

Data sheet

SM 221 (221-1FF40)

Technical data

Type SM 221 General information Note - Features - Sinputs AC 230 V Hysteresis Current consumption/power loss Current consumption from backplane bus 60 mA Power loss 3 W Technical data digital inputs Number of inputs 8 S Cable length, shielded 1000 m Cable length, shielded 600 m Rated load voltage Current consumption from load voltage L+ (without load) - Cable length, unshielded 600 m Rated load voltage Current consumption from load voltage L+ (without load) - Current consumption from load voltage Current Curr	Order no.	221-1FF40
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Input voltage for signal "1" AC 190260 V Input voltage hysteresis AC 90160 V Frequency range 50 Hz Input resistance 136 kOhm Input current for signal "1" - Connection of Two-Wire-BEROs possible - Max. permissible BERO quiescent current - Input delay of "0" to "1" 25 ms Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve - Initial data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Rated value	AC 230 V
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Frequency range 50 Hz Input resistance 136 kOhm Input current for signal "1" - Connection of Two-Wire-BEROs possible - Max. permissible BERO quiescent current - Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve - Initial 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 none	Input voltage for signal "1"	AC 190260 V
Input current for signal "1" - Connection of Two-Wire-BEROs possible - Max. permissible BERO quiescent current - Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Input delay of "1" to "0" 25 ms Input delay of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration 8 Input characteristic curve - Initial 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 none	Input voltage hysteresis	AC 90160 V
Input current for signal "1" - Connection of Two-Wire-BEROs possible - Max. permissible BERO quiescent current - Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 8 Input characteristic curve - Initial 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 none	Frequency range	50 Hz
Connection of Two-Wire-BEROs possible Max. permissible BERO quiescent current Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Rumber of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial 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 none	Input resistance	136 kOhm
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Input delay of "0" to "1" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial 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 none	Connection of Two-Wire-BEROs possible	
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Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial data size I 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 Supply voltage display none	Input delay of "0" to "1"	25 ms
Number of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial data size I Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions Diagnostics information read-out Supply voltage display none	Input delay of "1" to "0"	25 ms
Input characteristic curve - Initial 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 none	Number of simultaneously utilizable inputs horizontal configuration	8
Initial 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 none	Number of simultaneously utilizable inputs vertical configuration	8
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	Input characteristic curve	•
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	Initial data size	1 Byte
Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Status information, alarms, diagnostics	
Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Status display	green LED per channel
Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Interrupts	no
Diagnostic functions no Diagnostics information read-out none Supply voltage display none	Process alarm	no
Diagnostics information read-out none Supply voltage display none	Diagnostic interrupt	no
Diagnostics information read-out none Supply voltage display none	Diagnostic functions	no
		none
Group error display none	Supply voltage display	none
	Group error display	none



Channel error display	none	A YASKAWA COMPANY	
Isolation			
Between channels	-		
Between channels of groups to	8		
Between channels and backplane bus	✓		
Insulation tested with	DC 500 V		
Datasizes			
Input bytes	1	1	
Output bytes	0		
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		
Certifications			
UL508 certification	yes		