Data sheet
FM 050 (050-1BA10)

Technical data

Order no.	050-1BA10
Type	FM 050
Module ID	08C2 3801
General information	
Note	-
Features	1x Counter 32 Bit (AB), DC 5 V Up to 2 MHz (difference signal)
Current consumption/power loss	
Current consumption from backplane bus	75 mA
Power loss	0.85 W
Technical data digital inputs	
Number of inputs	-
Cable length, shielded	100 m
Cable length, unshielded	-
Rated load voltage	DC 20.4...28.8 V
Reverse polarity protection of rated load voltage	-
Current consumption from load voltage L+ (without load)	20 mA
Rated value	-
Input voltage for signal "0"	Differential signal RS422
Input voltage for signal "1"	Differential signal RS422
Input voltage hysteresis	-
Signal logic input	-
Frequency range	-
Input resistance	120 Ohm
Input current for signal "1"	-
Connection of Two-Wire-BEROs possible	-
Max. permissible BERO quiescent current	-
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 characteristic curve	-
Initial data size	8 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)	-
Output delay of "0" to "1"	-
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	10 Byte

Technical data counters

Number of counters	1
Counter width	32 Bit
Maximum input frequency	500 kHz
Maximum count frequency	2 MHz
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	yes
Counter output available	-

Status information, alarms, diagnostics

Status display	yes
Interrupts	yes, parameterizable
Process alarm	yes, parameterizable
Diagnostic interrupt	yes, parameterizable
Diagnostic functions	yes, parameterizable
Diagnostics information read-out	possible
Module state	green LED
Module error display	red LED
Channel error display	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	8
Output bytes	10
Parameter bytes	23
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	58 g
Weight including accessories	58 g
Gross weight	72 g

Environmental conditions

Operating temperature	0 °C to 60 °C
Storage temperature	-25 °C to 70 °C

Certifications

UL certification	yes
KC certification	yes