

**Data sheet**  
**FM 050 (050-1BB40)**
**Technical data**

<b>Order no.</b>	<b>050-1BB40</b>
Type	FM 050
Module ID	0881 2880
<b>General information</b>	
Note	-
Features	Frequency measurement 2x Counter 24 Bit (AB), DC 24 V Up to 600 kHz
<b>Current consumption/power loss</b>	
Current consumption from backplane bus	35 mA
Power loss	0.5 W
<b>Technical data digital inputs</b>	
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 $\mu$ s
Input delay of "1" to "0"	0.8 $\mu$ s
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
<b>Technical data digital outputs</b>	
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