## SIEMENS

## Data sheet

## 6ES7321-1BP00-0AA0



SIMATIC S7-300 digital input SM 321, Isolated in groups of 16, 64 DI, 24 V DC, 3ms, Sink/source input Terminal blocks 6ES7392-1.N00-0AA0 and cable 6ES7392-4...0-0AA0 required

Supply voltage           Lead voltage L+           • Rated value (DC)         24 V           • Reverse polarity protection         Yes           Input current         100 mA           Power loss, typ.         7 W           Power loss, typ.         7 W           Digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         44           all mounting positions         64          up to 60 °C, max.         82           horizontal installation         64          up to 60 °C, max.         32           Input voltage         DC           - up to 60 °C, max.         32           Input voltage         DC           • for signal °C         -30 to +5 V           • for signal °C		
• Rated value (DC)         24 V           • Reverse polarity protection         Yes           Input current         100 mA           Power loss         7 W           Digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         64           Input object of simultaneously controllable inputs         64           — up to 40 °C, max.         64           — up to 60 °C, max.         82           horizontal installation         64           — up to 60 °C, max.         82           horizontal installation         64           — up to 60 °C, max.         32           vertical installation         32           uet to 60 °C, max.         32           input voltage         DC           • up to 60 °C, max.         32           Input voltage         DC           • Signal °C*         - add value (DC)           • for signal ***, typ.         4.2 mA           Input current         - or to ring in ****           • for signal ****, typ.         4.2 mA           Input delay (for rated value of input voltage)         For standard inputs           for standard use	Supply voltage	
• Reverse polarity protection         Yes           Input current         100 mA           Power loss, typ.         7 W           Power loss, typ.         7 W           Digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         64           all mounting positions         64           - up to 40 °C, max.         64           - up to 60 °C, max.         32           horizontal installation         -           - up to 40 °C, max.         64           - up to 60 °C, max.         32           horizontal installation         -           - up to 40 °C, max.         32           Input voltage         DC           • Vertical installation         -           - up to 40 °C, max.         32           Input voltage         DC           • Stape of input voltage         DC           • for signal "1"         13 to 30V           Input delay (for rated value of input voltage)         For signal "1"           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         For standard inputs           - parameterizable	Load voltage L+	
Input current       100 mA         Power loss       7W         Digital inputs       64         Number of digital inputs       64         Number of simultaneously controllable inputs       64         Number of simultaneously controllable inputs       64         all mounting positions       64         — up to 40 °C, max.       64         — up to 60 °C, max.       64         — up to 60 °C, max.       64         — up to 60 °C, max.       32         horizontal installation       64         — up to 60 °C, max.       32         Input voltage       64         — up to 60 °C, max.       32         Input voltage       0C         — up to 60 °C, max.       32         Input voltage       0C         • Type of input voltage       0C         • Type of signal °1°       33 to +5 V         • for signal °1°       35 to 5V         • for signal °1°       13 to 30V         Input voltage       100 to +5 V         • for signal °1°, typ.       4.2 mA         Input delay (for rated value of input voltage)       100 restandard inputs         - parameterizable       No         - Rated value       4.2 ms	<ul> <li>Rated value (DC)</li> </ul>	24 V
from backplane bus 5 V DC, max.         100 mA           Power loss         7 W           Power loss, typ.         7 W           Digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         64           all mounting positions         64           - up to 40 °C, max.         64           - up to 60 °C, max.         32           horizontal installation         64           - up to 60 °C, max.         32           vertical installation         64           - up to 60 °C, max.         32           vertical installation         32           Input voltage         DC           • Type of input voltage         DC           • Type of input voltage         DC           • Fated value (DC)         24 V           • for signal *1", typ.         4.2 mA           Input delay (for rated value of input voltage)         10 for signal *1", typ.           • for signal *1", typ.         4.2 mA           Input delay (for rated value of input voltage)         For standard inputs           • at '0' to '1", min.         1.2 ms           - at '0' to '1", min.         1.2 ms	<ul> <li>Reverse polarity protection</li> </ul>	Yes
Power loss       Power loss, typ.     7 W       Digital inputs     64       Number of digital inputs     64       Input characteristic curve in accordance with IEC 61131, type 1     Yes       Number of simultaneously controllable inputs     64       all mounting positions     64       - up to 40 °C, max.     64       - up to 60 °C, max.     62       - up to 60 °C, max.     64       - up to 60 °C, max.     64       - up to 60 °C, max.     64       - up to 60 °C, max.     32       vertical installation     64       - up to 60 °C, max.     32       vertical installation     32       - up to 60 °C, max.     32       Input voltage     DC       • Type of input voltage     DC       • for signal "0"     -30 to +5 V       • for signal "1", typ.     4.2 mA       Input durrent     4.2 mA       Input durleduy (for rated value of input voltage)     12 ms       for standard inputs     -       - parameterizable     No       - Rated value     4.2 mS       - at "0" to "1", min.     1.2 ms       - at "0" to "1", min.     1.2 ms       - at "0" to "1", min.     1.2 ms       - at "1" to "0", min.     1.2 ms <t< td=""><td>Input current</td><td></td></t<>	Input current	
Power loss, typ.         7 W           Digital inputs         64           Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         84           all mounting positions	from backplane bus 5 V DC, max.	100 mA
Digital inputs       64         Input characteristic curve in accordance with IEC 61131, type 1       Yes         Number of simultaneously controllable inputs       84         all mounting positions       64         - up to 40 °C, max.       64         - up to 60 °C, max.       32         horizontal installation       64         - up to 40 °C, max.       64         - up to 60 °C, max.       32         horizontal installation       64         - up to 60 °C, max.       32         vertical installation       -         - up to 40 °C, max.       64         - up to 40 °C, max.       32         Input voltage       DC         • Rated value (DC)       24 V         • for signal "0"       -30 to +5 V         • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)       Input delay (for rated value of input voltage)         for standard inputs       -         - parameterizable       No         - at "0" to "1", min.       1.2 ms         - at "1" to "0", max.       4	Power loss	
Number of digital inputs       64         Input characteristic curve in accordance with IEC 61131, type 1       Yes         Number of simultaneously controllable inputs       all mounting positions	Power loss, typ.	7 W
Number of digital inputs       64         Input characteristic curve in accordance with IEC 61131, type 1       Yes         Number of simultaneously controllable inputs       all mounting positions	Digital inputs	
Input characteristic curve in accordance with IEC 61131, type 1         Yes           Number of simultaneously controllable inputs         all mounting positions		64
all mounting positions       -         - up to 40 °C, max.       64         - up to 60 °C, max.       32         horizontal installation       64         - up to 60 °C, max.       32         vertical installation       32         - up to 60 °C, max.       32         vertical installation       32         - up to 60 °C, max.       32         Input voltage       DC         - up to 40 °C, max.       32         Input voltage       DC         - Rated value (DC)       24 V         • for signal "0"       -30 to +5 V         • for signal "1"       13 to 30V         Input delay (for rated value of input voltage)       4.2 mA         • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)       -         for standard inputs       -         - parameterizable       No         - at "0" to "1", min.       1.2 ms         - at "0" to "1", max.       4.8 ms         - at "1" to "0", max.       4.8 ms         - at "1" to "0", max.       4.8 ms	Input characteristic curve in accordance with IEC 61131,	Yes
	Number of simultaneously controllable inputs	
up to 60 °C, max.         32           horizontal installation         64          up to 60 °C, max.         32           vertical installation         32          up to 40 °C, max.         32           Input voltage         0          up to 40 °C, max.         32           Input voltage         DC           • Rated value (DC)         24 V           • for signal "0"         -30 to +5 V           • for signal "1"         13 to 30V           Input delay (for rated value of input voltage)         For signal "1", typ.           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         For standard inputs           - parameterizable         No           - at "0" to "1", max.         4.8 ms           - at "1" to "0", min.         1.2 ms           - at "1" to "0", max.         4.8 ms           - at "1" to "0", max.         4.8 ms	all mounting positions	
horizontal installation         64          up to 60 °C, max.         32           vertical installation         32          up to 40 °C, max.         32           Input voltage         32           Input voltage         DC           • Rated value (DC)         24 V           • for signal "0"         -30 to +5 V           • for signal "1"         13 to 30V           Input current         -           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         -           for standard inputs         -           - parameterizable         No           - at "0" to "1", min.         1.2 ms           - at "0" to "1", max.         4.8 ms           - at "1" to "0", max.         4.8 ms           - at "1" to "0", max.         4.8 ms	— up to 40 °C, max.	64
up to 40 °C, max.         64	— up to 60 °C, max.	32
up to 60 °C, max.         32           vertical installation         32          up to 40 °C, max.         32           Input voltage         DC           • Type of input voltage         DC           • Rated value (DC)         24 V           • for signal "0"         -30 to +5 V           • for signal "1"         13 to 30V           Input current         -           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         -           for standard inputs         -           - parameterizable         No           - at "0" to "1", min.         1.2 ms           - at "0" to "1", max.         4.8 ms           - at "1" to "0", max.         4.8 ms           - at "1" to "0", max.         4.8 ms	horizontal installation	
vertical installation         32           Input voltage         32           Input voltage         DC           • Type of input voltage         DC           • Rated value (DC)         24 V           • for signal "0"         -30 to +5 V           • for signal "1"         13 to 30V           Input current         -           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         -           for standard inputs         -           - parameterizable         No           - Rated value         4.2 ms           - at "0" to "1", min.         1.2 ms           - at "0" to "1", max.         4.8 ms           - at "1" to "0", min.         1.2 ms           - at "1" to "0", max.         4.8 ms           - at "1" to "0", max.         4.8 ms	— up to 40 °C, max.	64
	— up to 60 °C, max.	32
Input voltage       DC         • Type of input voltage       DC         • Rated value (DC)       24 V         • for signal "0"       -30 to +5 V         • for signal "1"       13 to 30V         Input current       -30 to +5 V         • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)       -         for standard inputs       -         - parameterizable       No         - Rated value       4.2 ms         - at "0" to "1", min.       1.2 ms         - at "0" to "1", max.       4.8 ms         - at "1" to "0", max.       4.8 ms         Cable length       -	vertical installation	
• Type of input voltage         DC           • Rated value (DC)         24 V           • for signal "0"         -30 to +5 V           • for signal "1"         13 to 30V           Input current         4.2 mA           • for signal "1", typ.         4.2 mA           Input delay (for rated value of input voltage)         -           for standard inputs         -           - parameterizable         No           - Rated value         4.2 ms           - at "0" to "1", max.         4.8 ms           - at "1" to "0", max.         4.8 ms           - at "1" to "0", max.         4.8 ms	— up to 40 °C, max.	32
• Rated value (DC)       24 V         • for signal "0"       -30 to +5 V         • for signal "1"       13 to 30V         Input current          • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)          for standard inputs          - parameterizable       No         - Rated value       4.2 ms         - at "0" to "1", min.       1.2 ms         - at "0" to "1", max.       4.8 ms         - at "1" to "0", max.       4.8 ms         Cable length	Input voltage	
• for signal "0"       -30 to +5 V         • for signal "1"       13 to 30V         Input current       4.2 mA         • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)       for standard inputs         • parameterizable       No         - Rated value       4.2 ms         - at "0" to "1", min.       1.2 ms         - at "0" to "1", max.       4.8 ms         - at "1" to "0", min.       1.2 ms         - at "1" to "0", max.       4.8 ms         - at "1" to "0", max.       4.8 ms	<ul> <li>Type of input voltage</li> </ul>	DC
• for signal "1"       13 to 30V         Input current       4.2 mA         • for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)       for standard inputs         - parameterizable       No         - Rated value       4.2 ms         - at "0" to "1", min.       1.2 ms         - at "0" to "1", max.       4.8 ms         - at "1" to "0", min.       1.2 ms         - at "1" to "0", max.       4.8 ms	<ul> <li>Rated value (DC)</li> </ul>	24 V
Input current • for signal "1", typ. 4.2 mA Input delay (for rated value of input voltage) for standard inputs — parameterizable No — Rated value 4.2 ms — at "0" to "1", min. 1.2 ms — at "0" to "1", max. 4.8 ms — at "1" to "0", min. 1.2 ms — at "1" to "0", max. 4.8 ms	• for signal "0"	-30 to +5 V
• for signal "1", typ.       4.2 mA         Input delay (for rated value of input voltage)	● for signal "1"	13 to 30V
Input delay (for rated value of input voltage) for standard inputs — parameterizable No — Rated value 4.2 ms — at "0" to "1", min. 1.2 ms — at "0" to "1", max. 4.8 ms — at "1" to "0", min. 1.2 ms — at "1" to "0", max. 4.8 ms	Input current	
for standard inputs         — parameterizable       No         — Rated value       4.2 ms         — at "0" to "1", min.       1.2 ms         — at "0" to "1", max.       4.8 ms         — at "1" to "0", min.       1.2 ms         — at "1" to "0", max.       4.8 ms         — at "1" to "0", max.       4.8 ms         Cable length		4.2 mA
— parameterizable       No         — Rated value       4.2 ms         — at "0" to "1", min.       1.2 ms         — at "0" to "1", max.       4.8 ms         — at "1" to "0", min.       1.2 ms         — at "1" to "0", max.       4.8 ms         — at "1" to "0", max.       4.8 ms		
	for standard inputs	
	— parameterizable	No
		4.2 ms
		1.2 ms
— at "1" to "0", max.     4.8 ms       Cable length     4.8 ms		4.8 ms
Cable length		1.2 ms
	— at "1" to "0", max.	4.8 ms
• shielded, max. 1 000 m		
	<ul> <li>shielded, max.</li> </ul>	1 000 m

• unshielded, max.	600 m
Encoder	
Connectable encoders	
• 2-wire sensor	No
Interrupts/diagnostics/status information	
Alarms	No
Diagnostics function	No
Alarms	
Diagnostic alarm	No
Hardware interrupt	No
Diagnoses	
<ul> <li>Diagnostic information readable</li> </ul>	No
Wire-break	No
Diagnostics indication LED	
<ul> <li>Group error SF (red)</li> </ul>	No
<ul> <li>Status indicator digital input (green)</li> </ul>	Yes
<ul> <li>Encoder supply Vs (green)</li> </ul>	No
Potential separation	
Potential separation digital inputs	
<ul> <li>between the channels</li> </ul>	No
<ul> <li>between the channels, in groups of</li> </ul>	16
<ul> <li>between the channels and backplane bus</li> </ul>	Yes; Optocoupler
Isolation	
Isolation tested with	500 V DC
Connection method	
required front connector	Cable: 6ES7392-4Bxx0-0AA0 terminal blocks: 6ES7392-1xN00-0AA0
Dimensions	
Width	40 mm
Height	125 mm
Depth	112 mm
Weights	
Weight, approx.	230 g
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