SIEMENS

Data sheet

6ES7522-1BL10-0AA0



SIMATIC S7-1500, digital output module, DQ32x24 V DC/0.5A BA, 32 channels in groups of 8, 4 A per group; the module supports the safety-oriented shutdown of load groups up to SILCL2 acc. to EN 62061:2005 + A2:2015, and Category 3 / PL d according to EN ISO 13849-1:2015. delivery incl. front connector push-in

Product type designation DQ 32x24VDC/0.5A BA HV functional status From FS01 Firmware version V1.0.0 • FW update possible Yes Product function Yes • I&M data Yes; I&M0 to I&M3 • Is Schronous mode No • Prioritized startup Yes Engineering with * • STEP 7 TIA Portal configurable/integrated from version V1.3 / V13 • STEP 7 Tonfigurable/integrated from version V1.0 / V5.1 • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • DQ with energy-saving function No • DQ with energy-saving function No • WM No • Oversampling No • NSO Yes Supply voltage Rated value (DC) permissible range, upper limit (DC) 24 V permitsuity protection Yes, through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage 7 Power loss, typ. 3.8 W Objend outputs Transistor	General information	
Firmware version V1.0.0 • FW update possible Yes Product function	Product type designation	DQ 32x24VDC/0.5A BA
• FW update possible Yes Product function - • I&M data Yes, I&M0 to I&M3 • Isochronous mode No • Prioritized startup Yes Engineering with - • STEP 7 TIA Portal configurable/integrated from version V13 / V13 • STEP 7 TIA Portal configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Ves • DQ Yes • DQ with energy-saving function No • W/M No • Oversampling No • MSO Yes Supply voltage - Rated value (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 - Current consumption, max. 60 mA Output voltage - Rated value (DC) 24 V Power loss 1.15 W Power loss 1.15 W Power loss 3.8 W Digital outputs - Type of digital output Transistor	HW functional status	From FS01
Product function I&M data Yes; I&M0 to I&M3 Isochronous mode Prioritized startup STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version V5.5 SP3 / - PROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFINET from GSD version/GSD revision V2.3 / - Operating mode DQ Yes DQ with energy-saving function No Oversampling No Oversampling No Oversampling No Supply voltage 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 Rated value (DC) 24 V Power Power loss 1.15 W Power loss Power loss, typ. 3.8 W Digital outputs Transistor	Firmware version	V1.0.0
• I&M data Yes; I&M0 to I&M3 • Isochronous mode No • Prioritized startup Yes Engineering with	FW update possible	Yes
• Isochronous mode No • Prioritized startup Yes Engineering with V13 / V13 • STEP 7 TIA Portal configurable/integrated from version V13 / V13 • STEP 7 configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode V2.3 / - • DQ Yes • Supply voltage Internal protection with 7 A per group Pervisibile range, upper 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 Input current Current consumption,	Product function	
• Prioritized startup Yes Engineering with . • STEP 7 TIA Portal configurable/integrated from version V13 / V13 • STEP 7 configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/CSD revision V1.0 / V5.1 • PROFINET from GSD version/CSD revision V2.3 / - Operating mode Ves • DQ Yes • DQ Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • Oversampling No • MSO Yes Supply voltage	• I&M data	Yes; I&M0 to I&M3
Engineering with STEP 7 TIA Portal configurable/integrated from version V13 / V13 • STEP 7 configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Version • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Oversampling No • MSO Yes Supply voltage Rated value (DC) 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. Output voltage 24 V Power available from the backplane bus 1.15 W Power loss, typ. 3.8 W Digital outputs Transistor	 Isochronous mode 	No
• STEP 7 TIA Portal configurable/integrated from version V13 / V13 • STEP 7 configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Ves • DQ Yes • DQ with energy-saving function No • PWM No • Oversampling No • MSO Yes Supply voltage Z4 V Permissible range, lower limit (DC) 19.2 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. Output voltage Eated value (DC) Rated value (DC) 24 V Power available from the backplane bus 1.15 W Power loss, typ. 3.8 W Power loss, typ. 3.8 W Digital outputs Transistor	Prioritized startup	Yes
version V5.5 SP3 / - • STEP 7 configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode • • DQ Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • Oversampling No • MSO Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) 19.2 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 Rated value (DC) 24 V Power loss 1.15 W Power loss Power loss, typ. 3.8 W Digital outputs Power loss, typ. 3.8 W Digital outputs Poyer loss, typ. 3.8 W Digital outputs	Engineering with	
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /- Operating mode DQ Ves DQ with energy-saving function PWM No Oversampling No Supply voltage Reverse polarity protection Pose vissible range, upper limit (DC) 24 V Power Output voltage Rated value (DC) 24 V Power over Power loss Power loss Power loss Power loss Power loss, typ. Oligital output Transistor		V13 / V13
• PROFINET from GSD version/GSD revision V2.3 / - Operating mode • DQ • DQ Yes • DQ with energy-saving function No • PWM No • Oversampling No • MSO Yes Supply voltage Yes Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 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 24 V Power available from the backplane bus 1.15 W Power loss 1.15 W Power loss 3.8 W Digital output Transistor	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode Yes • DQ Yes • DQ with energy-saving function No • PWM No • Oversampling No • MSO Yes Supply voltage 24 V Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 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 Output voltage 24 V Power 24 V Power loss 24 V Power loss 3.8 W Digital outputs Transistor	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
DQ Yes DQ with energy-saving function No DQ with energy-saving function No PWM No Oversampling No Oversampling MSO Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 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 Rated value (DC) 24 V Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 3.8 W Digital output Transistor	 PROFINET from GSD version/GSD revision 	V2.3 / -
• DQ with energy-saving functionNo• PWMNo• OversamplingNo• MSOYesSupply voltageRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput current60 mAOutput voltage24 VPower24 VPower loss1.15 WPower loss, typ.3.8 WDigital outputTransistor	Operating mode	
• PWMNo• OversamplingNo• MSOYesSupply voltageRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.60 mAOutput voltagePower24 VPower available from the backplane bus1.15 WPower loss, typ.3.8 WDigital outputsTransistor	• DQ	Yes
• OversamplingNo• MSOYesSupply voltageRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.Output voltage60 mAOutput voltage24 VPower24 VPower or available from the backplane bus1.15 WPower loss, typ.3.8 WDigital outputsTransistor	 DQ with energy-saving function 	No
• MSO Yes Supply voltage Particular State Value (DC) Permissible range, lower limit (DC) 19.2 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 Current consumption, max. 60 mA Output voltage 24 V Power 24 V Power ross 1.15 W Power loss, typ. 3.8 W Digital outputs Transistor	• PWM	No
Supply voltageRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.Current consumption, max.60 mAOutput voltageRated value (DC)Power24 VPower available from the backplane bus1.15 WPower loss3.8 WPower loss, typ.3.8 WDigital outputsTransistor	Oversampling	No
Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 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 1.15 W Power loss 3.8 W Digital outputs Transistor	• MSO	Yes
permissible range, lower limit (DC) 19.2 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 1.15 W Power loss 3.8 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 24 V Power available from the backplane bus 1.15 W Power loss 3.8 W Digital outputs Transistor	Rated value (DC)	24 V
Reverse polarity protection Yes; through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage 60 mA Rated value (DC) 24 V Power Power Power available from the backplane bus 1.15 W Power loss 90 mer loss Power loss, typ. 3.8 W Digital outputs Transistor		
Input current Current consumption, max. 60 mA Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 3.8 W Digital outputs Type of digital output Transistor		
Current consumption, max. 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 24 V Power available from the backplane bus 1.15 W Power loss 1.15 W Power loss, typ. 3.8 W Digital outputs Transistor	Reverse polarity protection	Yes; through internal protection with 7 A per group
Output voltage Rated value (DC) 24 V Power 1.15 W Power loss 1.15 W Power loss, typ. 3.8 W Digital outputs Transistor	Input current	
Rated value (DC) 24 V Power Power available from the backplane bus 1.15 W Power loss 1.15 W Power loss 3.8 W Digital outputs Transistor	Current consumption, max.	60 mA
Power Power available from the backplane bus 1.15 W Power loss 3.8 W Power loss, typ. 3.8 W Digital outputs Transistor	Output voltage	
Power available from the backplane bus 1.15 W Power loss 3.8 W Digital outputs Transistor	Rated value (DC)	24 V
Power loss Power loss, typ. 3.8 W Digital outputs Type of digital output Transistor	Power	
Power loss, typ. 3.8 W Digital outputs Transistor	Power available from the backplane bus	1.15 W
Digital outputs Transistor	Power loss	
Type of digital output Transistor	Power loss, typ.	3.8 W
	Digital outputs	
	Type of digital output	Transistor
	Number of digital outputs	32

Current coursing	Vee
Current-sourcing	Yes
Digital outputs, parameterizable	No
Short-circuit protection	Yes
Response threshold, typ.	1A
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	
• 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" to "1", max.	100 µs
• "1" to "0", max.	500 µs
Parallel switching of two outputs	
for logic links	Yes
for uprating	No
for redundant control of a load	Yes
Switching frequency	
 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	
 shielded, max. 	1 000 m
 unshielded, max. 	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
 Diagnostic alarm 	No
Maintenance interrupt	No
Diagnoses	
 Monitoring the supply voltage 	No
Wire-break	No
Short-circuit	No
Group error	No
Diagnostics indication LED	
RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
 Monitoring of the supply voltage (PWR-LED) 	Yes; green LED
 Channel status display 	Yes; green LED
 for channel diagnostics 	No
for module diagnostics	No
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	707 V DC (tura tast)	
	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 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 FS04	
 horizontal installation, max. 	60 °C	
 vertical installation, min. 	-30 °C; from FS04	
 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	25 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	280 g	
Other		
Note:	Supplied incl. 40-pole push-in front connectors	
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