

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7522-1BL10-0AA0

S7 1500 DIGITAL OUTPUT MODULE

Used with the applicable PLC System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

Short designation	DI 16x230VAC BA	DI 16xNAMUR HF	DI 16x24VDC HS
Basic (BA)	Typ. 25 ms (fixed)	---	---
High Speed (HS)	---	---	0.05 ms to 20 ms (configurable)
Integrated counting function (Two channels can optionally be used as counter with 3 kHz)	---	Counting up to 20 kHz	Counting up to 20 kHz

Digital input/output module

Short designation	DI 16x24VDC / DQ 16x24V/0.5A BA
Article number	
High Feature (HF)	---
Basic (BA)	6ES7523-1BL00-0AA0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7523-1BL00-0AA0)
Equipment Manual	
High Feature (HF)	---
Basic (BA)	↓ (https://support.industry.siemens.com/cs/ww/en/view/83501523)
Width	
High Feature (HF)	---
Basic (BA)	25 mm
Number of inputs	16
Electrical isolation between channels	---
Number of potential groups	DI: 1 / DQ: 2
Rated input voltage	24 V DC
Diagnostic interrupt	---
Hardware interrupt	---
Isochronous mode	---
Input delay	
High Feature (HF)	---
Basic (BA)	Typ. 3 ms (fixed)
Integrated counting function (Two channels can optionally be used as counter with 3 kHz)	---

Advantages

The digital input modules provide you with the following advantages:

- High channel density with low variety of parts, therefore less effort for ordering, logistics and storage of spare parts
- Modules in 25 mm size without parameter assignment and diagnostics, therefore simple commissioning
- Front connector in screw-type connection system or in push-in system for 25 mm and 35 mm modules
- Same mechanical design, same handling and same accessories for all modules
- Same pin assignment for wiring, which means that circuit diagrams and wiring plans can be universally used
- Any combination of narrow and wide modules
- Can be used centrally in SIMATIC S7-1500 and in the ET 200MP distributed I/O system
- Cost-effective implementation of simple counting tasks with two counter inputs each of the following modules:
 - DI 16x24V DC HF
 - DI 32x24V DC HF
 - DI 16xNAMUR HF
 - DI 16xUC HF
 - DI 16x24VDC HS

5.6.3 Digital output modules

Digital output modules and digital input/output module (DC)

Short designation	DQ 8x24VDC/2A HF	DQ 32x24VDC/0.5A HF DQ 32x24VDC/ 0.5A BA	DQ 16x24VDC/0.5A HF DQ 16x24VDC/ 0.5A BA	DI 16x24VDC / DQ16x24V/0.5A BA
Article number				
High Feature (HF)	6ES7522-1BF00-0AB0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7522-1BF00-0AB0)	6ES7522-1BL01-0AB0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7522-1BL01-0AB0)	6ES7522-1BH01-0AB0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7522-1BH01-0AB0)	---
Basic (BA)	---	6ES7522-1BL10-0AA0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7522-1BL10-0AA0)	6ES7522-1BH10-0AA0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7522-1BH10-0AA0)	6ES7523-1BL00-0AA0 (https://mall.industry.siemens.com/mall/en/WW/Catalog/Product/6ES7523-1BL00-0AA0)
Equipment Manual				
High Feature (HF)	↓ (https://support.industry.siemens.com/cs/ww/en/view/59193089)	↓ (https://support.industry.siemens.com/cs/ww/en/view/109480716)	↓ (https://support.industry.siemens.com/cs/ww/en/view/109480717)	---

Short designation	DQ 8x24VDC/2A HF	DQ 32x24VDC/0.5A HF DQ 32x24VDC/ 0.5A BA	DQ 16x24VDC/0.5A HF DQ 16x24VDC/ 0.5A BA	DI 16x24VDC / DQ16x24V/0.5A BA
Basic (BA)	---	↓ (https://support.industry.siemens.com/cs/ww/en/view/83-500404)	↓ (https://support.industry.siemens.com/cs/ww/en/view/83-500415)	↓ (https://support.industry.siemens.com/cs/ww/de/view/83-501523)
Width				
High Feature (HF)	35 mm	35 mm	35 mm	---
Basic (BA)	---	25 mm	25 mm	25 mm
Number of outputs	8	32	16	16
Type	Transistor	Transistor	Transistor	Transistor
Electrical isolation between channels	X	Only with BA	Only with BA	X
Number of potential groups	2	4; only with BA	2; only with BA	DQ: 2 / DI: 1
Rated output voltage	24 V DC	24 V DC	24 V DC	24 V DC
Rated output current	2 A	0.5 A	0.5 A	0.5 A
Diagnostic interrupt	X	Only with HF	Only with HF	---
Hardware interrupt	---	---	---	---
Isochronous mode	---	Only with HF	Only with HF	---
Pulse width modulation (PWM)	X	---	---	---
Switching cycle counter	X	---	Only with HF	---

Short designation	DQ 8x24VDC/5A HS
Article number	6ES7522-5BF00-0AB0 (https://mall.industry.siemens.com/mall/en/ww/Catalog/Product?mlfb=6ES7522-5BF00-0AB0&SiepCountryCode=ww)
Equipment Manual	↓ (https://support.industry.siemens.com/cs/en/en/view/109978899)
Width	35 mm
Number of outputs	8
Type	Transistor
Electrical isolation between channels	X
Number of potential groups	2
Rated output voltage	24 V DC
Rated output current	5 A
Diagnostic interrupt	X
Hardware interrupt	---
Isochronous mode	X

C.3 S7-1500 I/O modules

Digital input modules

Digital input module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
DI 16x24VDC HF	6ES7521-1BH00-0AB0	-30 to +60	FS 05	5 000	FS 03
DI 16x24VDC HS	6ES7521-7BH00-0AB0	-30 to +60	FS 01	5 000	FS 01
DI 32x24VDC HF	6ES7521-1BL00-0AB0	-30 to +60	FS 05	5 000	FS 03
DI 64x24VDC SNK/SRC BA	6ES7521-1BP00-0AA0	-30 to +60	FS 01	5 000	FS 01
DI 16x24VDC SRC BA	6ES7521-1BH50-0AA0	0 to +60	FS 01	5 000	FS 01
DI 16x24VDC SRC BA	6ES7521-1BH50-0AA0	-25 to +60	FS 03	5 000	FS 05
DI 16x230VAC BA	6ES7521-1FH00-0AA0	0 to +60	FS 01	2,000	FS 01
DI 16x230VAC BA	6ES7521-1FH00-0AA0	-30 to +60	FS 03	2 000	FS 05
DI 16 x 24...125V UC HF	6ES7521-7EH00-0AB0	0 to +60	FS 01	2,000	FS 01
DI 16 x 24...125V UC HF	6ES7521-7EH00-0AB0	-30 to +60	FS 02	2 000	FS 01
DI 16x24VDC BA (25 mm)	6ES7521-1BH10-0AA0	0 to +60	FS 01	5 000	FS 01
DI 16x24VDC BA (25 mm)	6ES7521-1BH10-0AA0	-30 to +60	FS 03	5 000	FS 04
DI 32x24VDC BA (25 mm)	6ES7521-1BL10-0AA0	0 to +60	FS 01	5 000	FS 01
DI 32x24VDC BA (25 mm)	6ES7521-1BL10-0AA0	-30 to +60	FS 03	5 000	FS 04
DI 16xNamur HF	6ES7521-7TH00-0AB0	-30 to +60	FS 01	5 000	FS 01

Fail-safe digital input modules

Fail-safe digital input module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
F-DI 16X24VDC	6ES7526-1BH00-0AB0	0 to +60	FS 01	5 000	FS 01

Digital output modules

Digital output module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
DQ 16x24VDC/0.5A ST	6ES7522-1BH01-0AB0	-30 to +60	FS 03	5 000	FS 01
DQ 32x24VDC/0.5A ST	6ES7522-1BL01-0AB0	-30 to +60	FS 03	5 000	FS 01
DQ 64x24VDC/0.3A BA	6ES7522-1BP00-0AA0	-30 to +60	FS 01	5 000	FS 01
DQ 64x24VDC/0.3A SNK BA	6ES7522-1BP50-0AA0	-30 to +60	FS 01	5 000	FS 01
DQ 8x24VDC/2A HF	6ES7522-1BF00-0AB0	-30 to +60	FS 04	5 000	FS 06
DQ 8x24VDC/5A HS	6ES7522-5BF00-0AB0	-30 to +60	FS 01	5 000	FS 01
DQ 8x230VAC/2A ST (Triac)	6ES7522-5FF00-0AB0	0 to +60	FS 01	2,000	FS 01
DQ 8x230VAC/2A ST (Triac)	6ES7522-5FF00-0AB0	-25 to +60	FS 03	2 000	FS 01
DQ 16x230VAC/1A ST (Triac)	6ES7522-5FH00-0AB0	0 to +60	FS 01	2,000	FS 01
DQ 16x230VAC/1A ST (Triac)	6ES7522-5FH00-0AB0	-25 to +60	FS 02	2 000	FS 01
DQ 8x230VAC/5A ST (Relay)	6ES7522-5HF00-0AB0	-30 to +60	FS 03	2,000	FS 01
DQ 16x230VAC/2A ST (Relay)	6ES7522-5HH00-0AB0	-25 to +60	FS 02	2,000	FS 01
DQ 16x24...48VUC/125V-DC/0.5A ST	6ES7522-5EH00-0AB0	0 to +60	FS 01	2,000	FS 01
DQ 16x24...48VUC/125V-DC/0.5A ST	6ES7522-5EH00-0AB0	-25 to +60	FS 03	2 000	FS 01
DQ 16x24VDC/0.5A BA (25 mm)	6ES7522-1BH10-0AA0	0 to +60	FS 01	5 000	FS 01
DQ 16x24VDC/0.5A BA (25 mm)	6ES7522-1BH10-0AA0	-30 to +60	FS 03	5 000	FS 01
DQ 32x24VDC/0.5A BA (25 mm)	6ES7522-1BL10-0AA0	0 to +60	FS 01	5 000	FS 01
DQ 32x24VDC/0.5A BA (25 mm)	6ES7522-1BL10-0AA0	-30 to +60	FS 03	5 000	FS 01

Fail-safe digital output modules

Fail-safe digital output module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
F-DQ 8x24VDC/2A PPM	6ES7526-2BF00-0AB0	0 to +60	FS 01	5 000	FS 01

Digital input/output modules

Digital input/output module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
DI 16x24VDC / DQ 16x24VDC/0.5A BA	6ES7523-1BL00-0AA0	0 to +60	FS 01	5 000	FS 01
DI 16x24VDC / DQ 16x24VDC/0.5A BA	6ES7523-1BL00-0AA0	-30 to +60	FS 03	5 000	FS 01
DI 32x24VDC / DQ 32x24VDC/0.3A SNK BA	6ES7523-1BP50-0AA0	-30 to +60	FS 01	5 000	FS 01

Analog input modules

Analog input module	Article number	Ambient temperature		Installation altitude	
		Temperature range [°C]	As of version	Max. altitude [m]	As of version
AI 8xU/I/RTD/TC ST	6ES7531-7KF00-0AB0	-25 to +60	FS 06	5 000	FS 08
AI 8xU/I/RTD BA	6ES7531-7QF00-0AB0	-30 to +60	FS 03	5 000	FS 05
AI 16xI BA	6ES7531-7MH00-0AB0	-30 to +60	FS 01	5 000	FS 01
AI 16xU BA	6ES7531-7LH00-0AB0	-30 to +60	FS 01	5 000	FS 01
AI 8xU/I HS	6ES7531-7NF10-0AB0	-25 to +60	FS 02	5 000	FS 01
AI 8xU/I HF	6ES7531-7NF00-0AB0	-30 to +60	FS 02	2,000	FS 01
AI 8xU/R/RTD/TC HF	6ES7531-7PF00-0AB0	-30 to +60	FS 02	2,000	FS 01
AI 4xU/I/RTD/TC ST	6ES7531-7QD00-0AB0	0 to +60	FS 01	5 000	FS 01
AI 4xU/I/RTD/TC ST	6ES7531-7QD00-0AB0	-25 to +60	FS 02	5 000	FS 01
AI 8xHART HF	6ES7531-7TF00-0AB0	-30 to +60	FS 01	5 000	FS 01
AI 24xCVM HF	6ES7531-7LK00-0AB0	-30 to +60	FS 01	4 000	FS 01