Data sheet

6ES7522-1BF00-0AB0

Siemens EcoTech



SIMATIC S7-1500, digital output module DQ 8x24 V DC/2A HF; 8 channels in groups of 8; 8 A per group; diagnostics; substitute value: 2 channels can be used for pulse width modulation(PWM) . the module supports the safety-oriented shutdown of load groups up to SIL2 according to EN IEC 62061:2021 and Category 3 / PL d according to EN ISO 13849-1:2015. front connector (screw terminals or push-in) to be ordered separately

Figure similar

Product type designation	r igure siinna	
HW functional status From FS03 Firmware version V2.2.0 FW update possible Yes Product function I &M data Yes; I&M0 to I&M3 I sochronous mode No Prioritized startup Yes Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Tocnfigurable/integrated from version PROFIBUS from GSD version/GSD revision V1.0 / V5.5 SP3 / PROFIBUS from GSD version/GSD revision V2.3 / - Operating mode DQ Yes OD with energy-saving function Yes; with an application PWM Yes Gam control (switching at comparison values) No Oversampling No Oversampling No Integrated operating cycle counter 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 10 A per group Imput current Current consumption, max. 40 mA; 20 mA per group, no output is activated. Output voltage / header Rated value (DC) 24 V Power Power variable from the backplane bus 0.9 W	General information	
Firmware version Fiv update possible Product function I & M data I sochronous mode Frioritized startup Fengineering with STEP 7 TIA Portal configurable/integrated from version V5.5 SP3 /- V5.5 SP3 /- V6.5 SP3 /- V7.5 V9.5 V9.5 V9.5 V9.5 V9.5 V9.5 V9.5 V9	Product type designation	DQ 8x24VDC/2A HF
FW update possible Product function I&M data Isochronous mode Prioritized startup Yes Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision DQ Yes DQ Yes DQ With energy-saving function PWM Cam control (switching at comparison values) MSO Wersampling MSO Integrated operating cycle counter Supply voltage Rated value (DC) Permissible range, lower limit (DC) Powers Rated value (DC) Permissible range, upper limit (DC) Powers Current consumption, max 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) Power Rated value (DC) Permissible range, lower limit (DC) Permis	HW functional status	From FS03
Product function • I&M data • Isochronous mode • Prioritized startup Engineering with • 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 • PROFIBUS from GSD version/GSD revision • PROFIBUS from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PQ • DQ • DQ • Yes • DQ with energy-saving function • PVMM • Cam control (switching at comparison values) • Oversampling • MSO • Oversampling • MSO • Integrated operating cycle counter Supply voltage Rated value (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • Permissible range, upper limit (DC) • Zes, through internal protection with 10 A per group Input current Current consumption, max. • 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) • 24 V Power Rated value (DC) • 24 V Power Power available from the backplane bus • 0.9 W	Firmware version	V2.2.0
I I&M data Isochronous mode Isochronous mode Prioritized startup Pes Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 Tonfigurable/integrated from version STEP 7 Tonfigurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD ve	FW update possible	Yes
Isochronous mode Prioritized startup Prioritized startup Prioritized startup Engineering with Institute of the American Startup Institute of the America	Product function	
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Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version PROFINET from GSD version/GSD revision PROFINET from GSD version PROFINET from GSD	 Isochronous mode 	No
STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version PROFINET from GSD version/GSD revision PROFINET	Prioritized startup	Yes
STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 /- Operating mode DQ Yes DQ with energy-saving function Yes; with an application PWM Cam control (switching at comparison values) Oversampling No MSO Integrated operating cycle counter Yes Supply voltage Rated 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 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) Power Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	Engineering with	
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PROFINET from GSD version/GSD revision Operating mode DQ Yes DQ with energy-saving function Yes; with an application PWM Yes Cam control (switching at comparison values) Oversampling No MSO Yes Integrated operating cycle counter Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Yes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. Output voltage / header Rated value (DC) Power Power available from the backplane bus O.9 W	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode • DQ Yes • DQ with energy-saving function Yes; with an application • PWM Yes • 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) 19.2 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 10 A per group input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
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PWM Cam control (switching at comparison values) Coversampling MSO MSO Integrated operating cycle counter Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Reverse polarity protection Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power Power available from the backplane bus No	• DQ	Yes
Cam control (switching at comparison values) Oversampling No MSO Integrated operating cycle counter Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Seas V Reverse polarity protection Yes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) Power Power available from the backplane bus 0.9 W	 DQ with energy-saving function 	Yes; with an application
● Oversampling ● MSO Integrated operating cycle counter Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) Power Power available from the backplane bus No Yes	• PWM	Yes
MSO Integrated operating cycle counter Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Pes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) Power Power available from the backplane bus 0.9 W	 Cam control (switching at comparison values) 	No
● Integrated operating cycle counter Supply voltage 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 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	 Oversampling 	No
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. Output voltage / header Rated value (DC) Power Power available from the backplane bus 24 V 24 V 28.8 V Yes; through internal protection with 10 A per group In put current 40 mA; 20 mA per group, no output is activated. 24 V Power O.9 W	• MSO	Yes
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	 Integrated operating cycle counter 	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Yes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	Supply voltage	
permissible range, upper limit (DC) Reverse polarity protection Yes; through internal protection with 10 A per group Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	Rated value (DC)	24 V
Reverse polarity protection Input current Current consumption, max. Output voltage / header Rated value (DC) Power Power available from the backplane bus Yes; through internal protection with 10 A per group 40 mA; 20 mA per group, no output is activated. 24 V Power 0.9 W	permissible range, lower limit (DC)	19.2 V
Input current Current consumption, max. 40 mA; 20 mA per group, no output is activated. output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	permissible range, upper limit (DC)	28.8 V
Current consumption, max. output voltage / header Rated value (DC) Power Power available from the backplane bus 40 mA; 20 mA per group, no output is activated. 24 V Power 0.9 W	Reverse polarity protection	Yes; through internal protection with 10 A per group
output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	Input current	
Rated value (DC) 24 V Power Power available from the backplane bus 0.9 W	Current consumption, max.	40 mA; 20 mA per group, no output is activated.
Power Power available from the backplane bus 0.9 W	output voltage / header	
Power available from the backplane bus 0.9 W	Rated value (DC)	24 V
	Power	
Power loss	Power available from the backplane bus	0.9 W
Power loss	Power loss	
Power loss, typ. 5.6 W; 6.8 W for PWM operation	Power loss, typ.	5.6 W; 6.8 W for PWM operation
Digital outputs	Digital outputs	

Type of digital output	Transistor
Type of digital output	Transistor 8
Number of digital outputs Current-sourcing	Yes
·	Yes
Digital outputs, parameterizable Short-circuit protection	
	Yes 3 A
Response threshold, typ. Limitation of industries chutdown voltage to	-17 V
Limitation of inductive shutdown voltage to	Yes
Controlling a digital input	Tes
Digital output functions, parameterizable • Freely usable digital output	Yes
PWM output	Yes; FS02 and FW V2.1.0 or higher
— Number, max.	2
Cycle duration, parameterizable	Yes; 2 100 ms continuous
— ON period, min.	0 %
— ON period, max.	100 %
Resolution of the duty cycle	0.1 %
Minimum pulse duration	300 μs
Switching capacity of the outputs	300 μs
on lamp load, max.	10 W
	TO VV
Load resistance range • lower limit	12 Ω
upper limit Output voltage	4 kΩ
Output voltage • for signal "1", min.	L+ (-0.8 V)
Output current	L+ (-0.0 V)
•	2 A
for signal "1" rated valuefor signal "1" permissible range, max.	2.4 A; note derating specification for PWM operation
for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	U.J IIIA
• "0" to "1", typ.	80 µs
• "0" to "1", max.	100 μs
• "1" to "0", typ.	300 μs
• "1" to "0", max.	500 μs
Parallel switching of two outputs	- 300 μ3
• for logic links	Yes
• for uprating	No
for redundant control of a load	Yes
Switching frequency	165
with resistive load, max.	100 Hz; With PWM operation: 500 Hz
with resistive load, max. with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13; max. 500 Hz with PWM operation only with external circuit; see additional description in the manual
 on lamp load, max. 	10 Hz
Total current of the outputs	
Current per channel, max.	2 A; see additional description in the manual
Current per group, max.	8 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
nterrupts/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	No
Short-circuit	Yes
Group error	Yes
- Oloup Citol	160
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
Potential separation	
Potential separation channels	
 between the channels 	No
 between the channels, in groups of 	4
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 FS03
Ecological footprint	
environmental product declaration	Yes
Global warming potential	
— global warming potential, (total) [CO2 eq]	43.8 kg
 — global warming potential, (during production) [CO2 eq] 	9.5 kg
— global warming potential, (during operation) [CO2 eq]	34.5 kg
— global warming potential, (after end of life cycle)[CO2 eq]	-0.231 kg
Highest safety class achievable for safety-related tripping of standard	ard modules
 Performance level according to ISO 13849-1 	PL d
 Category according to ISO 13849-1 	Cat. 3
• SIL acc. to IEC 62061	SIL 2
 remark on safety-oriented shutdown 	https://support.industry.siemens.com/cs/de/en/view/39198632
product functions / security / header	
signed firmware update	No
data integrity	No
Ambient conditions	
Ambient temperature during operation	
horizontal installation, min.	-30 °C; From FS06
 horizontal installation, max. 	60 °C
• vertical installation, min.	-30 °C; From FS06
 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.	240 g
- O - 9 mpp	

last modified: 10/9/2024 🖸