




Data sheet

SM 221 (221-1BH20)

Technical data

Order no.	221-1BH20
Type	SM 221
General information	
Note	-
Features	16 inputs 2 inputs are configurable as counter LED status display
Current consumption/power loss	
Current consumption from backplane bus	85 mA
Power loss	3.5 W
Technical data digital inputs	
Number of inputs	16
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	-
Reverse polarity protection of rated load voltage	-
Current consumption from load voltage L+ (without load)	-
Rated value	DC 20.4...28.8 V
Input voltage for signal "0"	DC 0...5 V
Input voltage for signal "1"	DC 15...28.8 V
Input voltage hysteresis	-
Frequency range	-
Input resistance	-
Input current for signal "1"	7 mA
Connection of Two-Wire-BEROs possible	
Max. permissible BERO quiescent current	1.5 mA
Input delay of "0" to "1"	3 ms
Input delay of "1" to "0"	3 ms
Number of simultaneously utilizable inputs horizontal configuration	16
Number of simultaneously utilizable inputs vertical configuration	16
Input characteristic curve	IEC 61131-2, type 1
Initial data size	6 Byte
Technical data counters	
Number of counters	1
Counter width	32 Bit
Maximum input frequency	100 kHz
Maximum count frequency	400 kHz
Mode incremental encoder	
Mode pulse / direction	

Mode pulse	✓
Mode frequency counter	✓
Mode period measurement	✓
Gate input available	-
Latch input available	-
Reset input available	-
Counter output available	-

Status information, alarms, diagnostics

Status display	green LED per channel
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	no
Diagnostics information read-out	none
Supply voltage display	none
Group error display	none
Channel error display	none

Isolation

Between channels	-
Between channels of groups to	16
Between channels and backplane bus	✓
Insulation tested with	DC 500 V

Datasizes

Input bytes	6
Output bytes	6
Parameter bytes	5
Diagnostic bytes	0

Housing

Material	PPE / PA 6.6
Mounting	Profile rail 35 mm

Mechanical data

Dimensions (WxHxD)	25.4 mm x 76 mm x 88 mm
Weight	90 g

Environmental conditions

Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C

Certifications

UL508 certification	yes
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