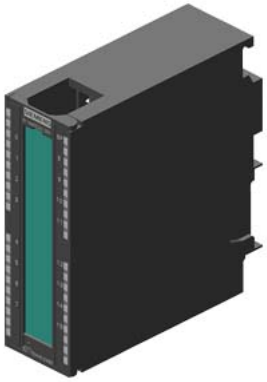
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Data sheet 6ES7321-7EH00-0AB0



********** spare part ********* SIMATIC S7/PCS 7 SM 321 digital input, 16 DI; 24/125 V DC, 1 x 40-pole, connection with wire break diagnostics, hardware interrupt diagnostics

General information	
Product function	
● Isochronous mode	No
Supply voltage	
Load voltage L+	
● Rated value (DC)	24 V
● permissible range, lower limit (DC)	24 V
● permissible range, upper limit (DC)	125 V
● Reverse polarity protection	Yes
Input current	
from backplane bus 5 V DC, max.	90 mA
Power loss	
Power loss, typ.	2 W; V_in = 24 V DC
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 60 °C, max.	16; V_in = 100 V DC
vertical installation	
— up to 40 °C, max.	16; V_in = 100 V DC
Input voltage	
● Rated value (DC)	24 V; 24 V DC to 125 V DC
● for signal "0"	-146 to 5V
● for signal "1"	15 to 146V
Input current	
● for signal "1", typ.	3.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.1 / 0.5 / 3 / 15 / 20 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 mA
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Parameterizable

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Alarms	
● Diagnostic alarm	Yes; Parameterizable
● Hardware interrupt	Yes; Parameterizable
Diagnoses	
● Wire break	Yes; I < 1 mA
Diagnostics indication LED	
● Group error SF (red)	Yes
● 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	3 500 V DC
Ambient conditions	
Ambient temperature during operation	
● min.	0 °C
● max.	60 °C
Connection method	
required front connector	1x 40-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	200 g

Classifications

	Version	Classification
eClass	16	27-24-22-04
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

Manufacturer Declaration

General Product Approval	For use in hazardous locations

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China RoHS | Manufacturer Declaration | Miscellaneous | IECEx | ATEX | FM

For use in hazardous locations					Maritime application
CCC	CCC-Ex	UL	Miscellaneous	IECEx	

Maritime application		
DNV	NK / Nippon Kaiji Kyokai	PRS

last modified: 4/7/2025

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