Incremental acquisition	Yes
• Absolute acquisition	Yes
• Suitable for S7-1500 Motion Control	Yes
Measuring functions	
• Measuring time, parameterizable	Yes
• Dyn. measuring time adjustment	Yes
• Number of thresholds, parameterizable	2
• Measuring range	
- Frequency measurement, min.	0.04 Hz
- Frequency measurement, max.	4 MHz
- Period measurement, min.	0.25 µs
- Period measurement, max.	25 s
• Accuracy	
- Frequency measurement	100 ppm; depending on measuring interval and signal evaluation
- Speed measurement	100 ppm; depending on measuring interval and signal evaluation
- Cycle duration measurement	100 ppm; depending on measuring interval and signal evaluation
<b>Galvanic isolation</b>	
Electrical isolation channels	
• between the channels	No
• between the channels and the backplane bus	Yes
• between the channels and the load voltage L+	No
<b>Permissible potential difference</b>	
between different circuits	75 V DC/60 V AC (base isolation)
<b>Isolation</b>	
Isolation checked with	707 V DC (type test)
<b>Ambient conditions</b>	
Operating temperature	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C; Please note derating for inductive loads
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C; Please note derating for inductive loads

6ES7551-1AB00-0AB0 TM PosInput 2	
<b>Decentralized operation</b>	
to SIMATIC S7-1500	Yes
To standard PROFINET controller	Yes
<b>Dimensions</b>	
Width	35 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	325 g

Ordering data	Article No.
<b>Counter and positioning module TM PosInput 2</b>	<b>6ES7551-1AB00-0AB0</b>
With 2 channels, max. 1 MHz counting frequency; for SSI encoders and incremental encoders with RS422 or 5V TTL interface	
<b>Accessories</b>	
<b>Front connectors</b>	
For 35 mm modules; including four potential bridges, cable ties and individual labeling strips, 40-pin	
• Screw terminals	<b>6ES7592-1AM00-0XB0</b>
• Push-in	<b>6ES7592-1BM00-0XB0</b>
<b>DIN A4 labeling sheets</b>	<b>6ES7592-2AX00-0AA0</b>
10 sheets with 10 labeling strips each for I/O modules; perforated, Al grey	
<b>U connector</b>	<b>6ES7590-0AA00-0AA0</b>
5 units; spare part	
<b>Universal front door for I/O modules</b>	<b>6ES7528-0AA00-7AA0</b>
5 front doors; with 5 labeling strips (front) and 5 cabling diagrams per front door; spare part	
<b>Shielding set I/O</b>	<b>6ES7590-5CA00-0AA0</b>
Infeed element, shield clamp, and shield terminal; 5 units, spare part	
<b>Shield terminal element</b>	<b>6ES7590-5BA00-0AA0</b>
10 units; spare part	

# SIMATIC S7-1500

## Connection system

### Front connectors

#### Overview



- Uniform, 40-pin front connector, suitable for SIMATIC S7-1500 I/O modules
- Versions for 25 mm wide or 35 mm wide modules
- With screw-type or push-in terminals
- Front connector for 35 mm modules to be ordered separately; front connector for 25 mm modules included in scope of supply of modules
- Connectable core cross-sections: 0.25 mm<sup>2</sup> to 1.5 mm<sup>2</sup> (AWG 24 to 16)

#### Ordering data

#### Article No.

##### Front connectors

For 35 mm modules; including four potential bridges, cable ties and individual labeling strips, 40-pin

- Screw terminals
- Push-in

**6ES7592-1AM00-0XB0**

**6ES7592-1BM00-0XB0**

**6ES7592-1BM00-0XA0**

For 25 mm modules; including cable ties and individual labeling strips; push-in, 40-pin; Spare part

##### Potential bridges for front connectors

**6ES7592-3AA00-0AA0**

20 units; spare part