SIEMENS

Data sheet

6ES7522-1BL01-0AB0



SIMATIC S7-1500, digital output module DQ 32x24 V DC/0.5 A HF; 32 channels in groups of 8; 4 A per group; Single-channel diagnostics; Substitute value: Front connector (screw terminals or push-in) to be ordered separately

Product type designation DQ 32x24VDC/0.5A HF HW functional status From FS02 Firmware version V1.1.0 Product function Vision FS02 • Isochronous mode Yes; I&M0 to I&M3 • Isochronous mode Yes • Prioritized startup Yes Engineering with V13 SP1 / - • STEP 7 TA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Ves • DQ Yes • Integrated operating cycle counter Yes Supply voltage Rated value (DC) permissible range, upper limit (DC) 26 V permissible range, upper limit (DC) 28 V PReverse polarity protection Yes; through internal protection with 7 A per group hput current Current consumption, max. 60 mA Curper voltage Rated value (DC) 24 V<	General information	
Firmware version V1.1.0 Product function • • I&M data Yes; I&M0 to I&M3 • Isochronous mode Yes • Prioritized startup Yes Engineering with • • STEP 7 TIA Portal configurable/integrated from version V1.3 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode • • DQ Yes • No No • Carn control (switching at comparison values) No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Zes Rated value (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity pro	Product type designation	DQ 32x24VDC/0.5A HF
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• I&M data Yes; I&M0 to I&M3 • Isochronous mode Yes • Prioritized startup Yes Engineering with Yes • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Carn control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Suppty voltage Rated value (DC) Permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. Output voltage Rated value (DC) Rated value (DC) 24 V Power loss 1.1 W Power loss 55 W	Firmware version	V1.1.0
• Isochronous mode Yes • Prioritized startup Yes Engineering with • • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode V2.3 / - • DQ Yes • DQ with energy-saving function No • PWWM No • Cam control (switching at comparison values) No • Oversampling No • Integrated operating cycle counter Yes Supply voltage Z4 V Rated value (DC) 24.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes, through internal protection with 7 A per group Input current 60 mA Output voltage 24.V Power loss 1.1 W Power loss 5.5 W Power loss, typ. 3.5 W Poingtale from the backplane bus 1.1 W	Product function	
• Prioritized startup Yes Engineering with V13 SP1 / - • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V2.3 / - • DPATE from GSD version/GSD revision V2.3 / - • Operating mode • • DQ Yes • DQ with energy-saving function No • DQ versampling No • Oversampling No • Oversampling No • Integrated operating cycle counter Yes Supply voltage 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage 24 V Power available from the backplane bus 1.1 W Power loss 1.1 W	• I&M data	Yes; I&M0 to I&M3
Engineering with STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFINET from GSD version/GSD revision V2.3 / - Operating mode • DQ Yes • DQ No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Integrated operating cycle counter Permissible range, uower limit (DC) 24 V permissible range, uower limit (DC) 26.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Input current Current consumption, max. 60 mA Output v	 Isochronous mode 	Yes
• STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode V2.3 / - • DQ Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Rated value (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Preverse polarity protection Yes, through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage 24 V Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor	Prioritized startup	Yes
version V1.0 / V5.1 • PROFIBUS from GSD version/GSD revision V2.3 / - Operating mode V2.3 / - • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Z4 V Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage Z4 V Rated value (DC) 24 V Power loss 1.1 W Power loss 9.0 mA Output voltage 24 V Rated value (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 0.0 mA Output voltage 24 V Power loss 1.1 W	Engineering with	
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Operating mode Yes DQ Yes DQ with energy-saving function No PWM No Cam control (switching at comparison values) No Oversampling No MSO Yes Integrated operating cycle counter Yes Supply voltage Permissible range, lower limit (DC) permissible range, lower limit (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Cutput voltage 1.1 W Power loss 1.1 W Power loss 9.5 W Power loss, typ. 3.5 W Digital outputs Transistor	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
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• PWM No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. Current consumption, max. 60 mA Output voltage 24 V Power Power toss 1.1 W Power loss 1.1 W Power loss 3.5 W Digital outputs Transistor	• DQ	Yes
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 Oversampling MSO Yes Integrated operating cycle counter Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss Power loss, typ. 3.5 W Digital output Transistor 	• PWM	No
• MSO Yes • Integrated operating cycle counter Yes Supply voltage Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Output voltage 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss 3.5 W Pigital outputs Transistor	 Cam control (switching at comparison values) 	No
Integrated operating cycle counter Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage Rated value (DC) 24 V Power Power Power v Power loss 1.1 W Power loss Power loss, typ. 3.5 W Digital output Transistor	Oversampling	No
Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. Current consumption, max. 60 mA Output voltage Rated value (DC) Rated value (DC) 24 V Power 1.1 W Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor	• MSO	Yes
Rated value (DC) 24 V permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. Output voltage 60 mA Rated value (DC) 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor	 Integrated operating cycle counter 	Yes
permissible range, lower limit (DC) 20.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. Current consumption, max. 60 mA Output voltage Rated value (DC) Power 24 V Power available from the backplane bus 1.1 W Power loss 9.5 W Power loss, typ. 3.5 W Digital outputs Transistor	Supply voltage	
permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 1.1 W Power loss 90 wer loss Power loss 3.5 W Digital outputs Transistor	Rated value (DC)	24 V
Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 21 V Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor	permissible range, lower limit (DC)	20.4 V
Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 9000000000000000000000000000000000000	permissible range, upper limit (DC)	28.8 V
Current consumption, max. 60 mA Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss Power loss, typ. 3.5 W Digital outputs Type of digital output Transistor	Reverse polarity protection	Yes; through internal protection with 7 A per group
Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor	Input current	
Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss 3.5 W Digital outputs Transistor	Current consumption, max.	60 mA
Power Power available from the backplane bus 1.1 W Power loss 9000000000000000000000000000000000000	Output voltage	
Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor	Rated value (DC)	24 V
Power loss Power loss, typ. 3.5 W Digital outputs Type of digital output Transistor	Power	
Power loss, typ. 3.5 W Digital outputs Transistor	Power available from the backplane bus	1.1 W
Digital outputs Transistor	Power loss	
Type of digital output Transistor	Power loss, typ.	3.5 W
	Digital outputs	
Number of digital outputs 32	Type of digital output	Transistor
	Number of digital outputs	32

Current-sourcing	Yes
Digital outputs, parameterizable	_ Yes
Short-circuit protection	Yes; Clocked electronically
Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	165
with resistive load, max.	0.5 A
 on lamp load, max. 	5 W
Load resistance range	5 77
lower limit	48 Ω
upper limit	12 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
for signal "1" rated value	0.5 A
 for signal "1" permissible range, max. 	0.5 A
 for signal "0" residual current, max. 	0.5 mA
Output delay with resistive load	0.5 MA
• "0" to "1", max.	100 με
• "1" to "0", max.	100 µs
	500 µs
Parallel switching of two outputs	Vaa
for logic links for uproting	Yes No
• for uprating	
for redundant control of a load	Yes
Switching frequency	100 H-
with resistive load, max.	100 Hz
with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13
on lamp load, max.	10 Hz
Total current of the outputs	
Current per channel, max.	0.5 A; see additional description in the manual
Current per group, max.	4 A; see additional description in the manual
Current per module, max.	16 A; see additional description in the manual
Cable length	4 000
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Execution and activation time (TCO), min.	70 µs
Bus cycle time (TDP), min.	250 µs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	Yes
Maintenance interrupt	Yes
Diagnoses	
 Monitoring the supply voltage 	Yes
Wire-break	Yes
Short-circuit	Yes
Group error	Yes
Diagnostics indication LED	
RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
MAINT LED	Yes; Yellow LED
 Monitoring of the supply voltage (PWR-LED) 	Yes; green LED
Channel status display	Yes; green LED
for channel diagnostics	Yes; red LED
for module diagnostics	Yes; red LED
0	

Potential separation		
Potential separation channels		
between the channels	No	
 between the channels, in groups of 	8	
 between the channels and backplane bus 	Yes	
Isolation		
Isolation tested with	707 V DC (type test)	
Standards, approvals, certificates		
Suitable for safety functions	No	
Suitable for safety-related tripping of standard modules	Yes; From FS02	
Highest safety class achievable for safety-related tripping of s	standard modules	
 Performance level according to ISO 13849-1 	PL d	
 Category according to ISO 13849-1 	Cat. 3	
 SILCL according to IEC 62061 	SILCL 2	
Ambient conditions		
Ambient temperature during operation		
 horizontal installation, min. 	-30 °C; From FS03	
 horizontal installation, max. 	60 °C	
 vertical installation, min. 	-30 °C; From FS03	
 vertical installation, max. 	40 °C	
Altitude during operation relating to sea level		
 Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual	
Dimensions		
Width	35 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	280 g	
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