Data sheet
FM 050 (050-1BB40)

Technical data

Order no.	050-1BB40
Type	FM 050
Module ID	0881 2880
General information	
Note	-
Features	Frequency measurement 2x Counter 24 Bit (AB), DC 24 V Up to 600 kHz
Current consumption/power loss	
Current consumption from backplane bus	35 mA
Power loss	0.5 W
Technical data digital inputs	
Number of inputs	2
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)	5 mA
Rated value	DC 20.4...28.8 V
Input voltage for signal "0"	DC 0...5 V
Input voltage for signal "1"	DC 15...28.8 V
Input voltage hysteresis	-
Signal logic 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	2
Number of simultaneously utilizable inputs vertical configuration	2
Input characteristic curve	IEC 61131-2, type 1
Initial data size	20 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	12 Byte

Technical data counters

Number of counters	2
Counter width	24 Bit
Maximum input frequency	600 kHz
Maximum count frequency	600 kHz
Mode incremental encoder	-
Mode pulse / direction	-
Mode pulse	-
Mode frequency counter	yes
Mode period measurement	yes
Gate input available	-
Latch input available	-
Reset input available	-
Counter output available	-

Status information, alarms, diagnostics

Status display	yes
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	no
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	20
Output bytes	12
Parameter bytes	8
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	55 g
Weight including accessories	55 g
Gross weight	70 g

Environmental conditions

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

Certifications

UL certification	yes
KC certification	yes