

Data sheet SM 031 (031-1CB40)

Technical data

Type     SM 031       Module ID     0408 1543       General information     -       Note     -       Features     2 inputs 16Bit Current 0(J)20 mA       Current consumption/power loss     60 mA       Current consumption from backplane bus     60 mA       Power loss     0.7 W       Technical data analog Inputs     2       Number of inputs     2       Cable length, shielded     200 m       Rated load votage     DC 24 V       Current consumption from load voltage L+ (without load)     15 mA       Votage ranges     -       Input votage ranges     -       Operational limit of votage ranges     -       Operational limit of votage ranges     -       Destruction limit votage ranges     -       Current input softage ranges     -       Current limit votage     -       Operational limit of votage ranges     -       Destruction limit votage     -       Current limit votage     -       Current ranges     -       Destruction limit votage     -	Order no.	031-1CB40
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Radical error limit current ranges with SFU-Destruction limit current inputs (voltage)max. 24VDestruction limit current inputs (electrical current)max. 40mAResistance inputs-Resistance ranges-	Operational limit of current ranges with SFU	-
Destruction limit current inputs (voltage) max. 24V   Destruction limit current inputs (electrical current) max. 40mA   Resistance inputs -   Resistance ranges -	Basic error limit current ranges	+/-0.1%
Destruction limit current inputs (electrical current) max. 40mA   Resistance inputs -   Resistance ranges -	Radical error limit current ranges with SFU	-
Resistance inputs-Resistance ranges-	Destruction limit current inputs (voltage)	max. 24V
Resistance ranges -	Destruction limit current inputs (electrical current)	max. 40mA
	Resistance inputs	-
Operational limit of resistor ranges -	Resistance ranges	-
	Operational limit of resistor ranges	-
Operational limit of resistor ranges with SFU -	Operational limit of resistor ranges with SFU	-
Basic error limit -	Basic error limit	-
Basic error limit with SFU -	Basic error limit with SFU	-
Destruction limit resistance inputs -	Destruction limit resistance inputs	
Resistance thermometer inputs -	Resistance thermometer inputs	-
Resistance thermometer ranges -	Resistance thermometer ranges	



Operational limit of resista	ince thermometer ranges
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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	16
Measurement principle	successive approximation
Basic conversion time	240 µs all channels
Noise suppression for frequency	>80dB (UCM<4V)

## Status information, alarms, diagnostics

Status display	yes
Interrupts	yes, parameterizable
Process alarm	yes, parameterizable
Diagnostic interrupt	yes, parameterizable
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

1501011011	
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 4 V
Max. potential difference between Mana and Mintern (Uiso)	-
Max. potential difference between inputs and Mana (Ucm)	DC 3 V
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
Parameter bytes	20



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	