

Data sheet SM 222 (222-1BH10)

Technical data

Type SM 222 General Information - Note - Features 16 outputs Output current 1 A Current consumption/power loss - Current consumption/power loss 3.5 W Technical data digital outputs 120 mA Power loss 3.5 W Technical data digital outputs 16 Cable longh, unbibledd 600 m Cable longh, unbibledd 600 m Rated load voltage DC 20.428.8 V Current consumption from load voltage L+ (without load) 10 mA Total current per group, horizontal configuration, 40°C 10 A Total current per group, vertical configuration 10 A Total current per group, vertical configuration, 60°C 10 A Total current a signal "1", ated value 1 A Output daily of "1" 0"0" 100 µs Minimum load current - Lamp load 5 W Paratele switching of outputs for inclusade power not possible Paratele switching of outputs for inclusade power not possible Switching fraquency with meducitwo load	Order no.	222-1BH10
Note - Features 16 outputs Output current 1 A Current consumption/power loss 120 mA Power loss 3.5 W Technical data digital outputs 16 Cable length, unshielded 600 m Catrent consumption from backplane bus 16 Cable length, unshielded 600 m Cable length, unshielded 600 m Cable length, unshielded 000 m Cable current per group, horizontal configuration, 60°C 10 A Total current per group, horizontal configuration 10 A Output delay of '0' to '1' 160 µs Output delay of '1' to '0' 100 µs Minimum load current - Lamp load 5 W Parallel switching of outputs for increased power not possible Parallel switching of outputs for increased power not possible Actuation of digital input yes S	Туре	SM 222
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Current consumption from backplane bus 120 mA Power loss 3.5 W Technical data digital outputs 16 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage DC 20.428.9 V Current consumption from load voltage L+ (without load) 10 mA Total current per group, horizontal configuration, 40°C 10 A Total current per group, vertical configuration, 60°C 10 A Total current per group, vertical configuration, 60°C 10 A Output delay of "0" to "1" 160 µs Output delay of "1" to "0" 100 µs Minimum load current - Lamp load 5 W Parallel switching of outputs for increased power not possible Actuation of digital input yes Switching frequency with nexistive load max. 104 Hz Switching frequency on lamp load max. 104 Hz Thermal limitation of duput yes, electronic Tringger level 1.5 A Number of outputs of contacts - Cutput deta size 2 Byte Switching capacity of contacts - Cutput data size 2 Byte Status display green LED per channel Therrality no	Features	
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Technical data digital outputs 16 Number of outputs 16 Cable length, shielded 1000 m Rated load voltage DC 20.428.8 V Current consumption from load voltage L+ (without load) 10 mA Total current per group, horizontal configuration, 40°C 10 A Total current per group, horizontal configuration 10 A Output delay of 10° to 11 150 µs Output delay of 100 µs max Minimum load current - Lamp load 5 W Parallel switching of outputs for redundant control of a load not possible Actuation of digital input yes Switching frequency with inductive load max. 1000 Hz Switching frequency with inductive load max. 100 Hz Switching frequen	Current consumption from backplane bus	120 mA
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Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)10 mATotal current per group, horizontal configuration, 40°C10 ATotal current per group, horizontal configuration10 ATotal current per group, horizontal configuration10 AOutput delay of '0' to '1'160 µsOutput delay of '0' to '1'100 µsMinimum load current-Lamp load5 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyesSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive study of youtputs-Switching coperating cycle of relay outputs-Switching copacity of contacts-Output data size2 ByteStatus sinformation, alarms, diagnostics-Status sinformation, alarms, diagnostics-Diagnostic interruptnoDiagnostic interruptno	Technical data digital outputs	
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Rated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)10 mATotal current per group, horizontal configuration, 40°C10 ATotal current per group, horizontal configuration, 60°C10 ATotal current per group, vertical configuration, 60°C10 AOutput current at signal "1", rated value1 AOutput delay of "0" to "1"150 µsOutput delay of "1" to "0"100 µsMinimum load current-Lamp load5 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency on lamp loadmax. 100 HzSwitching frequency on lamp loadnot.Trigger level1.5 ANumber of operating cycle of relay outputs-Switching contacts-Output data size2 ByteStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Cable length, shielded	1000 m
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Output delay of "0" to "1"150 μsOutput delay of "1" to "0"100 μsMinimum load current-Lamp load5 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Total current per group, vertical configuration	10 A
Output delay of *1* to *0*100 µsMinimum load current-Lamp load5 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus linformation, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Output current at signal "1", rated value	1 A
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Parallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Minimum load current	-
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Actuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsrooStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Parallel switching of outputs for redundant control of a load	not possible
Switching frequency with resistive loadmax. 1000 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Parallel switching of outputs for increased power	not possible
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Switching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Switching frequency with resistive load	max. 1000 Hz
Internal limitation of inductive shut-off voltageL+ (-52 V)Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Switching frequency with inductive load	max. 0.5 Hz
Short-circuit protection of outputyes, electronicTrigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Switching frequency on lamp load	max. 10 Hz
Trigger level1.5 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size2 ByteStatus information, alarms, diagnosticsStatus displaygreen LED per channelInterruptsnoProcess alarmnoDiagnostic interruptno	Internal limitation of inductive shut-off voltage	L+ (-52 V)
Number of operating cycle of relay outputs - Switching capacity of contacts - Output data size 2 Byte Status information, alarms, diagnostics - Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no	Short-circuit protection of output	yes, electronic
Switching capacity of contacts - Output data size 2 Byte Status information, alarms, diagnostics - Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no	Trigger level	1.5 A
Output data size 2 Byte Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no	Number of operating cycle of relay outputs	-
Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no	Switching capacity of contacts	-
Status display green LED per channel Interrupts no Process alarm no Diagnostic interrupt no	Output data size	2 Byte
Interrupts no Process alarm no Diagnostic interrupt no	Status information, alarms, diagnostics	
Process alarm no Diagnostic interrupt no	Status display	green LED per channel
Diagnostic interrupt no	Interrupts	no
	Process alarm	no
Diagnostic functions no	Diagnostic interrupt	no
	Diagnostic functions	no



Diagnostics information read-out	none A YASKAWA COMPANY
Supply voltage display	green LED per group
Group error display	red SF LED
Channel error display	none
Isolation	
Between channels	•
Between channels of groups to	16
Between channels and backplane bus	yes
Insulation tested with	DC 500 V
Datasizes	
Input bytes	0
Output bytes	2
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	90 g
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	