6ES7521-1BH10-0AA0

Data sheet



SIMATIC S7-1500 Digital input module, DI 16x24 V DC BA, 16 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 Firmware version FW update possible Product function I&M data Isochronous mode Prioritized startup STEP 7 TIA Portal configurable/integrated from version FROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision DI 16 x 24 V DC BA From FS01 From FS01 V1.0.0 Yes Product function V2.0.0 V3.0 PROFINET from GSD version/GSD revision V2.3 /-	General information	
Firmware version FW update possible Product function I &M data Selsochronous mode Prioritized startup Engineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision DI Counter MSI Supply voltage Rated value (DC) permissible range, upper limit (DC) Power Power loss	Product type designation	DI 16 x 24 V DC BA
FW update possible Product function I&M data Selsochronous mode 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 DI Counter MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) Power loss Power loss Yes; I&M0 to I&M3 Yes; I&M0 to I&M3 Yes; I&M0 to I&M3 Yes V13 / V13 V2.3 / - V2.5 SP3 / - V2.3 / - V2.3 / - V2.3 / - V2.4 / Ves V2.5 Ves V2.7 / Ves V2.8 V Power loss	HW functional status	From FS01
Product function I &M data I sochronous mode Prioritized startup Engineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision DI Counter MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) Power Power loss	Firmware version	V1.0.0
I &M data I sochronous mode I sochronous mode 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 PROFINET from GSD version/GSD revision DI Ves Counter MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Power Power loss No Ves Vas /- Vas	 FW update possible 	Yes
Isochronous mode 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 PROFINET from GSD version/GSD revision DI Counter MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Power Power loss No Power loss No Power loss No Post	Product function	
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 Pres Supply vers Supply voltage Rated value (DC) Permissible range, lower limit (DC) Power Power available from the backplane bus 1.05 W Power loss	■ 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 Press Supply version Press Supply voltage Rated value (DC) Permissible range, lower limit (DC) Prower Power available from the backplane bus 1.05 W Power loss	 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/GSD revision Operating mode DI Counter No MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) Power Power available from the backplane bus V13 / V13 V13 / V13 V13 / V13 V13 / V13 V15 / V15	 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 DI Counter MSI Wes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W Power loss	Engineering with	
 PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision Profile of the profile of the	•	V13 / V13
 PROFINET from GSD version/GSD revision Operating mode DI Counter MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W 	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode • DI • Counter • MSI No • MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
Oli Counter No MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W	 PROFINET from GSD version/GSD revision 	V2.3 / -
	Operating mode	
MSI Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W Power loss	• DI	Yes
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W Power loss	Counter	No
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W Power loss	• MSI	Yes
permissible range, lower limit (DC) permissible range, upper limit (DC) Power Power available from the backplane bus 1.05 W Power loss	Supply voltage	
permissible range, upper limit (DC) 28.8 V Power Power available from the backplane bus 1.05 W Power loss	Rated value (DC)	24 V
Power available from the backplane bus 1.05 W Power loss	permissible range, lower limit (DC)	19.2 V
Power available from the backplane bus 1.05 W Power loss	permissible range, upper limit (DC)	28.8 V
Power loss	Power	
	Power available from the backplane bus	1.05 W
	Power loss	
Power loss, typ. 1.8 W	Power loss, typ.	1.8 W
Digital inputs	Digital inputs	
Number of digital inputs 16	Number of digital inputs	16
Digital inputs, parameterizable No		No
Source/sink input P-reading	Source/sink input	P-reading
Input characteristic curve in accordance with IEC 61131, type 3		Yes
Input voltage	Input voltage	
Rated value (DC) 24 V	Rated value (DC)	24 V
● for signal "0" -30 to +5 V	• for signal "0"	-30 to +5 V
● for signal "1" +11 to +30V	• for signal "1"	+11 to +30V
Input current	Input current	
• for signal "1", typ. 2.7 mA	• for signal "1", typ.	2.7 mA

Input dolay (for rated value of input voltage)	
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	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Encoder	
Connectable encoders	V
2-wire sensor	Yes
 permissible quiescent current (2-wire sensor), max. 	1.5 mA
Interrupts/diagnostics/status information	NI.
Diagnostics function	No
Alarms	
Diagnostic alarm	No
Hardware interrupt	No
Diagnoses	
 Monitoring the supply voltage 	No
Wire-break	No
Short-circuit	No
Diagnostics indication LED	
• 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 channels	
between the channels	No
between the channels, in groups of between the channels and backglone bus	16 Voc
between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
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, min. vertical installation, max.	-50°C, IIOIII FS04
	1 0 0
Altitude during operation relating to sea level	E 000 m. Doctrictions for installation allifundary 0 000 m.
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.	230 g
Other	

Note:	Supplied incl. 40-pole push-in front connectors
last modified:	6/24/2021 🗗