

Data sheet SM 321 (321-1FH00)

Technical data

Type	Order no.	321-1FH00
Separation Sep	Туре	SM 321
Note -		
Features	General information	
AC 120/230 V	Note	<u>-</u>
Current consumption/power loss Current consumption from backplane bus 35 mA Power loss 5 W Technical data digital inputs Number of inputs 16 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "1" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "0" to "0" 25 ms Input delay of "1" to "0" 25	Features	
Current consumption from backplane bus 5 W Technical data digital inputs Number of inputs 16 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79,264 V Input voltage for signal "1" AC 79,264 V Input voltage flysteresis - Frequency range 47,63 Hz Input consistance - 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" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 16 Input characteristic curve - Initial data size 2 Byte Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostics information read-out none	SPEED-Bus	-
Power loss 5 W Technical data digital inputs Number of inputs 16 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "1" to "0" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 16 Input characteristic curve - Initial data size 2 Byte Status display green LED per channel Interrupts no Process alarm no Diagnostic functions no no Diagnostic information read-out none	Current consumption/power loss	
Number of inputs 16 Cable length, shielded 1000 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input toutlage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "0" to "1" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Number of simultaneously utilizable inputs vertical configuration Find the size 2 byte Status display green LED per channel Interrupts no Diagnostic functions no Diagnostic interrupt no Diagnostics information read-out none	Current consumption from backplane bus	35 mA
Number of inputs 16 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "1" to "0" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 16 Input characteristic curve - Initial data size 2 Byte Status display green LED per channel Interrupts no Diagnostic functions no Diagnostics information read-out none	Power loss	5 W
Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage for signal "1" AC 79264 V Input voltage systeresis - Frequency range 4763 Hz 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" 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 16 Input characteristic curve - Initial data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Diagnostic functions no Diagnostics information read-out none	Technical data digital inputs	
Cable length, unshielded 600 m Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs vertical configuration 16 Input characteristic curve - Initial data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Diagnostic functions no	Number of inputs	16
Rated load voltage AC 120/230 V Current consumption from load voltage L+ (without load) - Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Number of simultaneously utilizable inputs vertical configuration Fature Status information, alarms, diagnostics Status display green LED per channel Interrupts no Diagnostic interrupt no Diagnostic interrupt no Diagnostics information read-out	Cable length, shielded	1000 m
Current consumption from load voltage L+ (without load) Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz Input current for signal "1" 7 mA Connection of Two-Wire-BEROs possible Wax. permissible BERO quiescent current 1.5 mA Input delay of "0" to "1" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial data size 2 Byte Status display green LED per channel Interrupts no Diagnostic interrupt no Diagnostics information read-out AC 79264 V Input Characteristic read-out AC 79264 V Input Characteristic curve - no Diagnostics information read-out none	Cable length, unshielded	600 m
Rated value AC 120/230 V Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "0" to "1" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Diagnostic interrupt no Diagnostic information read-out none	Rated load voltage	AC 120/230 V
Input voltage for signal "0" AC 040 V Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 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 Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostic functions Diagnostics information read-out none	Current consumption from load voltage L+ (without load)	-
Input voltage for signal "1" AC 79264 V Input voltage hysteresis - Frequency range 4763 Hz 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" 25 ms Input delay of "0" to "1" 25 ms Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions noe	Rated value	AC 120/230 V
Input voltage hysteresis Frequency range 4763 Hz 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" 25 ms Input delay of "1" to "0" Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve - Initial data size 2 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	Input voltage for signal "0"	AC 040 V
Input resistance	Input voltage for signal "1"	AC 79264 V
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" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 16 Input characteristic curve - Initial data size 2 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	Input voltage hysteresis	-
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" 25 ms Input delay of "1" to "0" 25 ms Number of simultaneously utilizable inputs horizontal configuration 16 Number of simultaneously utilizable inputs vertical configuration 16 Input characteristic curve - Initial data size 2 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	Frequency range	4763 Hz
Connection of Two-Wire-BEROs possible Max. permissible BERO quiescent current 1.5 mA 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 2 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	Input resistance	-
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 Input characteristic curve - Initial data size 2 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	Input current for signal "1"	7 mA
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 2 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	Connection of Two-Wire-BEROs possible	yes
Input delay of "1" to "0" Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial data size 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	Max. permissible BERO quiescent current	1.5 mA
Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial data size 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	Input delay of "0" to "1"	25 ms
Number of simultaneously utilizable inputs vertical configuration Input characteristic curve Initial data size 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	Input delay of "1" to "0"	25 ms
Input characteristic curve - Initial data size 2 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	Number of simultaneously utilizable inputs horizontal configuration	16
Initial data size 2 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	Number of simultaneously utilizable inputs vertical configuration	16
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	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	Initial data size	2 Byte
Interrupts no Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none	Status information, alarms, diagnostics	
Process alarm no Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none	Status display	green LED per channel
Diagnostic interrupt no Diagnostic functions no Diagnostics information read-out none	Interrupts	no
Diagnostic functions no Diagnostics information read-out none	Process alarm	no
Diagnostics information read-out none	Diagnostic interrupt	no
	Diagnostic functions	no
Supply voltage display none	Diagnostics information read-out	none
	Supply voltage display	none



Group error display	none	A YASKAWA COMPANY	
Channel error display	none		
Isolation			
Between channels	yes		
Between channels of groups to	4		
Between channels and backplane bus	yes		
Insulation tested with	DC 4000 V		
Datasizes			
Input bytes	2	2	
Output bytes	0	0	
Parameter bytes	0	0	
Diagnostic bytes	0		
Housing			
Material	PPE		
Mounting	Rail System 300		
Mechanical data			
Dimensions (WxHxD)	40 mm x 125 mm x 120 mm		
Weight	240 g		
Environmental conditions			
Operating temperature	0 °C to 60 °C	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	-25 °C to 70 °C	
Certifications			
UL certification	yes	yes	
KC certification	yes		