

Data sheet SM 031 (031-1BB40)

Technical data

Type SM 031 Module ID 04021 ISC3 General information - Note - Features 2 inputs 12Bit Current consumption/power loss Current consumption/power loss 0.7 W Current consumption from backplane bus 70 mA Power loss 0.7 W Technical data analog inputs 2 Number of inputs 2 Cable length, shielded 200 m Rated load voltage CG2 4 V Current consumption from load voltage L+ (without load) 15 mA Voltage inputs - Input veisitance (voltage ranges) - Operational limit of voltage ranges - Operational limit of voltage ranges with SFU - Basic error limit voltage ranges - Max. input resistance (current range) 110 Ohm Input voltage ranges with SFU - Destruction limit voltage ranges with SFU - Destruction limit voltage ranges with SFU - Destruction limit of current ranges - Max. input resistance (current ranges	Order no.	031-1BB40
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Basic error limit with SFU -	Operational limit of resistor ranges with SFU	-
	Basic error limit	-
Destruction limit resistance inputs -	Basic error limit with SFU	-
	Destruction limit resistance inputs	-
Resistance thermometer inputs -	Resistance thermometer inputs	-
Resistance thermometer ranges -	Resistance thermometer ranges	



Operational limit of resi	stance thermometer ran	ges
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Operational limit of resistance thermometer ranges	-
Operational limit of resistance thermometer ranges with SFU	-
Basic error limit thermoresistor ranges	-
Grundfehlergrenze Widerstandsthermometerbereiche mit SFU	-
Destruction limit resistance thermometer inputs	-
Thermocouple inputs	-
Thermocouple ranges	-
Operational limit of thermocouple ranges	-
Operational limit of thermocouple ranges with SFU	-
Basic error limit thermoelement ranges	-
Basic error limit thermoelement ranges with SFU	-
Destruction limit thermocouple inputs	-
Programmable temperature compensation	-
External temperature compensation	-
Internal temperature compensation	-
Internal temperature compensation	-
Technical unit of temperature measurement	-
Resolution in bit	12
Measurement principle	successive approximation
Basic conversion time	2 ms all channels
Noise suppression for frequency	>50dB at 50Hz (UCM<2V)

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Status information, alarms, diagnostics

Status display	yes
Interrupts	no
Process alarm	no
Diagnostic interrupt	no
Diagnostic functions	yes
Diagnostics information read-out	possible
Module state	green LED
Module error display	red LED
Channel error display	red LED per channel

Isolation

Parameter bytes

Between channels	-
Between channels of groups to	-
Between channels and backplane bus	yes
Between channels and power supply	yes
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	DC 2 V
Max. potential difference between Mana and Mintern (Uiso)	-
Max. potential difference between inputs and Mana (Ucm)	-
Max. potential difference between inputs and Mintern (Uiso)	DC 75 V/ AC 50 V
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V
Datasizes	
Input bytes	4
Output bytes	0

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Diagnostic bytes

Housing		
Material	PPE / PPE GF10	
Mounting	Profile rail 35 mm	
Mechanical data		
Dimensions (WxHxD)	12.9 mm x 109 mm x 76.5 mm	
Weight	60 g	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL certification	yes	
KC certification	yes	