

Data sheet SM 222 (222-1BF50)

Technical data

Type     SM 222       General information     .       Note     -       Features     8 Low-Side outputs Output current 0.5 A       Current consumption/power loss     .       Current consumption/power loss     50 mA       Power loss     1.5 W       Technical data digital outputs     8       Cable length, shielded     1000 m       Cable length, shielded     600 m       Rated load voltage     DC 20.428.8 V       Current per group, horizontal configuration, 40°C     4 A       Total current per group, horizontal configuration, 40°C     4 A       Output delay of "0" to "1"     30 µs       Output delay of "0" to "1"     30 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       Parallel switching of digital input     yes       Switching frequency with resistive load     max. 1000 Hz	Order no.	222-1BF50
Note   -     Features:   8 Low-Side outputs Output current 0.5 A     Current consumption/power loss   50 mA     Power loss   1.5 W     Technical data digital outputs   8     Cable length, shielded   1000 m     Cable length, unshielded   600 m     Rated load voltage   DC 20.428.8 V     Current consumption from load voltage L+ (without load)   15 mA     Total current per group, horizontal configuration, 40°C   4 A     Total current per group, horizontal configuration, 60°C   4 A     Total current a signal "1", rated value   0.5 A     Output delay of "0" to "1"   30 µs     Output delay of "0" to "1"   30 µs     Output delay of "1" to "0"   100 µs     Minimum load current   -     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     Parallel switching of duputs for increased power   not possible		SM 222
Note   -     Features:   8 Low-Side outputs Output current 0.5 A     Current consumption/power loss   50 mA     Power loss   1.5 W     Technical data digital outputs   8     Cable length, shielded   1000 m     Cable length, unshielded   600 m     Rated load voltage   DC 20.428.8 V     Current consumption from load voltage L+ (without load)   15 mA     Total current per group, horizontal configuration, 40°C   4 A     Total current per group, horizontal configuration, 60°C   4 A     Total current a signal "1", rated value   0.5 A     Output delay of "0" to "1"   30 µs     Output delay of "0" to "1"   30 µs     Output delay of "1" to "0"   100 µs     Minimum load current   -     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     Parallel switching of duputs for increased power   not possible		
Features   8 Low-Side outputs Output current 0.5 A     Current consumption/power loss   50 mA     Power loss   1.5 W     Technical data digital outputs   8     Number of outputs   8     Cable length, shielded   1000 m     Cable length, unshielded   600 m     Rated load voltage   DC 20.428.8 V     Current consumption from load voltage L+ (without load)   15 mA     Total current per group, horizontal configuration, 40°C   4 A     Total current per group, horizontal configuration   4 A     Output current at signal "1", rated value   0.5 A     Output delay of "0" to "1"   30 µs     Output delay of "0" to "1"   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	General information	
Output current 0.5 A       Current consumption/power loss       Current consumption from backplane bus     50 mA       Power loss     1.5 W       Technical data digital outputs     Number of outputs       Number of outputs     8       Cable length, shielded     1000 m       Cable length, unshielded     600 m       Rated load voltage     DC 20.428.8 V       Current consumption from load voltage L+ (without load)     15 mA       Total current per group, horizontal configuration, 40°C     4 A       Total current per group, horizontal configuration     4 A       Output current at signal "1", rated value     0.5 A       Output delay of "0" to "1"     30 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	Note	•
Current consumption from backplane bus50 mAPower loss1.5 WTechnical data digital outputsNumber of outputs8Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput delay of "0" to "1"30 μsOutput delay of "1" to "0"100 μsMinimum load current-Lamp load5 WParallel switching of outputs for increased powernot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyes	Features	
Power loss1.5 WTechnical data digital outputsNumber of outputs8Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput delay of "0" to "1"30 μsOutput delay of "0" to "1"30 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 inputyes	Current consumption/power loss	
Technical data digital outputsNumber of outputs8Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Current consumption from backplane bus	50 mA
Number of outputs8Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 μsOutput delay of "1" to "0"100 μsMinimum load current-Lamp load5 WParallel switching of outputs for increased powernot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyes	Power loss	1.5 W
Cable length, shielded1000 mCable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 μsOutput delay of "1" to "0"100 μsMinimum load current-Lamp load5 WParallel switching of outputs for increased powernot possibleActuation of digital inputyes	Technical data digital outputs	
Cable length, unshielded600 mRated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 μsOutput delay of "1" to "0"100 μsMinimum load current-Lamp load5 WParallel switching of outputs for increased powernot possibleActuation of digital inputyes	Number of outputs	8
Rated load voltageDC 20.428.8 VCurrent consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Cable length, shielded	1000 m
Current consumption from load voltage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 digital inputyes	Cable length, unshielded	600 m
Total current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Rated load voltage	DC 20.428.8 V
Total current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Current consumption from load voltage L+ (without load)	15 mA
Total current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Total current per group, horizontal configuration, 40°C	4 A
Output current at signal "1", rated value0.5 AOutput delay of "0" to "1"30 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 inputyes	Total current per group, horizontal configuration, 60°C	4 A
Output delay of "0" to "1"30 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 inputyes	Total current per group, vertical configuration	4 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 inputyes	Output current at signal "1", rated value	0.5 A
Minimum load current -   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 yes	Output delay of "0" to "1"	30 µs
Lamp load5 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for increased powernot possibleActuation of digital inputyes	Output delay of "1" to "0"	100 µs
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   yes	Minimum load current	-
Parallel switching of outputs for increased power not possible   Actuation of digital input yes	Lamp load	5 W
Actuation of digital input yes	Parallel switching of outputs for redundant control of a load	not possible
	Parallel switching of outputs for increased power	not possible
Switching frequency with resistive load max. 1000 Hz	Actuation of digital input	yes
	Switching frequency with resistive load	max. 1000 Hz
Switching frequency with inductive load max. 0.5 Hz	Switching frequency with inductive load	max. 0.5 Hz
Switching frequency on lamp load max. 10 Hz	Switching frequency on lamp load	max. 10 Hz
Internal limitation of inductive shut-off voltage +45 V	Internal limitation of inductive shut-off voltage	+45 V
Short-circuit protection of output yes, electronic	Short-circuit protection of output	yes, electronic
Trigger level 1.7 A	Trigger level	1.7 A
Number of operating cycle of relay outputs -	Number of operating cycle of relay outputs	-
Switching capacity of contacts -	Switching capacity of contacts	-
Output data size 1 Byte	Output data size	1 Byte
Status information, alarms, diagnostics	Status information, alarms, diagnostics	
Status display green LED per channel	Status display	green LED per channel
Interrupts no	Interrupts	no
Process alarm no	Process alarm	no
Diagnostic interrupt no	Diagnostic interrupt	no
Diagnostic functions 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	8	
Between channels and backplane bus	yes	
Insulation tested with	DC 500 V	
Datasizes		
Input bytes	0	
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	90 g	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL certification	yes	
KC certification	-	