



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 losses

Power loss, typ.	3 W
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## 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

#### all mounting positions

up to 40 °C, max.	16
up to 60 °C, max.	16

## Input voltage

Rated value, DC	24 V
for signal "0"	-30 to +5 V
for signal "1"	15 to 30 V
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	
Cable length, shielded, max.	1000 m
Cable length unshielded, max.	600 m
Digital outputs	
Number of digital outputs	8 ; can also be parameterized individually as DI
Product function / at the digital outputs / 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	
Lamp load, max.	5 W
Load resistance range	
lower limit	48 $\Omega$
upper limit	4 k $\Omega$
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 for 0 to 60 °C, min.	5 mA
for signal "1" permissible range for 0 to 60 °C, max.	0.6 A
for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
"0" to "1", max.	350 $\mu$ s
"1" to "0", max.	500 $\mu$ s
Parallel switching of 2 outputs	
for increased power	No
for redundant control of a load	Yes ; only outputs of the same group

Switching frequency	
with resistive load, max.	100 Hz
with inductive load, max.	0.5 Hz
on lamp load, max.	10 Hz
Aggregate current of outputs (per group)	
horizontal installation	
up to 40 °C, max.	4 A
up to 60 °C, max.	3 A
Cable length	
Cable length, shielded, max.	1000 m
Cable length 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	
Alarms	No
Diagnostic messages	
Diagnostic functions	No
Diagnostics indication LED	
Status indicator digital output (green)	Yes
Status indicator digital input (green)	Yes
Galvanic isolation	
Galvanic isolation digital inputs	
between the channels	No
between the channels and the backplane bus	Yes ; Optocoupler
Galvanic isolation digital outputs	
between the channels	No
between the channels and the backplane bus	Yes ; Optocoupler
Permissible potential difference	
between different circuits	75 VDC / 60 VAC
Isolation	
Isolation checked 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
Status	Sep 2, 2013