

Description

The digital temperature measuring converter of series VarioCheck VC5B are freely programmable digital measuring transformer with two analogue outputs and up to 4 limiting value relays. The input of all characteristics is carried out via the configuration software AD-Studio. VarioCheck fulfils all tasks of a universal measuring value recording through integral function modules such as selectable relay functions, simulation modus, free linearizing curves and a wide range of supply voltage.



Specific characteristics

- Resistance thermometer inputs, types Pt/Ni 100, Pt/Ni 500, Pt/Ni 1000
- Thermocouples inputs, types J, T, K, E, N, S, R, B, C or inputs a mV/T-characteristic curve. Selectable internal or external reference junction
- A bipolar mV-Voltage input. Free linearizing curves possible.
- Current- and voltage input different scaleable and simultaneously useful. Must not connect the clamps 8 and 9.
- Galvanic 3-circuit separation of input, output and supply.
- Freely definable scaling of the quantity to be measured through stating range, decimal point position and unit from the list or defined unit.
- Zoom function, expanded scale, linearizing, inverse modus.
- Monitoring of the measuring signal with up to 4 freely adjustable limiting values.
- Monitoring functions such as limiting values, window function or signal trend each with relay.
- Non-volatile saving of all set parameters.

Business data

Order number

AD-VC5B GVC-R0	without relay
AD-VC5B GVF-R2	two relays
AD-VC5B GVF-R4	four relays

Technical specifications

Resistance thermometer inputs Pt100, Pt500, Pt1000 to DIN EN 60751

Measuring range	-200 ... +850 °C
Connection method	2-, 3- oder 4-wire system
Resolution	16 Bit
Accuracy	0,5 K
Smallest measuring spans	20 K
Max line resistance ¹⁾	10 Ohm/cable
Sensor supply	
Pt100	1 mA
Pt500, Pt1000	210 µA

¹⁾ Bei 2-Leiter geht der Leitungswiderstand als Offset in die Messung ein.

Resistance thermometer inputs Ni100, Ni500, Ni1000 to DIN EN 43760

Measuring range	-60 ... +230 °C
Connection method	2-, 3- oder 4-wire system
Resolution	16 Bit
Accuracy	0,5 K
Smallest measuring spans	20 K
Max line resistance ¹⁾	10 Ohm/cable
Sensor supply	
Ni100	1 mA
Ni500, Ni1000	210 µA

¹⁾ Bei 2-Leiter geht der Leitungswiderstand als Offset in die Messung ein.

Thermocouples

Comparative place:

Internal	measurement with LM35 in the device connecting terminals
External	Cold junction temperature selectable by parameters
Resolution	16 Bit
Accuracy	0,2 % of measuring range
To DIN EN 60584:	
Measuring range type J	-200 ... +1200 °C
Measuring range type T	-200 ... +400 °C
Measuring range type K	-200 ... +1360 °C
Measuring range type E	-200 ... +1000 °C
Measuring range type N	-200 ... +1300 °C
Measuring range type S	-40 ... +1760 °C
Measuring range type R	-40 ... +1760 °C
Measuring range type B	+400 ... +1800 °C
After standard ASTM E988:	
Measuring range type C	0 ... +2320 °C
Smallest measuring spans	100 K

Voltage inputs

Measuring range	-18 ... +18 mV
	-36 ... +36 mV
	-72 ... +72 mV
	-144 ... +144 mV



Multifunction Transducer Temperature Measuring Converter

AD-VC 5B

Technical specifications

Current output 20 mA

Output range	0 ... 20,4 mA
Resolution	10 Bit
Accuracy	20 µA
Max. burden	500 Ohm
Residual ripple	20 µAss

Voltage output 10 V

Output range	0 ... 10,2 V
Resolution	10 Bit
Accuracy	10 mV
Min. burden	5 kOhm
Residual ripple	10 mVss

Werden Stromausgang und Spannungsausgang gleichzeitig benutzt, dürfen die beiden Kreise nicht verbunden werden.

Relay outputs A..D

Max switching voltage	AC 250 V AC
Max switching current AC	2 A AC
Max switching voltage	DC 50 V DC
Max switching current DC	2 A DC

Transmission behaviour

Sampling rate	1 measure/s
Linearity error	0,2 % of full scale
Temperature influence	+/-100 ppm/K of full scale

Supply

Supply voltage	50 ... 253 V AC
	20 .. 253 V DC
Max power consumption at 24V DC	2,6 W
Max power consumption at 230V AC	5 VA

Housing

Dimension	BxHxT 33x110x134 mm
Manner of fastening	DIN rail mounting 35mm, EN 50022
Type of protection	IP 20
Connection method	detachable terminal clamp, 5 mm grid
Wire cross section	max. 2,5 mm ²
Weight	ca. 200 g

Environmental conditions

Permissible ambient temperature	-10 ... +60 °C
Storage and transport	-10 ... 70 °C (no condensation)

EMC

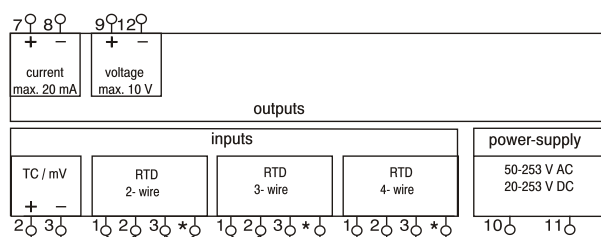
Product family standard	EN 61326
Discharge static electricity, ESD	IEC 61000-4-2
Electromagnetic fields ¹	IEC 61000-4-3
Fast transients, burst	IEC 61000-4-4
Impulse voltage, surge	IEC 61000-4-5
Route controlled HF-signals	IEC 61000-4-6
Emitted interference	EN 55011, CISPR11 Cl. B

¹During electromagnetic disturbance minor changes in output signal are possible.

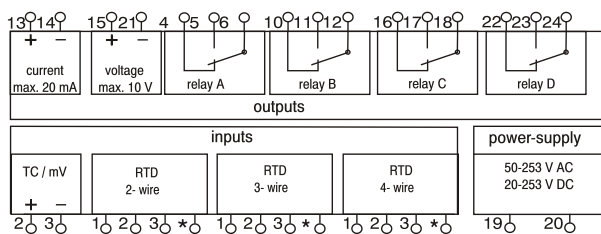
Galvanic isolation, test voltages

Input to output	2,5 kV, 1min
Input/output to auxiliary voltages	4 kV, 1min
Outputs together	no galvanic isolation
Input to the programming interface	no galvanic isolation

Block and wiring diagram

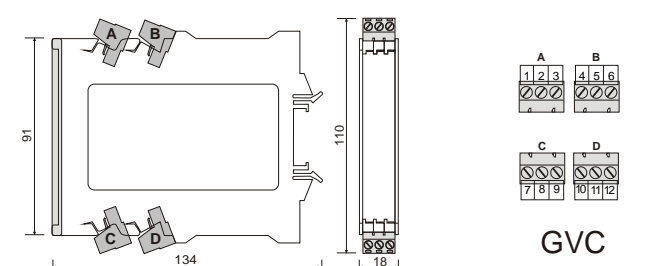


AD-VC 5B GVC

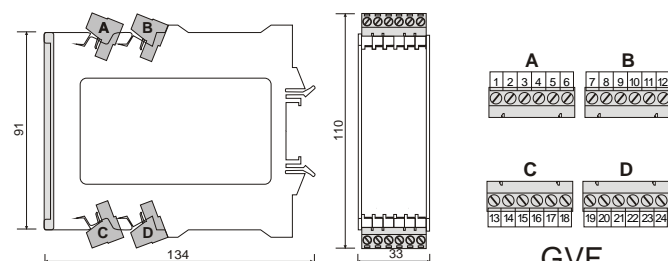


AD-VC 5B GVF

Dimensions



GVC



GVF