

Data sheet

6ES7321-1BH02-0AA0



Figure similar

spare part SIMATIC S7-300, digital input SM 321, isolated, 16 DI, 24 V DC, 1x 20-pole

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, max.	10 mA
Power loss	
Power loss, typ.	3.5 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 40 °C, max.	16
— up to 60 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• 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.	7 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", min.	1.2 ms
— at "1" to "0", max.	4.8 ms
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

Interrupts/diagnostics/status information

Alarms	No
Diagnostics function	No

Alarms

- Diagnostic alarm No
- Hardware interrupt No

Diagnostics indication LED

- Status indicator digital input (green) Yes

Potential separation

Potential separation digital inputs	
• between the channels	No
• between the channels, in groups of	16
• between the channels and backplane bus	Yes; Optocoupler

Isolation

Isolation tested with	500 V DC
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Connection method

required front connector	20-pin
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Dimensions

Width	40 mm
Height	125 mm
Depth	120 mm

Weights

Weight, approx.	200 g
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Classifications

	Version	Classification
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval

[Miscellaneous](#)



[China RoHS](#)



EMV For use in hazardous locations



[EM](#)



For use in hazardous locations Maritime application



IECEEx



ATEX

[Miscellaneous](#)

[CCC-Ex](#)



ABS



BUREAU
VERITAS

Maritime application



DNV



LRS

[NK / Nippon Kaiji Kyokai](#)



PRS



RINA

[CCS \(China Classification Society\)](#)

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4/7/2025

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