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Data sheet 6ES7521-1BL00-0AB0

SIMATIC S7-1500, DIGITAL INPUT MODULE DI32 X DC24V, 32 CHANNELS IN GROUPS OF 16; INPUT DELAY 0.05... 20MS; INPUT TYPE 3 (IEC 61131); DIAGNOSIS, PROCESSALARMS



Figure similar

General information	
Product type designation	DI 32x24 V DC HF
HW functional status	FS01
Firmware version	V2.1.0
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal configurable/integrated as of version	V13 SP1 / -
• STEP 7 configurable/integrated as of version	V5.5 SP3 / -
• PROFIBUS as of GSD version/GSD revision	V1.0 / V5.1
• PROFINET as of GSD version/GSD revision	V2.3 / -
Operating mode	
• DI	Yes
• Counter	Yes
• MSI	Yes
Supply voltage	

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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
Input current	
Current consumption, max.	40 mA; 20 mA per group with 24 V DC supply
Power	
Power available from the backplane bus	1.1 W
Power loss	
Power loss, typ.	4.2 W
Digital inputs	
Number of digital inputs	32
Digital inputs, parameterizable	Yes
m/p-reading	p-reading
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Digital input functions, parameterizable	
• Gate start/stop	Yes
• Freely usable digital input	Yes
• Counter	
— Number, max.	2
— Counting frequency, max.	1 kHz
— Counting width	32 bit
— Counting direction up/down	Up
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+11 to +30V
Input current	
• for signal "1", typ.	2.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.05 / 0.1 / 0.4 / 1.6 / 3.2 / 12.8 / 20 ms
— at "0" to "1", min.	0.05 ms
— at "0" to "1", max.	20 ms
— at "1" to "0", min.	0.05 ms
— at "1" to "0", max.	20 ms
for interrupt inputs	
— parameterizable	Yes
for counter/technological functions	

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— parameterizable	Yes
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Filtering and processing time (TCI), min.	80 µs; At 50 µs filter time
Bus cycle time (TDP), min.	250 µs
Interrupts/diagnostics/status information	
Diagnostics	Yes
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; to I < 350 µA
• Short-circuit	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	Yes; Red LED
• for module diagnostics	Yes; Red LED
Potential separation	
Potential separation channels	
• between the channels	Yes
• between the channels, in groups of	16
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
Isolation	
Isolation tested with	707 V DC (type test)
Ambient conditions	

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Ambient temperature during operation	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C

Decentralized operation	
Prioritized startup	Yes

Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm

Weights	
Weight, approx.	260 g

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