

Data sheet

FM 050 (050-1BA00)

Technical data

Order no.	050-1BA00
Туре	FM 050
Module ID	08C1 3800
General information	
Note	-
Features	1x Counter 32 Bit (AB), DC 24 V Up to 400 kHz 1x DO, DC 24 V 0,5 A
Current consumption/power loss	
Current consumption from backplane bus	75 mA
Power loss	1 W
Technical data digital inputs	
Number of inputs	5
Cable length, shielded	100 m
Cable length, unshielded	-
Rated load voltage	DC 20.428.8 V
Reverse polarity protection of rated load voltage	
Current consumption from load voltage L+ (without load)	20 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	-
Signal logic input	Sinking input
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	5
Number of simultaneously utilizable inputs vertical configuration	5
Input characteristic curve	IEC 61131-2, type 1
Initial data size	12 Byte
Technical data digital outputs	
Number of outputs	1
Cable length, shielded	100 m
Cable length, unshielded	100 m
Rated load voltage	DC 20.428.8 V
Current consumption from load voltage L+ (without load)	-

YASKAWA VIPA CONTROLS

Output delay of "1" to "0" Minimum load current	Output delay of "0" to "1"	30 μs
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 yes Switching frequency with resistive load max. 10 kHz Switching frequency with resistive load max. 10 kHz Switching frequency on lamp load max. 10 kHz Switching frequency on lamp load max. 10 kHz Internal limitation of inductive shut-off voltage Le (-52 V) Short-circuit protection of output yes, electronic Trigger level 1 A Number of operating cycle of relay outputs - Switching capacity of contacts - Output data size 10 Byte Technical data counters Number of counters 1 Counter width 32 Bit Maximum pour frequency 100 kHz Maximum count frequency 400 kHz Mode pulse / direction Mode pulse / wes Mode pulse / direction Mode pulse / given output - Sample / given output / wes Status display / wes Status information, alarms, diagnostics Status information, alarms, diagnostics Status information yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic information read-out Module error display Node learer channels	Output delay of "1" to "0"	30 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 Switching frequency with resistive load max. 10 kHz Switching frequency with inductive load max. 10 kHz Switching frequency with inductive shut-off voltage L+(-52 V) Switching frequency on lamp load max. 10 kHz Internal limitation of inductive shut-off voltage L+(-52 V) Short-circuit production of output yes, electronic Trigger level 1 A Number of operating cycle of relay outputs - Switching capacity of contacts - Output data size 10 Byte Technical data counters Number of counters 1 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 frequency counter - Gate input available yes Latch input available yes Status display yes Status display yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic information read-out model and in the possible Module error display none Between channels of groups to -	Minimum load current	-
Parallel switching of outputs for increased power Actuation of digital input Switching frequency with resistive load max. 10 kHz Switching frequency with inductive load max. 10 kHz Switching frequency on lamp load max. 10 kHz Switching frequency on lamp load max. 10 kHz Internal limitation of inductive shut-off voltage L+ (-82 V) Short-circuit protection of output yos, electronic Trigger lovel 1 A Number of operating cycle of relay outputs - Switching capacity of contacts - Output data size 10 Byte Technical data counters Number of counters 1 Counter width 32 Bit Maximum count frequency 100 kHz Maximum count frequency 400 kHz Maximum count frequency 400 kHz Mode pulse / direction yes Mode pulse / direction yes Mode pulse / wes Mode pulse / yes Status display usualiable yes Status display yes Status display yes, parameterizable Process alarm yes, parameterizable Diagnostic interrupt Process alarm yes, parameterizable Diagnostic interrupt Diagnostic interrupt Process alarm yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt Process alarm Number of groups to - Between channels - Between channels - Between channels of groups to	Lamp load	10 W
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Short-circuit protection of output yes, electronic Trigger level 1 A Number of operating cycle of relay outputs - Switching capacity of contacts - Output data size 10 Byte Technical data counters Number of counters 1 Counter width 32 Bit Maximum input frequency 100 kHz Maximum input frequency 400 kHz Maximum count frequency 400 kHz Mode pulse / direction yes Shode frequency counter - Mode prior measurement - Gate input available yes Counter output available yes Status display yes Interrupts yes, parameterizable Process alarm yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic interrupt possible Module state green LED Module error display none Between channels of groups to -	Switching frequency on lamp load	max. 10 kHz
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Switching capacity of contacts Output data size 10 Byte Technical data counters Number of counters 1 Counter width 32 Bit Maximum input frequency 100 kHz Maximum count frequency 400 kHz Mode incremental encoder yes Mode pulse / direction yes Mode pulse / direction yes Mode priod measurement - Mode priod measurement - Gate input available yes Latch input available yes Status display yes Status display yes Interrupts yes, parameterizable Diagnostic interrupt Diagnostic functions Diagnostics information read-out possible Module state green LED Module error display none Isolation Between channels Eetween channels Eetween channels Eetween channels 1 1 1 1 1 1 1 1 1 1 1 1 1	Trigger level	1 A
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Mode pulse / direction yes Mode pulse - Mode frequency counter - Mode period measurement - Gate input available yes Latch input available yes Reset input available yes Counter output available yes Status information, alarms, diagnostics Status display yes Interrupts yes, parameterizable Process alarm yes, parameterizable Diagnostic interrupt yes, parameterizable Diagnostic functions yes, parameterizable Diagnostic functions yes, parameterizable Diagnostic sinformation read-out possible Module state green LED Module error display red LED Channel error display none Isolation Between channels - Between channels of groups to -	Maximum count frequency	400 kHz
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Isolation Between channels - Between channels of groups to -	Module error display	red LED
Between channels - Between channels of groups to -	Channel error display	none
Between channels of groups to -	Isolation	
	Between channels	-
	Between channels of groups to	-
Between channels and backplane bus yes	Between channels and backplane bus	yes
Between channels and power supply -	Between channels and power supply	-
Max. potential difference between circuits -	Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	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	10
Parameter bytes	25
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	57 g
Weight including accessories	57 g
Gross weight	71 g
Environmental conditions	
Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C
Certifications	
UL certification	yes
KC certification	yes