

Data sheet

EM 134 (134-4EE00)

Technical data

Order no.	134-4EE00
Type	EM 134
General information	
Note	-
Features	3 inputs U/I 1 input Pt, Ni, R 2 outputs U/I Configurable
Current consumption/power loss	
Current consumption from backplane bus	70 mA
Power loss	2 W
Technical data analog inputs	
Number of inputs	4
Cable length, shielded	-
Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage	yes
Current consumption from load voltage L+ (without load)	55 mA
Voltage inputs	yes
Min. input resistance (voltage range)	120 kOhm
Input voltage ranges	+1 V ... +5 V 0 V ... +10 V -10 V ... +10 V
Operational limit of voltage ranges	+/-0.3% ... +/-0.7%
Operational limit of voltage ranges with SFU	-
Basic error limit voltage ranges	+/-0.2% ... +/-0.5%
Basic error limit voltage ranges with SFU	-
Destruction limit voltage	max. 30V
Current inputs	yes
Max. input resistance (current range)	110 Ohm
Input current ranges	+4 mA ... +20 mA -20 mA ... +20 mA 0 mA ... +20 mA
Operational limit of current ranges	+/-0.3% ... +/-0.8%
Operational limit of current ranges with SFU	-
Basic error limit current ranges	+/-0.2% ... +/-0.5%
Radical error limit current ranges with SFU	-
Destruction limit current inputs (electrical current)	max. 50mA
Destruction limit current inputs (voltage)	max. 24V
Resistance inputs	yes
Resistance ranges	0 ... 600 Ohm 0 ... 3000 Ohm
Operational limit of resistor ranges	+/-0.4%
Operational limit of resistor ranges with SFU	-
Basic error limit	+/-0.2%

Basic error limit with SFU	-
Destruction limit resistance inputs	max. 30V
Resistance thermometer inputs	yes
Resistance thermometer ranges	Pt100 Pt1000 Ni100 Ni1000
Operational limit of resistance thermometer ranges	+/-0.6% ... +/-1.0%
Operational limit of resistance thermometer ranges with SFU	-
Basic error limit thermoresistor ranges	+/-0.4% ... +/-0.5%
Basic error limit thermoresistor ranges with SFU	-
Destruction limit resistance thermometer inputs	max. 30V
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	°C
Resolution in bit	12
Measurement principle	successive approximation
Basic conversion time	3.2 ms / channel
Noise suppression for frequency	50 Hz, 60 Hz, 400 Hz
Initial data size	8 Byte

Technical data analog outputs

Number of outputs	2
Cable length, shielded	-
Rated load voltage	DC 24 V
Reverse polarity protection of rated load voltage	yes
Current consumption from load voltage L+ (without load)	55 mA
Voltage output short-circuit protection	yes
Voltage outputs	yes
Min. load resistance (voltage range)	1 kOhm
Max. capacitive load (current range)	1 µF
Max. inductive load (current range)	30 mA
Output voltage ranges	-10 V ... +10 V +1 V ... +5 V 0 V ... +10 V
Operational limit of voltage ranges	+/-0.4% ... +/-0.8%
Basic error limit voltage ranges	+/-0.2% ... +/-0.4%
Destruction limit against external applied voltage	max. 16V (30V / 10s)
Current outputs	yes
Max. in load resistance (current range)	500 Ohm
Max. inductive load (current range)	10 mH
Typ. open circuit voltage current output	15 V

Output current ranges	0 mA ... +20 mA +4 mA ... +20 mA -20 mA ... +20 mA
Operational limit of current ranges	+/-0.3% ... +/-0.8%
Basic error limit current ranges	+/-0.2% ... +/-0.5%
Destruction limit against external applied voltage	max. 30V
Settling time for ohmic load	0.5 ms
Settling time for capacitive load	1 ms
Settling time for inductive load	1 ms
Resolution in bit	12
Conversion time	1.2 ms / channel
Substitute value can be applied	yes
Output data size	4 Byte

Status information, alarms, diagnostics

Status display	none
Interrupts	yes
Process alarm	no
Diagnostic interrupt	yes, parameterizable
Diagnostic functions	yes
Diagnostics information read-out	possible
Supply voltage display	green LED
Group error display	red SF LED
Channel error display	none

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 11 V
Max. potential difference between Mana and Mintern (Uiso)	DC 75 V/ AC 50 V
Max. potential difference between inputs and Mana (Ucm)	DC 11 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	8
Output bytes	4
Parameter bytes	18
Diagnostic bytes	12

Housing

Material	PPE / PA 6.6
Mounting	Profile rail 35 mm

Mechanical data

Dimensions (WxHxD)	101.6 mm x 76 mm x 48 mm
Weight	230 g

Environmental conditions

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

Certifications

UL certification	yes
KC certification	-