

Data sheet

SM 222 (222-1HD10)

Technical data

Type SM 222 General Information Note	Order no.	222-1HD10
Note - A isolated relay outputs AC 230 V DC 30 V Output current 5 A	Туре	SM 222
Note - A isolated relay outputs AC 230 V/ DC 30 V Output current 5 A		
Features 4 isolated relay outputs AC 230 V Output current 5 A Current consumption/power loss Current consumption from backplane bus 160 mA Power loss 2 W Technical data digital outputs Number of outputs 4 Cable length, unshielded 1000 m Cable length, unshielded 600 m Rated load voltage AC 230 V Current consumption from load voltage L+ (without load) - Total current per group, horizontal configuration, 40°C 5 A Total current per group, horizontal configuration 60°C 5 A Total current per group, versical configuration 5 A Output delay of "0" to "1" 10 ms Output delay of "0" to "0" 5 ms Minimum load current 1 or "0" 5 ms Minimum load current 1 - Lamp load Parallel switching of outputs for redundant control of a load not possible Parallel switching of outputs for increased power not possible Parallel switching of outputs for increased power not possible Switching frequency with resistive load max. 10 Hz Switching frequency with inductive load - Switching frequency output output of voltage - Short-circuit protection of output Trigger level - Number of operating cycle of relay outputs 5 A Output data size 1 Byte Status display green LED per channel Interrupts no	General information	
AC 230 V/ DC 30 V Output current S A Current consumption/power loss Current consumption from backplane bus 160 mA Power loss 2 W Technical data digital outputs Number of outputs 4 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voitage AC 230 V Current consumption from load voltage L+ (without load) - Total current per group, horizontal configuration, 40°C 5 A Total current per group, horizontal configuration 60°C 5 A Total current per group, vartical configuration 5 A Output current signal *1", rated value 5 A Output delay of "0" to 1" 10 ms Output delay of "0" to 1" 10 ms Output delay of "1" to "0" 5 ms Minimum load current 1 Lamp load Parallel switching of outputs for increased power not possible Actuation of digital input - Switching frequency with resistive load max. 10 Hz Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output 5 A Output das size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no	Note	-
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Cable length, unshielded 600 m Rated load voltage AC 230 V Current consumption from load voltage L+ (without load) - Total current per group, horizontal configuration, 40°C 5 A Total current per group, horizontal configuration, 60°C 5 A Total current per group, vertical configuration 5 A Output current at signal "1", rated value 5 A Output delay of "0" to "1" 10 ms Output delay of "1" to "0" 5 ms Minimum load current - Lamp load - Parallel switching of outputs for increased power not possible Parallel switching of outputs for increased power not possible Actuation of digital input - Switching frequency with resistive load max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output Trigger level - Number of operating cycle of relay outputs 10/7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no	Number of outputs	4
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Total current per group, horizontal configuration, 40°C 5 A Total current per group, horizontal configuration 60°C 5 A Total current per group, vertical configuration 5 A Output current at signal "1", rated value 5 A Output delay of "0" to "1" 10 ms Output delay of "1" to "0" 5 ms Minimum load current - Lamp load - 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 max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no	Rated load voltage	AC 230 V
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Total current per group, vertical configuration 5 A Output current at signal "1", rated value 5 A Output delay of "0" to "1" 10 ms Output delay of "1" to "0" 5 ms Minimum load current - Lamp load - 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 max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10A7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no	Total current per group, horizontal configuration, 40°C	5 A
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Minimum load current Lamp load Parallel switching of outputs for redundant control of a load Parallel switching of outputs for increased power not possible Actuation of digital input - Switching frequency with resistive load Switching frequency with inductive load Switching frequency on lamp load Internal limitation of inductive shut-off voltage Short-circuit protection of output - Trigger level Number of operating cycle of relay outputs 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Output delay of "0" to "1"	10 ms
Lamp load - 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 max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Output delay of "1" to "0"	5 ms
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 max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Minimum load current	-
Parallel switching of outputs for increased power not possible Actuation of digital input - Switching frequency with resistive load max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Lamp load	-
Actuation of digital input Switching frequency with resistive load Switching frequency with inductive load Switching frequency on lamp load Internal limitation of inductive shut-off voltage Short-circuit protection of output - Trigger level Number of operating cycle of relay outputs Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Parallel switching of outputs for redundant control of a load	not possible
Switching frequency with resistive load max. 10 Hz Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Parallel switching of outputs for increased power	not possible
Switching frequency with inductive load - Switching frequency on lamp load - Internal limitation of inductive shut-off voltage - Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Actuation of digital input	-
Switching frequency on lamp load Internal limitation of inductive shut-off voltage Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Switching frequency with resistive load	max. 10 Hz
Internal limitation of inductive shut-off voltage Short-circuit protection of output Trigger level Number of operating cycle of relay outputs Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Switching frequency with inductive load	-
Short-circuit protection of output - Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Switching frequency on lamp load	-
Trigger level - Number of operating cycle of relay outputs 10^7 Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Internal limitation of inductive shut-off voltage	-
Number of operating cycle of relay outputs Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Short-circuit protection of output	-
Switching capacity of contacts 5 A Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Trigger level	-
Output data size 1 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Number of operating cycle of relay outputs	10^7
Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Switching capacity of contacts	5 A
Status display green LED per channel Interrupts no Process alarm no	Output data size	1 Byte
Interrupts no Process alarm no	Status information, alarms, diagnostics	
Process alarm no	Status display	green LED per channel
	Interrupts	no
Diagnostic interrupt no	Process alarm	no
	Diagnostic interrupt	no



Diagnostic functions	no	A YASKAWA COMPANY	
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	1		
Between channels and backplane bus	✓		
Insulation tested with	DC 500 V		
Datasizes			
Input bytes	0		
Output bytes	1		
Parameter bytes	0	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	25.4 mm x 76 mm x 88 mm	
Weight	100 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			
UL508 certification	yes		