

Data sheet SM 022 - Digital output (022-1BF00)

Technical data

TypeSM 022 - Digital outputModule ID0106 AFC8General Information-Note-FeaturesSC 24 V 0.5 ACurrent consumption/power loss80 mACurrent consumption from backplane bus80 mAPower loss0.7 WTechnical data digital outputs8Cable length, shielded600 mCate loss0.0 mCable length, shielded000 mCable length, unshielded600 mCate loss0.6 0 mRated load votageDC 20.428.8 VCurrent consumption from load votage L+ (without load)15 mATotal current per group, horizontal configuration, 40°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, horizontal configuration, 60°C4 ATotal current per group, horizontal configuration, 60°C4 DOutput delay of 1° to °1°30 psOutput delay of 1° to °1°30 psDuput delay of 1° to °1°30 psSwitching frequency with inductive loadmax. 100 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency with inductive loadmax. 100 HzSwitching frequency with inductive loadmax. 0.5 HzSwitching frequency with inductive loadmax. 100 HzSwitching frequency with inductive loadmax. 100 HzSwitching frequency with inducti	Order no.	022-1BF00
General information Note - Features 8x DO DC 24 V 0.5 Å Current consumption/power loss 80 mA Current consumption from backplane bus 80 mA Power loss 0.7 W Technical data digital outputs 8 Cable length, unshielded 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, 60°C 4 A Total current per group, horizontal configuration, 60°C 4 A Total current per group, vertical configuration, 60°C 4 A Total current per group, vertical configuration, 60°C 4 A Output current at signal '1', tated value 0.5 A Signal logic output Sourcing output Output delay of '1' to '0' 175 µs Minimum load current - Lamp load not possible Parallel switching of outputs for increased power not possible Parallel switching of outputs for increased power not possible Switching frequency on Inme joud max. 100 Hz	Туре	SM 022 - Digital output
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DC 24 V Current consumption/power loss Current consumption from backplane bus 80 mA Power loss 0.7 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, 60°C 4 A Output current at signal '1', rated value 0.5 A Signal logic output Sourcing output Output day of '1 to '0' 175 µS Minimum load current - Lamp load 10 W Parallel switching of outputs for increased power not possible Parallel switching of outputs for increased power not possible Switching frequency with inductive load max. 100 Hz Switching frequency with inductive shu-off voltage L+ (45 V) Switching frequency with inductive shu-off voltage L+ (45 V) Switc	Note	-
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Power loss 0.7 W Technical data digital outputs 8 Cable length, shielded 1000 m Cable length, unshielded 600 m Rated load voltage D C 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 Output ourrent at signal '1', rated value 0.5 A Signal logic output Sourcing output Output day of '0' to '1' 30 μs Output durrent at signal outputs - Larm load current per group, horizontal configuration 4 M Output day of '1' to '0' 175 μs Minimum load current - Lamp load 10 W Parallel switching of outputs for increased power not possible Parallel switching frequency with inductive load max. 1000 Hz Switching frequency on lamp load max. 1000 Hz Switching frequency on lamp load max. 100 Hz Switching requency on lamp load max. 100 Hz Switching requency on lamp load	Current consumption/power loss	
Technical data digital 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, 60°C 4 A Total current per group, vertical configuration, 60°C 4 A Output current at signal "1", rated value 0.5 A Signal logic output Sourcing output Output delay of "0" to "1" 30 µs Output delay of "1" to "0" 175 µs Minimum load current - Lamp load 10 W Parallel switching of outputs for increased power not possible Parallel switching frequency with inductive load max. 1000 Hz Switching frequency with inductive load max. 0.5 Hz Switching frequency on lamp load max. 0.5 Hz Switching requency on lamp load max. 0.5 Hz Switching requency on lamp load max. 0.5 Hz Switching requency on lamp load	Current consumption from backplane bus	80 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 configuration, 60°C4 AOutput current at signal "1", rated value0.5 ASignal logic outputSourcing outputOutput delay of "0" to "1"30 µsOutput delay of "1" to "0"175 µsMinimum load current-Lamp load10 WParallel switching of outputs for increased powernot possibleParallel switching of outputs for increased powermot possibleSwitching frequency with inductive loadmax. 100 HzSwitching frequency on lamp loadmax. 100 HzSwitching frequency on lamp loadmax. 100 HzInternal limitation of inductive shut-off voltageL+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching reagency of contacts0Output da size8 BitStatus displaygreen LED per channelInterruptsnoProcess alarmno	Power loss	0.7 W
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Total current per group, horizontal configuration, 60°C4 ATotal current per group, vertical configuration4 AOutput current at signal *1*, rated value0.5 ASignal logic outputSourcing outputOutput delay of *0* to *1*30 µsOutput delay of *0* to *1*30 µsOutput delay of *1* to *0*175 µsMinimum load current-Lamp load10 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 resistive loadmax. 0.5 HzSwitching frequency with inductive loadmax. 0.1 HzInternal limitation of inductive shut-off voltageL+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displaygreen LED per channelInterruptsnoProcess alarmno	Current consumption from load voltage L+ (without load)	15 mA
Total current per group, vertical configuration4 AOutput current at signal "1", rated value0.5 ASignal logic outputSourcing outputOutput delay of "0" to "1"30 µsOutput delay of "0" to "1"175 µsMinimum load current-Lamp load10 WParallel switching of outputs for redundant control of a loadnot possibleParallel switching of outputs for rincreased powernot possibleActuation of digital inputyesSwitching frequency with resistive loadmax. 1000 HzSwitching frequency with resistive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (45 V)Short-circuit protection of outputs-Switching copacity of contacts-Output data size8 BitStatus displaygreen LED per channelInternalFormation, alarms, diagnosticsStatus displaynoProcess alarmno	Total current per group, horizontal configuration, 40°C	4 A
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Lamp load10 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. 0.10 HzInternal limitation of inductive shut-off voltageL+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displaygreen LED per channelInterruptsnoParallel satermno	Output delay of "1" to "0"	175 µs
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Parallel 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+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displaygreen LED per channelInterruptsnoProcess alarmno	Lamp load	10 W
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+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displaygreen LED per channelInterruptsnoProcess alarmno	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+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displaygreen LED per channelInterruptsnoProcess alarmno	Parallel switching of outputs for increased power	not possible
Switching frequency with inductive loadmax. 0.5 HzSwitching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmno	Actuation of digital input	yes
Switching frequency on lamp loadmax. 10 HzInternal limitation of inductive shut-off voltageL+ (-45 V)Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus displayInterruptsnoProcess alarmno	Switching frequency with resistive load	max. 1000 Hz
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Short-circuit protection of outputyes, electronicTrigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmno	Switching frequency on lamp load	max. 10 Hz
Trigger level1 ANumber of operating cycle of relay outputs-Switching capacity of contacts-Output data size8 BitStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmno	Internal limitation of inductive shut-off voltage	L+ (-45 V)
Number of operating cycle of relay outputs-Switching capacity of contacts-Output data size& BitStatus information, alarms, diagnosticsgreen LED per channelInterruptsnoProcess alarmno	Short-circuit protection of output	yes, electronic
Switching capacity of contacts - Output data size 8 Bit Status information, alarms, diagnostics - Status display green LED per channel Interrupts no Process alarm no	Trigger level	1 A
Output data size 8 Bit Status information, alarms, diagnostics green LED per channel Interrupts no Process alarm no	Number of operating cycle of relay outputs	-
Status information, alarms, diagnostics Status display green LED per channel Interrupts no Process alarm no	Switching capacity of contacts	-
Status display green LED per channel Interrupts no Process alarm no	Output data size	8 Bit
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

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Diagnostic functions	no
Diagnostics information read-out	none
Supply voltage display	green LED
Group error display	red LED
Channel error display	none
Isolation	
Between channels	
Between channels of groups to	-
Between channels and backplane bus	yes
Insulation tested with	DC 500 V
PWM data	
PWM channels	
PWM time basis	-
Period length	-
Minimum pulse width	-
Type of output	-
Safety	
Safety protocol	-
Safety requirements	-
Secure user address	-
Watchdog	-
Two channels	-
Test pulse length	-
Circuit monitoring	
Datasizes	
Input bytes	0
Output bytes	1
Parameter bytes	0
Diagnostic bytes	0
Housing	
Material	PPE / PPE GF10
Mounting	Profile rail 35 mm
Mechanical data	
Dimensions (WxHxD)	12.9 mm x 109 mm x 76.5 mm
Net weight	58 g
Weight including accessories	58 g
Gross weight	73 g
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	yes