

### SM 523 digital input/output modules

#### Overview



- 16 digital inputs and 16 digital outputs
- For flexible adaptation of the controller to the corresponding task
- For subsequent expansion of the system with additional inputs and outputs
- For use in the tightest spaces: particularly economical, without parameters or diagnostic functions

#### Technical specifications

6ES7523-1BL00-0AA0 DI 16x24VDC / DQ 16x24VDC/0.5A BA	
<b>General information</b>	
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal can be configured/integrated as of version	V13 / V13
• STEP 7 can be configured/integrated as of version	V5.5 SP3 / -
Operating mode	
• MSI	Yes
• MSO	Yes
<b>Supply voltage</b>	
Type of supply voltage	DC
Rated value (DC)	24 V
Reverse polarity protection	Yes; through internal protection with 7 A per group
<b>Digital inputs</b>	
Number of digital inputs	16
m/p-reading	p-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Input voltage	
• Rated value, DC	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	11 to 30 V
Input current	
• for signal "1", typ.	2.7 mA

6ES7523-1BL00-0AA0 DI 16x24VDC / DQ 16x24VDC/0.5A BA	
Input delay (for rated value of input voltage)	
• for standard inputs	
- Parameterizable	No
• for interrupt inputs	
- Parameterizable	No
Cable length	
• Cable length, shielded, max.	1 000 m
• Cable length unshielded, max.	600 m
<b>Digital outputs</b>	
Type of digital output	transistor
Number of digital outputs	16
Current-sourcing	Yes
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	12 kΩ
Output voltage	
• Type of output voltage	DC
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs
Parallel switching of 2 outputs	
• for logic links	Yes
• for increased power	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	10 Hz
Aggregate current of the outputs	
• Max. current per channel	0.5 A; see additional description in the manual
• Max. current per group	4 A; see additional description in the manual
• Max. current per module	8 A; see additional description in the manual
Cable length	
• Cable length, shielded, max.	1 000 m
• Cable length unshielded, max.	600 m
<b>Encoder</b>	
Connectable encoders	
• 2-wire sensor	Yes
- Permissible quiescent current (2-wire sensor), max.	1.5 mA
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	No

# SIMATIC S7-1500

## Digital modules

### SM 523 digital input/output modules

#### Technical specifications (continued)

	<b>6ES7523-1BL00-0AA0</b> DI 16x24VDC / DQ 16x24VDC/0.5A BA
<b>Interrupts/diagnostics/ status information</b>	
Substitute values connectable	No
Alarms	
• Diagnostic alarm	No
• Hardware interrupt	No
Diagnostic messages	
• Diagnostics	No
• Monitoring the supply voltage	No
• Wire break	No
• Short circuit	No
Diagnostics indication LED	
• RUN LED	Yes; Green LED
• ERROR LED	Yes; Red LED
• MAINT LED	No
• Monitoring the supply voltage	Yes; Green LED
• Channel status display	Yes; Green LED
• for channel diagnostics	No
• for module diagnostics	No
<b>Galvanic isolation</b>	
Electrical isolation channels	
• between the channels and the backplane bus	Yes
<b>Isolation</b>	
Isolation checked with	707 V DC (type test)
<b>Decentralized operation</b>	
Prioritized startup	Yes
<b>Dimensions</b>	
Width	25 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	280 g

#### Ordering data

#### Article No.

##### SM 523 digital input/output module

Module width 25 mm; without parameters or diagnostic functions; front connector (push-in) included in scope of delivery

16 inputs, 24 V DC, isolated;  
16 outputs, 24 V DC; 0.5 A, isolated

**6ES7523-1BL00-0AA0**

##### Accessories

##### Front connectors

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

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

##### Potential bridges for front connectors

20 units; spare part

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

##### DIN A4 labeling sheets

For 25 mm modules; 10 sheets with 10 labeling strips each for I/O modules; perforated, Al gray

**6ES7592-1AX00-0AA0**

##### U connector

5 units; spare part

**6ES7590-0AA00-0AA0**

##### Universal front door for I/O modules

For 25 mm modules; 5 front doors; with 5 labeling strips (front) and 5 cabling diagrams per front door; spare part

**6ES7528-0AA00-0AA0**