

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



Figure similar

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

- 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

- Fixed current limitation for wire-break monitoring, min. 10 kΩ
- Fixed current limitation for wire-break monitoring, max. 18 kΩ

#### 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. 2 mA

### Interrupts/diagnostics/status information

Alarms Yes

Diagnostics function Yes; Parameterizable

Alarms

• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; Parameterizable
<b>Diagnostic messages</b>	
• Diagnostic information readable	Yes
• Wire-break	Yes; to I < 1 mA
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
• Status indicator digital input (green)	Yes
• Encoder supply Vs (green)	Yes
<b>Potential separation</b>	
<b>Potential separation digital inputs</b>	
• between the channels	No
• between the channels, in groups of	16
• between the channels and backplane bus	Yes; Optocoupler
<b>Isolation</b>	
Isolation tested with	500 V DC
<b>Connection method</b>	
required front connector	20-pin
<b>Dimensions</b>	
Width	40 mm
Height	125 mm
Depth	120 mm
<b>Weights</b>	
Weight, approx.	200 g
<b>last modified:</b>	06/09/2020