



Figure similar

SIMATIC S7-300, Digital input SM 321, isolated, 16 DI; 24 V DC, 1x 20-pole, process interrupt, diagnostics, suitable for isochronous mode

Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	90 mA
from backplane bus 5 V DC, max.	130 mA
Encoder supply	
Number of outputs	2
Type of output voltage	L+ (-2.5 V)
Short-circuit protection	Yes; Electronic
additional (redundant) feed	Yes
Output current	
• Rated value	120 mA
• permissible range, lower limit	0 mA
• permissible range, upper limit	150 mA
Power loss	
Power loss, typ.	4 W
Digital inputs	
Number of digital inputs	16
Input characteristic curve in accordance with IEC 61131, type 2	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 40 °C, max.	16
— up to 60 °C, max.	16
vertical installation	
— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5 V
• for signal "1"	13 to 30V
Input current	

<ul style="list-style-type: none"> • for signal "1", typ. 	7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	Yes; 0.1 / 0.5 / 3 / 15 / 20 ms
Encoder connection	
<ul style="list-style-type: none"> • Fixed current limitation for wire-break monitoring, min. 	10 kΩ
<ul style="list-style-type: none"> • Fixed current limitation for wire-break monitoring, max. 	18 kΩ
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
<ul style="list-style-type: none"> • unshielded, max. 	600 m
Encoder	
Connectable encoders	
<ul style="list-style-type: none"> • 2-wire sensor 	Yes
— permissible quiescent current (2-wire sensor), max.	2 mA
Interrupts/diagnostics/status information	
Alarms	Yes
Diagnostics function	Yes; Parameterizable
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes; Parameterizable
<ul style="list-style-type: none"> • Hardware interrupt 	Yes; Parameterizable
Diagnoses	
<ul style="list-style-type: none"> • Diagnostic information readable 	Yes
<ul style="list-style-type: none"> • Wire-break 	Yes; to I < 1 mA
Diagnostics indication LED	
<ul style="list-style-type: none"> • Group error SF (red) 	Yes
<ul style="list-style-type: none"> • Status indicator digital input (green) 	Yes
<ul style="list-style-type: none"> • Encoder supply Vs (green) 	Yes
Potential separation	
Potential separation digital inputs	
<ul style="list-style-type: none"> • between the channels 	No
<ul style="list-style-type: none"> • between the channels, in groups of 	16
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes; Optocoupler
Isolation	
Isolation tested with	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
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