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SIMATIC S7-300, DIGITAL MODULE SM 327, OPTICALLY ISOLATED, 8 DI AND 8 DX, 24V DC, 0.5A 1 X 20 PIN, 8DX CHANNELWISE PROGRAMMABLE AS DI OR DO



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
Input current	
from load voltage L+ (without load), max.	20 mA
from backplane bus 5 V DC, max.	60 mA
Power loss	
Power loss, typ.	3 W
Digital inputs	
Number of digital inputs	8; 8 hard-wired, 8 others individually parameterizable
Input characteristic curve in accordance with IEC 61131, type 1	Yes
Number of simultaneously controllable inputs	
horizontal installation	
— up to 60 °C, max.	16
vertical installation	

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— up to 40 °C, max.	16
Input voltage	
• Type of input voltage	DC
• Rated value (DC)	24 V
• for signal "0"	-30 to +5V
• for signal "1"	+15 to +30V
Input current	
• for signal "1", typ.	6 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	1.2 ms
— at "0" to "1", max.	4.8 ms
— at "1" to "0", min.	1.2 ms
— at "1" to "0", max.	4.8 ms
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m

Digital outputs	
Number of digital outputs	8; can also be parameterized individually as DI
Short-circuit protection	Yes
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-54 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	4 kΩ
Output voltage	
• for signal "1", min.	L+ (-1.5 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, min.	5 mA
• for signal "1" permissible range, max.	0.6 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	350 µs
• "1" to "0", max.	500 µs
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes; only outputs of the same group

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Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	10 Hz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
vertical installation	
— up to 40 °C, max.	2 A
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.	1.5 mA
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Alarms	No
Diagnostic functions	No
Diagnostics indication LED	
• Status indicator digital output (green)	Yes
• Status indicator digital input (green)	Yes
Potential separation	
Potential separation digital inputs	
• between the channels	No
• between the channels and backplane bus	Yes; Optocoupler
Potential separation digital outputs	
• between the channels	No
• between the channels and backplane bus	Yes; Optocoupler
Permissible potential difference	
between different circuits	75 V DC/60 V AC
Isolation	
Isolation tested with	500 V DC
Connection method	
required front connector	20-pin

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Dimensions	
Width	40 mm
Height	125 mm
Depth	120 mm

Weights	
Weight, approx.	200 g

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