

Data sheet FM 050 (050-1BB00)

Technical data

Type FM 050 Module ID 08C3 380A General information Commend of the part of t	Order no.	050-1BB00
Module ID 08C3 380A General Information Canal Counter 32 Bit (AB) Features 2 Counter 32 Bit (AB) Current consumption from backplane bus 75 mA Power loss 0.9 W Technical data digital inputs Number of inputs 4 Cable length, shielded 100 m Cable length, shielded 0 C 20.428.8 V Reverse polarity protection of rated load voltage - Rated load voltage DC 20.428.8 V Raverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 15 mA Rated value DC 20.428.8 V Input voltage for signal "0" DC 0.5.5 V Input voltage for signal "1" DC 0.5.5 V Input voltage for signal "1" DC 0.5.5 W Input voltage for signal "1" DC 0.5	Туре	FM 050
Note - Features 2 Counter 32 Bit (AB) Current consumption/power loss Current consumption from backplane bus 75 mA Power loss 0.9 W Technical data digital inputs 4 Cable length, shielded 100 m Cable length, unshielded - Rated load voltage DC 2428.8 V Reverse polarity protection of rated load voltage - Current consumption from load voltage L+ (without load) 15 mA Rated value DC 20.428.8 V Input voltage for signal 10° DC 1528.8 V Input voltage for signal 1° DC 1528.8 V Input voltage for signal 1°1 3 mA Frequency range - Input voltage for signal 1°1 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of '0' to '1° 0' Number of simultaneously utilizable inputs vertical configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte		08C3 380A
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Number of inputs 4 Cable length, shielded 100 m Cable length, unshielded	Current consumption from backplane bus	75 mA
Number of inputs Cable length, shielded Cable length, unshielded Rated load voltage Reverse polarity protection of rated load voltage Current consumption from load voltage L+ (without load) Input voltage for signal "0" Input voltage for signal "1" Input voltage for signal "1" Input voltage for signal "1" Input voltage hysteresis Frequency range Input current for signal "1" SamA Connection of Two-Wire-BEROs possible Max. permissible BERO quiescent current Input delay of "0" to "1" Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vortical configuration Input characteristic curve Initial data size Length, shielded Cable length, unshielded Rated load voltage L+ (without load) 1 = Cable length, unshielded Rated load voltage L+ (without load) 1 = Cable length, unshielded Current consumption from load voltage L+ (without load) 2 = Carrent consumption from load voltage L+ (without load) 1 = Cable length, unshielded Current consumption from load voltage L+ (without load) 2 = Carrent consumption from load voltage L+ (without load) 2 = Carrent consumption from load voltage L+ (without load) 3 = Carrent consumption from load voltage L+ (without load) 3 = Carrent consumption from load voltage L+ (without load) 3 = Carrent consumption from load voltage L+ (without load) 4 = Carrent consumption from load voltage L+ (without load) 5 = Carrent consumption from load voltage L+ (without load) 5 = Carrent consumption from load voltage L+ (without load) 5 = Carrent consumption from load voltage L+ (without load)	Power loss	0.9 W
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Current consumption from load voltage L+ (without load) 15 mA Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 µs Input delay of "1" to "0" 0.8 µs Number of simultaneously utilizable inputs horizontal configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage - Current consumption from load voltage L+ (without load) -	Rated load voltage	DC 20.428.8 V
Rated value DC 20.428.8 V Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input resistance - Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 µs Input delay of "1" to "0" 0.8 µs Number of simultaneously utilizable inputs horizontal configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Cable length, shielded - Cable length, unshielded - Rated load voltage L+ (without load) - Current consumption from load voltage L+ (without load) -	Reverse polarity protection of rated load voltage	-
Input voltage for signal "0" DC 05 V Input voltage for signal "1" DC 1528.8 V Input voltage hysteresis - Frequency range - Input resistance - Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 µs Input delay of "1" to "0" 0.8 µs Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input data size IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage L+ (without load) -	Current consumption from load voltage L+ (without load)	15 mA
Input voltage for signal "1"	Rated value	DC 20.428.8 V
Input voltage hysteresis - Frequency range - Input resistance - Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 μs Number of simultaneously utilizable inputs horizontal configuration 4 Number of simultaneously utilizable inputs vertical configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage - Current consumption from load voltage L+ (without load) -	Input voltage for signal "0"	DC 05 V
Frequency range-Input resistance-Input current for signal "1"3 mAConnection of Two-Wire-BEROs possibleyesMax. permissible BERO quiescent current0.5 mAInput delay of "0" to "1"0.8 μsInput delay of "1" to "0"0.8 μsNumber of simultaneously utilizable inputs horizontal configuration4Input characteristic curveIEC 61131-2, type 1Initial data size12 ByteTechnical data digital outputsNumber of outputs-Cable length, shielded-Cable length, unshielded-Catel load voltage-Current consumption from load voltage L+ (without load)-	Input voltage for signal "1"	DC 1528.8 V
Input resistance - Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 μs Input delay of "1" to "0" 0.8 μs Number of simultaneously utilizable inputs horizontal configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage Current consumption from load voltage L+ (without load) -	Input voltage hysteresis	-
Input current for signal "1" 3 mA Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 µs Input delay of "1" to "0" 0.8 µs Number of simultaneously utilizable inputs horizontal configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage Current consumption from load voltage L+ (without load) -	Frequency range	-
Connection of Two-Wire-BEROs possible yes Max. permissible BERO quiescent current 0.5 mA Input delay of "0" to "1" 0.8 μs Input delay of "1" to "0" 0.8 μs Number of simultaneously utilizable inputs horizontal configuration 4 Number of simultaneously utilizable inputs vertical configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage - Current consumption from load voltage L+ (without load) -	Input resistance	-
Max. permissible BERO quiescent current0.5 mAInput delay of "0" to "1"0.8 μsInput delay of "1" to "0"0.8 μsNumber of simultaneously utilizable inputs horizontal configuration4Number of simultaneously utilizable inputs vertical configuration4Input characteristic curveIEC 61131-2, type 1Initial data size12 ByteTechnical data digital outputsNumber of outputs-Cable length, shielded-Cable length, unshielded-Rated load voltage-Current consumption from load voltage L+ (without load)-	Input current for signal "1"	3 mA
Input delay of "0" to "1" to "0" 0.8 µs Input delay of "1" to "0" 0.8 µs Number of simultaneously utilizable inputs horizontal configuration 4 Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage Current consumption from load voltage L+ (without load) -	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 IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs Cable length, shielded - Cable length, unshielded Rated load voltage Current consumption from load voltage L+ (without load) - Cable length, unshielded Current consumption from load voltage L+ (without load) - Cable length, unshielded Current consumption from load voltage L+ (without load)	Max. permissible BERO quiescent current	0.5 mA
Number of simultaneously utilizable inputs horizontal configuration Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded Cable length, unshielded Rated load voltage Current consumption from load voltage L+ (without load) - Cable length, unshielded - Carrent consumption from load voltage L+ (without load)	Input delay of "0" to "1"	0.8 µs
Number of simultaneously utilizable inputs vertical configuration Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded Rated load voltage Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load)	Input delay of "1" to "0"	0.8 µs
Input characteristic curve IEC 61131-2, type 1 Initial data size 12 Byte Technical data digital outputs Number of outputs - Cable length, shielded - Cable length, unshielded - Rated load voltage Current consumption from load voltage L+ (without load) -		4
Technical data digital outputs Number of outputs Cable length, shielded Cable length, unshielded Cable length, unshielded Catle length, unshielded Catle length, unshielded Catle length, unshielded Catle length, unshielded	Number of simultaneously utilizable inputs vertical configuration	4
Technical data digital outputs Number of outputs Cable length, shielded Cable length, unshielded Cable length, unshielded Catle length, unshielded Current consumption from load voltage L+ (without load)	Input characteristic curve	IEC 61131-2, type 1
Number of outputs - Cable length, shielded - Cable length, unshielded - Cable length, unshielded - Cable length, unshielded - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load) - Current consumption from load voltage L+ (without load)	Initial data size	12 Byte
Cable length, shielded - Cable length, unshielded - Rated load voltage - Current consumption from load voltage L+ (without load) -	Technical data digital outputs	
Cable length, unshielded - Rated load voltage - Current consumption from load voltage L+ (without load) -	Number of outputs	-
Rated load voltage - Current consumption from load voltage L+ (without load) -	Cable length, shielded	-
Rated load voltage - Current consumption from load voltage L+ (without load) -	Cable length, unshielded	-
Current consumption from load voltage L+ (without load) -		-
Output delay of "0" to "1" -		-
	Output delay of "0" to "1"	-

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Output delay of "1" to "0"	
Minimum load current	
Lamp load	
Parallel switching of outputs for redundant control of a load	-
Parallel switching of outputs for increased power	-
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	-
Output data size	12 Byte
Technical data counters	
Number of counters	2
Counter width	32 Bit
Maximum input frequency	100 kHz
Maximum count frequency	400 kHz
Mode incremental encoder	yes
Mode pulse / direction	yes
Mode pulse	-
Mode frequency counter	-
Mode period measurement	-
Gate input available	-
Latch input available	-
Reset input available	-
Counter output available	-
Status information, alarms, diagnostics	
Status display	yes
Interrupts	yes, parameterizable
Process alarm	yes, parameterizable yes, parameterizable
Diagnostic interrupt	yes, parameterizable
Diagnostic functions	yes, parameterizable yes, parameterizable
Diagnostics information read-out	possible
Module state	green LED
	red LED
Module error display Channel error display	none
Chainer entri dispiay	none
Isolation	
Between channels	-
Between channels of groups to	-
Between channels and backplane bus	yes
Between channels and power supply	-
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	-
Max. potential difference between Mana and Mintern (Uiso)	-



Max. potential difference between inputs and Mana (Ucm)	-
Max. potential difference between inputs and Mintern (Uiso)	-
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V
Datasizes	
Input bytes	12
Output bytes	12
Parameter bytes	45
Diagnostic bytes	20
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	60 g
Weight including accessories	-
Gross weight	-
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	yes