

Data sheet SM 031 (031-1LD80)

Technical data

Type SM 031 Modulo ID 0410 1544 General information Note - Features 4 inputs 18P8 0 3000 ohm resistance Passarance Resistance measurement with 2, 3, and 4-wires regires less parameter bytes than module 031-18D80 Current consumption/power loss 55 mA Current consumption from backplane bus 55 mA Power loss 4 Cable length, shielded 200 m Cable length, shielded 200 m Rated load voltage DC 24 V Current consumption from load voltage L+ (without load) 30 mA Voltage inquis - Min. Input resistance (voltage ranges) - Min. Input resistance (voltage ranges) - Input voltage ranges - Operational limit of voltage ranges with SFU - Basic error limit voltage ranges with SFU - Basic error limit voltage ranges with SFU - Basic error limit of current ranges - Max. input resistance (current ranges) - Input current ranges - Operational limit of current ranges with SFU	Order no.	031-1LD80
Note - Current consumption/power loss Current consumption/power loss Current consumption/power loss Current consumption from backplane bus 55 mA Power loss 1 W Technical data analog inputs Number of inputs 4 Cable length, shielded 200 m Rated load voltage 1 Current consumption from load voltage L+ (without load) 30 mA Voltage inputs 5 Min. input resistance (voltage ranges 1 Current limit of voltage ranges 2 Current limit voltage ranges 3 Current limit voltage ranges with SFU 5 Current limit current ranges with SFU 5 Current consumption limit current ranges with SFU 5 Cestional limit of vortent ranges with SFU 5 Cestional limit of vortent ranges with SFU 5 Cestional limit current ranges with SFU 5 Cestional limit current ranges with SFU 5 Cestional limit of vortent ranges with SFU 5 Cestional limit of vortent ranges in Current ranges 5 Ceptational limit of current ranges 6 Ceptational limit of current ranges 7 Ceptational limit of current ranges 7 Ceptational limit of current ranges 8 Ceptational limit of current ranges 9 Ceptational limit of current ranges 9 Ceptational limit of current ranges 8 Ceptational limit of current ranges 8 Ceptational limit of current ranges with SFU 6 Ceptational limit of current ranges with SFU 7 Ceptational limit of current ranges with SFU 8 Ceptational limit of current ranges with SFU 8 Ceptational limit of current ranges with SFU 9 Ceptational limit of current ranges with SFU 9 Ceptational limit of current ranges with SFU 9 Ceptational limit of resistor	Туре	SM 031
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Operational limit of resistor ranges with SFU +/- 0,2 % Basic error limit +/- 0.2 % Basic error limit with SFU +/- 0,1 %	Resistance ranges	0 600 Ohm
Basic error limit +/- 0.2 % Basic error limit with SFU +/- 0,1 %	Operational limit of resistor ranges	+/- 0.4 %
Basic error limit with SFU +/- 0,1 %	Operational limit of resistor ranges with SFU	+/- 0,2 %
*	Basic error limit	+/- 0.2 %
Destruction limit resistance inputs -	Basic error limit with SFU	+/- 0,1 %
	Destruction limit resistance inputs	-



Resistance thermometer inputs	A YASKAWA COMPANY
Paristana the management	P(400
Resistance thermometer ranges	Pt100 Pt1000 Ni100 Ni1000
Operational limit of resistance thermometer ranges	+/- 0.4 %
Operational limit of resistance thermometer ranges with SFU	+/- 0,2 %
Basic error limit thermoresistor ranges	+/- 0.2 %
Operational limit of resistance thermometer ranges with SFU	+/- 0,1 %
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	Sigma-Delta
Basic conversion time	84.2 ms (50 Hz) 70.5 ms (60 Hz) per channel
Noise suppression for frequency	>80dB at 50Hz (UCM<6V)
Status information, alarms, diagnostics	
Status display	yes
Interrupts	yes, parameterizable
Process alarm	no
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	✓
Between channels and power supply	-
Max. potential difference between circuits	-
Max. potential difference between inputs (Ucm)	DC 6 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 60 V
Max. potential difference between Mintern and outputs	-
Insulation tested with	DC 500 V



Datasizes		
Input bytes	8	
Output bytes	0	
Parameter bytes	12	
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	
Weight	60 g	
Environmental conditions		
Operating temperature	0 °C to 60 °C	
Storage temperature	-25 °C to 70 °C	
Certifications		
UL508 certification	yes	