6ES7521-1BL10-0AA0

Data sheet



SIMATIC S7-1500 Digital input module, DI $32x24\ V$ DC BA, $32\ channels$ in groups of 16, Input delay typ. $3.2\ ms$, Input type 3 (IEC 61131); Delivery incl. front connector Push-in

Product type designation HW functional status From FS01 From FS01 From FS01 V1.0.0 • FW update possible Product function • 18M data • Isochronous mode • Prioritized startup Penglineering with • STEP 7 TIAP Portal confligurable/integrated from • STEP 7 TIAP Portal confligurable/integrated from • STEP 7 configurable/integrated from version • STEP 7 configurable/integrated from version • PROFIBUS from GSD version/GSD revision • PROFIBUS from GSD	General information	
Firmware version Fiv update possible Fives Froduct function I &M data I & 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 FROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from SSD version/GSD revision V2.3 /- Operating mode I DI SUMPLY voltage Rated value (DC) permissible range, lower limit (DC) Power Versions Power available from the backplane bus Power voltage Power voltage Power loss Power loss, typ. Digital inputs No Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input otage Rated value (DC) For signal "0" For signal "1" For signal "2" For sig	Product type designation	DI 32x24VDC BA
Product function RM data	HW functional status	From FS01
Product function • 18M data • 18M data • 18M on • Prioritized startup Engineering with • STEP 7 TIA Portal configurable/integrated from version • PROFIBUS from GSD version/GSD revision • PROFIBUS from GSD version/GSD revision • DI • Counter • MSI Supply voltage Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • permissible range, upper limit (DC) • Power loss Power loss Number of digital inputs Number of digital inputs Digital inputs, parameterizable No • Rated value (DC) • For signal "1" • Rated value (DC) • For signal "1" •	Firmware version	V1.0.0
I I I I I I I I I I I I I I I I I I I	 FW update possible 	Yes
Isochronous mode Prioritized startup Yes Ingineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version V5.5 SP3 /- PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode DI Yes Counter No Supply voltage Rated value (DC) permissible range, lower limit (DC) 28.8 V Power available from the backplane bus Digital inputs Number of lagital inputs No Preading Input characteristic curve in accordance with IEC 61131, type 3 Input voltage ■ Rated value (DC) ■ Ago to +5 V ■ for signal "0" ■ Jo to +5 V ■ for signal "1", typ. Input delay (for rated value of input voltage)		
Prioritized startup Prioritized startup 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 Press Operating mode Ounter No MSI Supply voltage Rated value (DC) Permissible range, lower limit (DC) Power Power available from the backplane bus Power loss, typ. Power loss, typ. Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable No Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Pate d value (DC) For signal "0" For signal "0" For signal "1" For signal "1", typ. Input delay (for rated value of input voltage)	• I&M data	Yes; I&M0 to I&M3
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 ProfineTrom GSD revision Pro	 Isochronous mode 	No
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 PROFINET from GSD version/GSD revision DI Yes Counter Mo MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range to the backplane bus 1.05 W Power Power available from the backplane bus 1.05 W Power loss Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) Freading Preading Input voltage Rated value (DC) For signal "1" Hat 0 +30V Input current For signal "1" For signal "1", typ. Input delay (for rated value of input voltage)	 Prioritized startup 	Yes
version 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 Ol Yes Counter No MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Power Power loss Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" Input current for signal "1", typ. Input delay (for rated value of input voltage)	Engineering with	
PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Profile from GSD revision Profile from		V13 / V13
PROFINET from GSD version/GSD revision Operating mode OI OI OCUMENT ON	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode • DI • Counter • MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) power Power loss Power loss Power loss Power loss Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable No Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage • Rated value (DC) • for signal "0" • 30 to +5 V • for signal "1" Input current • for signal "1", typ. Input delay (for rated value of input voltage)	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
DI Counter Counter No MSI Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W Power loss Power loss, typ. 3 W Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) Fraid inputs Source (DC) Fraid inputs Source (DC) Fraid inputs Source (DC) Fraid inputs Source (DC) Fraid input	 PROFINET from GSD version/GSD revision 	V2.3 / -
• Counter • MSI • MSI Supply voitage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissi	Operating mode	
Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (• DI	Yes
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W Power loss Power loss, typ. 3 W Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) of or signal "0" of or signal "1" Input current of or signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	Counter	No
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W Power loss Power loss, typ. 3 W Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) of or signal "1" of or signal "1" of or signal "1", typ. Input delay (for rated value of input voltage)	• MSI	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus Power loss Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) of or signal "0" of or signal "1" Input current of or signal "1", typ. Input delay (for rated value of input voltage)	Supply voltage	
Power Power available from the backplane bus Power loss Power loss, typ. Poigital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) of or signal "0" of or signal "1" Input current of or signal "1", typ. Input delay (for rated value of input voltage)	` '	24 V
Power available from the backplane bus Power loss Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" Input current for signal "1", typ. Input delay (for rated value of input voltage)	permissible range, lower limit (DC)	19.2 V
Power loss Power loss, typ. Digital inputs Number of digital inputs Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" Input current for signal "1", typ. Input delay (for rated value of input voltage) 1.05 W 3 W Digital inputs 32 P-reading P-reading Yes Yes 4 4 4 4 7 7 7 8 7 8 8 8 8 8 8 8 8	permissible range, upper limit (DC)	28.8 V
Power loss, typ. Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" for signal "1" for signal "1", typ. Input delay (for rated value of input voltage) 2 W 3 W No P-reading Yes Yes Yes 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Power	
Power loss, typ. Digital inputs Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage • Rated value (DC) • for signal "0" • for signal "1" Input current • for signal "1", typ. Input delay (for rated value of input voltage)	Power available from the backplane bus	1.05 W
Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" for signal "1" for signal "1", typ. Input delay (for rated value of input voltage) 32 No P-reading Yes Yes Yes Yes 111 to +30V 111 to +30V 112	Power loss	
Number of digital inputs Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage Rated value (DC) for signal "0" for signal "1" Input current for signal "1", typ. Input delay (for rated value of input voltage) 32 No No P-reading Yes Yes Yes 1111 Yes 24 V -30 to +5 V +11 to +30V 10 put current 2.7 mA	Power loss, typ.	3 W
Digital inputs, parameterizable Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage • Rated value (DC) • for signal "0" • for signal "1" Input current • for signal "1", typ. Input delay (for rated value of input voltage)	Digital inputs	
Source/sink input Input characteristic curve in accordance with IEC 61131, type 3 Input voltage • Rated value (DC) • for signal "0" • for signal "1" • for signal "1" • for signal "1", typ. Input current • for signal "1", typ. Input delay (for rated value of input voltage)	Number of digital inputs	32
Input characteristic curve in accordance with IEC 61131, type 3 Input voltage • Rated value (DC) • for signal "0" • for signal "1" • for signal "1" • for signal "1", typ. Input current • for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	Digital inputs, parameterizable	No
Input voltage • Rated value (DC) • for signal "0" • for signal "1" Input current • for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	Source/sink input	P-reading
 Rated value (DC) for signal "0" for signal "1" to +5 V for signal "1" to +30V Input current for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)		Yes
 for signal "0" for signal "1" to +5 V for signal "1" to +30V Input current for signal "1", typ. Input delay (for rated value of input voltage) 		
for signal "1" +11 to +30V Input current for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	 Rated value (DC) 	24 V
Input current • for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	● for signal "0"	-30 to +5 V
• for signal "1", typ. 2.7 mA Input delay (for rated value of input voltage)	• for signal "1"	+11 to +30V
Input delay (for rated value of input voltage)	Input current	
	● for signal "1", typ.	2.7 mA
for standard inputs	Input delay (for rated value of input voltage)	
	for standard inputs	

parameterizable	No
— at "0" to "1", min.	3 ms
— at "0" to "1", max.	4 ms
— at "1" to "0", min.	3 ms
— at "1" to "0", max.	4 ms
for interrupt inputs	
— parameterizable	No
for technological functions	
— parameterizable	No
Cable length	110
• shielded, max.	1 000 m
	600 m
• unshielded, max.	600 III
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
 permissible quiescent current (2-wire sensor), 	1.5 mA
max.	
Interrupts/diagnostics/status information	
Diagnostics function	No
Alarms	
Diagnostic alarm	No
Hardware interrupt	No
Diagnoses	.,,
Monitoring the supply voltage	No
Wire-break	No
Short-circuit	No
	NO
Diagnostics indication LED	V
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
 Monitoring of the supply voltage (PWR-LED) 	No
 Channel status display 	Yes; green LED
 for channel diagnostics 	No
 for module diagnostics 	No
Potential separation	
Potential Separation	
Potential separation channels	No
Potential separation channels • between the channels	No 16
Potential separation channels • between the channels • between the channels, in groups of	16
Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus	16 Yes
Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus • between the channels and the power supply of the	16
Potential separation channels	16 Yes
Potential separation channels	16 Yes No
Potential separation channels	16 Yes
Potential separation channels	16 Yes No
Potential separation channels	16 Yes No
Potential separation channels	16 Yes No 707 V DC (type test)
Potential separation channels	16 Yes No 707 V DC (type test)
Potential separation channels	16 Yes No 707 V DC (type test) No
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C
Potential separation channels • between the channels, in groups of • between the channels and backplane bus • between the channels and the power supply of the electronics Isolation Isolation tested with Standards, approvals, certificates Suitable for safety functions Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min.	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C
Potential separation channels • between the channels, in groups of • between the channels and backplane bus • between the channels and the power supply of the electronics Isolation Isolation tested with Standards, approvals, certificates Suitable for safety functions Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. Altitude during operation relating to sea level • Installation altitude above sea level, max. Dimensions Width	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 25 mm 147 mm
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 25 mm 147 mm 129 mm
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 25 mm 147 mm
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 25 mm 147 mm 129 mm
Potential separation channels	16 Yes No 707 V DC (type test) No -30 °C; from FS04 60 °C -30 °C; from FS04 40 °C 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual 25 mm 147 mm 129 mm

