



Data sheet

FM 250 (250-1BA00)

Technical data

Order no.	250-1BA00
Type	FM 250
General information	
Note	-
Features	2/4 channels with 32/16 Bit DC 24 V or via backplane bus Free configurable DC 24 V outputs (1 A) Up to 1 MHz
Current consumption/power loss	
Current consumption from backplane bus	80 mA
Power loss	2.5 W
Technical data digital inputs	
Number of inputs	6
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage	
Current consumption from load voltage L+ (without load)	-
Rated value	-
Input voltage for signal "0"	DC 0...5 V
Input voltage for signal "1"	DC 15...28.8 V
Input voltage hysteresis	-
Frequency range	-
Input resistance	2 kOhm
Input current for signal "1"	14 mA
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	6
Number of simultaneously utilizable inputs vertical configuration	6
Input characteristic curve	-
Initial data size	10 Byte
Technical data digital outputs	
Number of outputs	2
Cable length, shielded	1000 m
Cable length, unshielded	600 m
Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage	
Current consumption from load voltage L+ (without load)	10 mA

Total current per group, vertical configuration	2 A
Output voltage signal "1" at min. current	L+ (-125 mV)
Output voltage signal "1" at max. current	L+ (-0.8 V)
Output current at signal "1", rated value	1 A
Output current, permitted range to 40°C	-
Output current, permitted range to 60°C	-
Output delay of "0" to "1"	max. 100 µs
Output delay of "1" to "0"	max. 500 µs
Minimum load current	-
Lamp load	10 W
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	-
Switching frequency with resistive load	max. 1000 Hz
Switching frequency with inductive load	max. 0.5 Hz
Switching frequency on lamp load	max. 10 Hz
Internal limitation of inductive shut-off voltage	L+ (-52 V)
Short-circuit protection of output	yes, electronic
Trigger level	3 A
Number of operating cycle of relay outputs	-
Switching capacity of contacts	-
Output data size	10 Byte

Technical data counters

Number of counters	2
Counter width	1x32 Bit / 2x16 Bit
Maximum input frequency	1 MHz
Maximum count frequency	1 MHz
Mode incremental encoder	✓
Mode pulse / direction	✓
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	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	no
Diagnostics information read-out	none
Supply voltage display	yes
Group error display	red LED

Channel error display	none
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Isolation

Between channels	-
Between channels of groups to	-
Between channels and backplane bus	✓
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	10
Output bytes	10
Parameter bytes	4
Diagnostic bytes	0

Housing

Material	PPE / PA 6.6
Mounting	Profile rail 35 mm

Mechanical data

Dimensions (WxHxD)	25.4 mm x 76 mm x 78 mm
Weight	230 g

Environmental conditions

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

Certifications

UL508 certification	yes
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