

Data sheet SM 223 (223-1BF00)

Technical data

Type SM 223 General Information - Features 8 channels (as input or output) Output Outp	Order no.	223-1BF00
Note	Туре	SM 223
Note	Conoral information	
Features Schancels (as input or output) Output current 1 A Diagnostics function Current consumption/power loss Current consumption from backplane bus 65 mA Power loss 2 W Technical data digital inputs Number of inputs 8 Cable length, shielded 1000 m Cable length, shielded 600 m Rated load voltage 1 - Current consumption from load voltage L+ (without load) - Rated value DC 20.428.8 V Input voltage for signal "1" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage for signal "1" DC 1528.8 V Input voltage for signal "1" T T mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "0" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m		
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Number of inputs 8 Number of inputs 8 Cable length, shielded 1000 m Rated load voltage	Current consumption from backplane bus	65 mA
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Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage - Current consumption from load voltage L+ (without load) - Rated value DC 20.428.8 V Input voltage for signal *0° DC 05 V Input voltage for signal *1" DC 1528.8 V Input voltage for signal *1" DC 1528.8 V Input voltage for signal *1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input resistance - Input current for signal *1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of *0' to *1" 3 ms Input delay of *0' to *1" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 1 byte Technical data digital outputs Number of outputs 8 Cable length, shielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal *1", rated value 1 A	Technical data digital inputs	
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Rated load voltage - Current consumption from load voltage L+ (without load) - Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input resistance - Input resistance - Input resistance voltage and "1" TMA Connection of Two-Wire-BEROs possible ves Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Cable length, shielded	1000 m
Current consumption from load voltage L+ (without load) Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range Input current for signal "1" T 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 Number of simultaneously utilizable inputs vertical configuration Number of simultaneously utilizable inputs vertical configuration Reconcilidated data digital outputs Number of outputs 8 Cable length, shielded 1000 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage Current consumption from load voltage L+ (without load) Output current at signal "1", rated value 1 A	Cable length, unshielded	600 m
Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "4" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration 8 Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1	Rated load voltage	-
Input voltage for signal "10" Input voltage for signal "1" Input voltage for signal "1" Input voltage hysteresis Frequency range Input resistance Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible Wax, permissible BERO quiescent current Input delay of "0" to "1" 3 ms Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) Output current at signal "1", rated value 1 A	Current consumption from load voltage L+ (without load)	-
Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input resistance - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes 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 Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Rated value	DC 20.428.8 V
Input voltage hysteresis - Frequency range - Input resistance - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Input delay of "1" to "0" 3 ms Input delay of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 11	Input voltage for signal "0"	DC 05 V
Frequency range Input resistance Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes 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 Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 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) 0 typut current at signal "1", rated value 1 A	Input voltage for signal "1"	DC 1528.8 V
Input resistance - Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible yes 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 Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Input voltage hysteresis	-
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Max. permissible BERO quiescent current Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Rumber of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage Current consumption from load voltage L+ (without load) 0 utput current at signal "1", rated value 1 A	Input current for signal "1"	7 mA
Input delay of "0" to "1" 3 ms Input delay of "1" to "0" 3 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Connection of Two-Wire-BEROs possible	yes
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Input characteristic curve IEC 61131-2, type 1 Initial data size 1 Byte Technical data digital outputs Number of outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) Output current at signal "1", rated value 1 A		8
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Rated load voltage DC 20.428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Cable length, shielded	1000 m
Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Cable length, unshielded	600 m
Current consumption from load voltage L+ (without load) 10 mA Output current at signal "1", rated value 1 A	Rated load voltage	DC 20.428.8 V
Output current at signal "1", rated value 1 A	Reverse polarity protection of rated load voltage	-
	Current consumption from load voltage L+ (without load)	10 mA
Output delay of "0" to "1" 150 µs	Output current at signal "1", rated value	1 A
	Output delay of "0" to "1"	150 µs



Output delay of "1" to "0"	100 µs	A YASKAWA COMPANY
Minimum load current	100 μs	
Lamp load	5 W	
Parallel switching of outputs for redundant control of a load	not possible	
Parallel switching of outputs for increased power	not possible	
Actuation of digital input	•	
Switching frequency with resistive load	yes max. 1000 Hz	
Switching frequency with inductive load	max. 0.5 Hz	
Switching frequency on lamp load	max. 10 Hz	
Internal limitation of inductive shut-off voltage	L+ (-52 V)	
Short-circuit protection of output	yes, electronic	
Trigger level	1.7 A	
Number of operating cycle of relay outputs	-	
Switching capacity of contacts		
Output data size	1 Byte	
Output data size	1 byte	
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	green LED	
Group error display	red SF LED	
Channel error display	none	
Isolation		
Between channels		
Between channels of groups to	8	
Between channels and backplane bus	yes	
Insulation tested with	DC 500 V	
insulation tested with	DC 300 V	
Datasizes		
Input bytes	1	
Output bytes	1	
Parameter bytes	0	
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	100 g	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
- Clorago temperaturo	20 0 10 10 0	



Certifications

UL certification	yes
KC certification	-