SIEMENS

Data sheet

6ES7321-1CH20-0AA0



SIMATIC S7-300, Digital input SM 321, isolated, 16 DI, 48-125 V DC, 1x 20-pole

Figure similar

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 loss	
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
Input voltage	
 Type of input voltage 	DC
Rated value (DC)	48 V; 48 V DC to 125 V DC
● for signal "0"	-146 V DC to +15 V DC
• for signal "1"	30 V DC 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
— at "1" to "0", min.	0.7 ms
— at "1" to "0", max.	3 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	
Alarms	No
Diagnostics function	No
Alarms	
Diagnostic alarm	No
Hardware interrupt	No
Diagnostics indication LED	
 Group error SF (red) 	No
 Status indicator digital input (green) 	Yes
Potential separation	
Potential separation digital inputs	
 between the channels 	No
 between the channels, in groups of 	8
 between the channels and backplane bus 	Yes; Optocoupler
Isolation	
Isolation tested with	1 500 V DC
connection method	
required front connector	20-pin
Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm
Weights	
Weight, approx.	200 g

last modified:

3/12/2024