SIEMENS

Data sheet 6ES7321-7TH00-0AB0

SIMATIC S7/PCS7 Digital input SM 321, 16 DI; 24 V DC, 1 x 40-pole, diagnostics-capable, for contacts (wired/ not wired), NAMUR encoder, 3/4-wire Bero, with chatter monitoring; Pulse extension, open-circuit detection Interface module IM 153-2 HF or IM 153-4 HF possible



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.	100 mA
from backplane bus 5 V DC, max.	100 mA
Encoder supply	
Number of outputs	4
Type of output voltage	1Vs1/2Vs1: 18 V, 1Vs2/2Vs2: 8.2 V
Short-circuit protection	Yes; Electronic
additional (redundant) feed	No
Output current	
• Rated value	190 mA; at 18V: 190mA, at 8.2V: 60mA
• permissible range, upper limit	Up to 60 degree: at 18V: 0 to 110mA, at 8.2V: 0 to 60mA; Up to 40 degree: at 18V: 0 to 190mA, at 8.2V: 0 to 60mA

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Power loss	
Power loss, typ.	11 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC 61131, type 1	No
Input characteristic curve in accordance with IEC 61131, type 2	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 60 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	8.2 V; 8.2V/18V
Input current	
• for signal "0", min.	0.35 mA
• for signal "0", max. (permissible quiescent current)	1.2 mA
• for signal "1", typ.	10 mA; for NAMUR: 2.1 to 7 mA, for 10k ohm/47k ohm contact: typical 10mA, for 4 wire BEROs: typical 10 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	2.5 ms
— at "0" to "1", max.	3.5 ms
— at "1" to "0", min.	2.5 ms
— at "1" to "0", max.	3.5 ms
Cable length	
• shielded, max.	400 m; max. 200m with 8.2 V sensor, max. 400m with 18 V sensor
• unshielded, max.	Not permitted
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
Diagnostic messages	
• Diagnostic information readable	Yes
• Wire-break	Yes
Diagnostics indication LED	

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• Group error SF (red)	Yes
• Status indicator digital input (green)	Yes
• Encoder supply Vs (green)	Yes

Potential separation	
Potential separation digital inputs	
• between the channels	Yes
• between the channels, in groups of	8
• between the channels and backplane bus	Yes

Isolation	
Isolation tested with	600 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

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