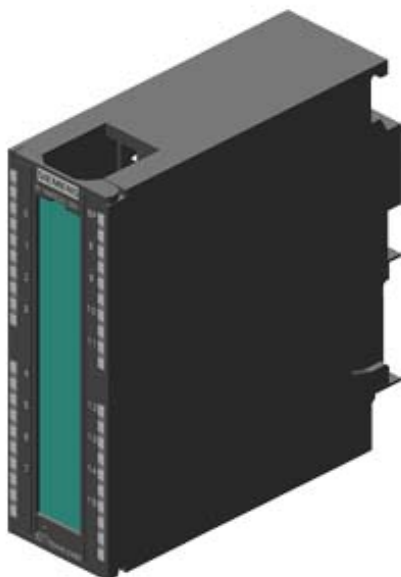


SIMATIC S7/PCS 7, SM 321 DIGITAL INPUT, 16 DI, DC 24/125V, 1 X 40-PIN FRONT CONNECTOR WITH WIRE BREAK DIAGNOSIS
HARDWARE INTERRUPT DIAGNOSTICS



Supply voltage

Load voltage L+

• Rated value (DC)	24 V
• permissible range, lower limit (DC)	24 V
• permissible range, upper limit (DC)	125 V

Input current

from backplane bus 5 V DC, max.	90 mA
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Power loss

Power loss, typ.	2 W; V _{in} = 24 V DC
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Time stamping

Accuracy	0.1 ms; Use shielded cables and parameterize an input delay of 0.1 ms.
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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
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Diagnostic functions	Yes; Parameterizable
Alarms	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; Parameterizable
Diagnostic messages	
• 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
Permissible potential difference	

between different circuits	250 V AC/300 V DC
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
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