MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official Siemens pages

SIMATIC S7-300

6ES7321-7RD00-0AB0

DIGITAL INPUT MODULE

OFFICIAL SOURCES

Siemens official product documentation. Selected pages retain their original content, color and aspect ratio.

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Data sheet 6ES7321-7RD00-0AB0

SIMATIC S7, digital input SM 321, isolated, 4 DI; 24 V DC, NAMUR/DIN 19234, for signals from the hazardous area, diagnostics-capable, PTB tested



Figure similar

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	50 mA
from backplane bus 5 V DC, max.	80 mA
Encoder supply	
Type of output voltage	via the inputs
Power loss	
Power loss, typ.	1.1 W
Digital inputs	
Number of NAMUR inputs	4
Input voltage	
• Rated value (DC)	8.2 V; from internal power circuit supply
Input current	

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• on wire-break, max.	0.1 mA
• on short-circuit, max.	8.5 mA
for NAMUR encoders	
— for signal "0"	0.35 to 1.2 mA
— for signal "1"	2.1 to 7 mA
Input delay (for rated value of input voltage)	
• Input frequency (with a time delay of 0.1 ms), max.	2 kHz
for NAMUR inputs	
— parameterizable	Yes; 0.1 / 0.5 / 3 / 15 / 20 ms (plus 0.25 ms preparation time)
Cable length	
• unshielded, max.	200 m

Encoder	
Connectable encoders	
• NAMUR encoder	Yes; Two-wire connection

Interrupts/diagnostics/status information	
Diagnostic functions	Yes
Diagnostic messages	
• Diagnostic information readable	Yes
Diagnostics indication LED	
• Group error SF (red)	Yes
• Status indicator digital input (green)	Yes
• Channel fault indicator F (red)	Yes

Ex(i) characteristics	
Module for Ex(i) protection	Yes
Maximum values of input circuits (per channel)	
• Co (permissible external capacity), max.	3 µF
• Io (short-circuit current), max.	14.1 mA
• Lo (permissible external inductivity), max.	100 mH
• Po (power of load), max.	33.7 mW
• Uo (output no-load voltage), max.	10 V

Potential separation	
Potential separation digital inputs	
• Potential separation digital inputs	Yes
• between the channels, in groups of	1

Standards, approvals, certificates	
Use in hazardous areas	
• Type of protection acc. to EN 50020 (CENELEC)	[EEx ib] IIC
• Type of protection acc. to FM	Class II, Division 2, Group A, B, C, D T4

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• Test number PTB	Ex-96.D.2094X

Ambient conditions

Ambient temperature during operation

• max.	60 °C

Connection method

required front connector	20-pin

Weights

Weight, approx.	230 g

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