

Data sheet

SM 031 (031-1CB30)

Technical data

Type	Order no.	031-1CB30
Module ID	Туре	SM 031
General information Note		
Note		
Features 2 inputs 16Bit Voltage 010 V Current consumption/power loss Current consumption from backplane bus 60 mA Power loss 0.8 W Technical data analog inputs Number of inputs 2 Cable length, shielded 200 m Rated load voltage DC 24 V Current consumption from load voltage L+ (without load) 20 mA Voltage inputs yes Min. input resistance (voltage range) 200 kOhm Input voltage ranges 0 V +10 V Operational limit of voltage ranges with SFU - Basic error limit voltage ranges with SFU - Destruction limit voltage ranges +/-0.1% Max. input resistance (current range) - Operational limit of current ranges - Operational limit current ranges with SFU - Basic error limit voltage ranges with SFU - Basic error limit current ranges - Operational limit of current ranges - Operational limit of current ranges with SFU - Basic error limit current inputs (voltage) - Destruction limit current inputs (electrical current) - Resistance ranges - Operational limit of resistor ranges with SFU - Basic error limit with SFU - Destruction limit eriststance inputs - Resistance thermometer inputs	General information	
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Destruction limit resistance inputs - Resistance thermometer inputs -	Basic error limit	-
Resistance thermometer inputs -	Basic error limit with SFU	-
	Destruction limit resistance inputs	-
Resistance thermometer ranges -	Resistance thermometer inputs	-
	Resistance thermometer ranges	-



Operational limit of resistance thermometer ranges	- A YASKAWA COMPANY
Operational limit of resistance thermometer ranges with SFU	-
Basic error limit thermoresistor ranges	-
Basic error limit thermoresistor ranges with 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	-
Temperature error internal 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 at 50Hz (UCM<9V)
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	
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 9 V
Max. potential difference between Mana and Mintern (Uiso)	-
Max. potential difference between inputs and Mana (Ucm)	DC 1 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



Diagnostic bytes	20	A YASKAWA COMPANY	
Housing			
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	yes	
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