





# Digital input modules

Signal modules digital   Digital input modules					
321-1BH01					
321-1BH70					
321-1BL00					
321-1FH00					

Order number	321-1BH01	321-1BH70	321-1BL00	321-1FH00
Figure				
Type	SM 321	SM 321S - SPEED-Bus	SM 321	SM 321
<b>General information</b>				
Note	-	-	-	-
Features	▶ 16 inputs	▶ SPEED-Bus ▶ 16 fast inputs ▶ Parameterizable as alarm/ETS	▶ 32 inputs	▶ 16 inputs, in groups of 4 ▶ AC 120/230 V
SPEED-Bus	-	✓	-	-
<b>Current consumption/power loss</b>				
Current consumption from backplane bus	25 mA	390 mA	35 mA	35 mA
Power loss	3.5 W	5 W	6.5 W	5 W
<b>Technical data digital inputs</b>				
Number of inputs	16	16	32	16
Cable length, shielded	1000 m	1000 m	1000 m	1000 m
Cable length, unshielded	600 m	600 m	600 m	600 m
Rated load voltage	-	DC 20.4...28.8 V	-	AC 120/230 V
Current consumption from load voltage L+ (without load)	-	15 mA	-	-
Rated value	DC 20.4...28.8 V	DC 24 V	DC 20.4...28.8 V	AC 120/230 V
Input voltage for signal "0"	DC 0...5 V	DC 0...5 V	DC 0...5 V	AC 0...40 V
Input voltage for signal "1"	DC 15...28.8 V	DC 15...28.8 V	DC 15...28.8 V	AC 79...264 V
Input voltage hysteresis	-	-	-	-
Frequency range	-	-	-	47...63 Hz
Input resistance	-	-	-	-
Input current for signal "1"	7 mA	7 mA	7 mA	7 mA
Connection of Two-Wire-BEROs possible	✓	✓	✓	✓
Max. permissible BERO quiescent current	1.5 mA	1.5 mA	1.5 mA	1.5 mA
Input delay of "0" to "1"	3 ms	parameterizable 2.56µs - 40ms	3 ms	25 ms
Input delay of "1" to "0"	3 ms	parameterizable 2.56µs - 40ms	3 ms	25 ms
Number of simultaneously utilizable inputs horizontal configuration	16	16	32	16
Number of simultaneously utilizable inputs vertical configuration	16	16	32	16
Input characteristic curve	IEC 61131, type 1	IEC 61131, type 1	IEC 61131, type 1	-
Initial data size	2 Byte	2 Byte	4 Byte	2 Byte
<b>Status information, alarms, diagnostics</b>				
Status display	green LED per channel	green LED per channel	green LED per channel	green LED per channel
Interrupts	no	yes	no	no
Process alarm	no	yes, parameterizable	no	no
Diagnostic interrupt	no	yes, parameterizable	no	no

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Diagnostic functions	no	yes	no	no
Diagnostics information read-out	none	possible	none	none
Supply voltage display	none	green LED	none	none
Group error display	none	none	none	none
Channel error display	none	none	none	none
<b>Isolation</b>				
Between channels	-	-	-	✓
Between channels of groups to	16	16	16	4
Between channels and backplane bus	✓	✓	✓	✓
Insulation tested with	DC 500 V	DC 500 V	DC 500 V	DC 4000 V
<b>Datasizes</b>				
Input bytes	2	2 / 48	4	2
Output bytes	0	0	0	0
Parameter bytes	0	0 / 66	0	0
Diagnostic bytes	0	16	0	0
<b>Housing</b>				
Material	PPE	PPE	PPE	PPE
Mounting	Rail System 300	-	Rail System 300	Rail System 300
<b>Mechanical data</b>				
Dimensions (WxHxD)	40 mm x 125 mm x 120 mm	40 mm x 125 mm x 120 mm	40 mm x 125 mm x 120 mm	40 mm x 125 mm x 120 mm
Weight	220 g	220 g	240 g	240 g
<b>Environmental conditions</b>				
Operating temperature	0 °C to 60 °C	0 °C to 60 °C	0 °C to 60 °C	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C	-25 °C to 70 °C
<b>Certifications</b>				
UL508 certification	yes	yes	yes	yes

# Connections, Interfaces

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### 321-1BH01




Diagram showing the terminal block connections for the 321-1BH01 module. The terminals are numbered 1 through 20. Terminals 1-9 are connected to a common DC 24 V supply. Terminals 12-19 are connected to a common ground (M). Terminal 20 is also connected to ground (M).

### 321-1BH70


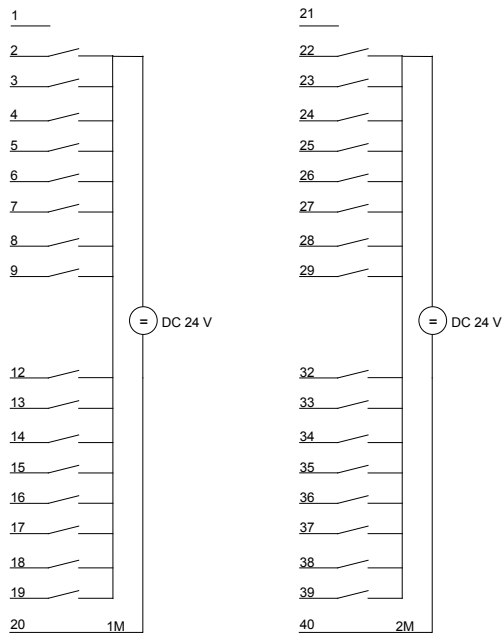


Diagram showing the terminal block connections for the 321-1BH70 module. The terminals are numbered 1 through 20. Terminals 1-9 are connected to a common DC 24 V supply. Terminals 12-19 are connected to a common ground (M). Terminal 20 is also connected to ground (M).

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