MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7321-1CH20-0AA0

HIGH-VOLTAGE DIGITAL INPUT MODULE

Used with the applicable SIMATIC S7-300 SM 321 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens 6ES7321-1CH20-0AA0 original product data, applicable source pages 1, 2, 3.

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Product data sheet 6ES7321-1CH20-0AA0



SIMATIC S7-300, DIGITAL INPUT SM 321,
OPTICALLY ISOLATED, 16 DI, DC 48-125V,
1 X 20 PIN

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Supply voltage	
Load voltage L+	
Rated value (DC)	48 V
permissible range, lower limit (DC)	48 V
permissible range, upper limit (DC)	125 V
Input current	
from backplane bus 5 V DC, max.	40 mA
Power losses	
Power loss, typ.	4.3 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.	8
up to 60 °C, max.	8 ; 6 to Ue 146 V
vertical installation	
up to 40 °C, max.	8

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Input voltage	
Rated value, DC	48 V ; 48 to 125 V DC
for signal "0"	-146 to +15 V DC
for signal "1"	30 to 146 V DC
Input current	
for signal "1", typ.	3.5 mA
Input delay (for rated value of input voltage)	
for standard inputs	
Parameterizable	No
at "0" to "1", min.	0.1 ms
at "0" to "1", max.	3.5 ms
Cable length	
Cable length, shielded, max.	1000 m
Cable length unshielded, max.	600 m
Encoder	
Connectable encoders	
2-wire sensor	Yes
Permissible quiescent current (2-wire sensor), max.	1 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Alarms	
Alarms	No
Diagnostic alarm	No
Hardware interrupt	No
Diagnostic messages	
Diagnostic functions	No
Diagnostics indication LED	
Group error SF (red)	No
Status indicator digital input (green)	Yes
Galvanic isolation	
Galvanic isolation digital inputs	
between the channels	No
between the channels, in groups of	8
between the channels and the backplane bus	Yes ; Optocoupler
Permissible potential difference	
between different circuits	146 V DC / 132 V AC

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Isolation	
Isolation checked with	1500 V DC
Connection method	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	200 g
Status	Sep 2, 2013

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