

Digital Multi-function Measuring Transducer

VarioCheck[®] VC4S

The VarioCheck AD-VC4S combines Isolation Amplifier, Measuring Transducer, Indicating Device, Simulator, Linearizer and Limit Switch in one unit.



www.adamczewski.com

norm analogue signal

supply of transmitter

2 analogue outputs

4 limiting value relays

Freely programmable digital measuring transformer

VarioCheck® VC4S

Function and applications

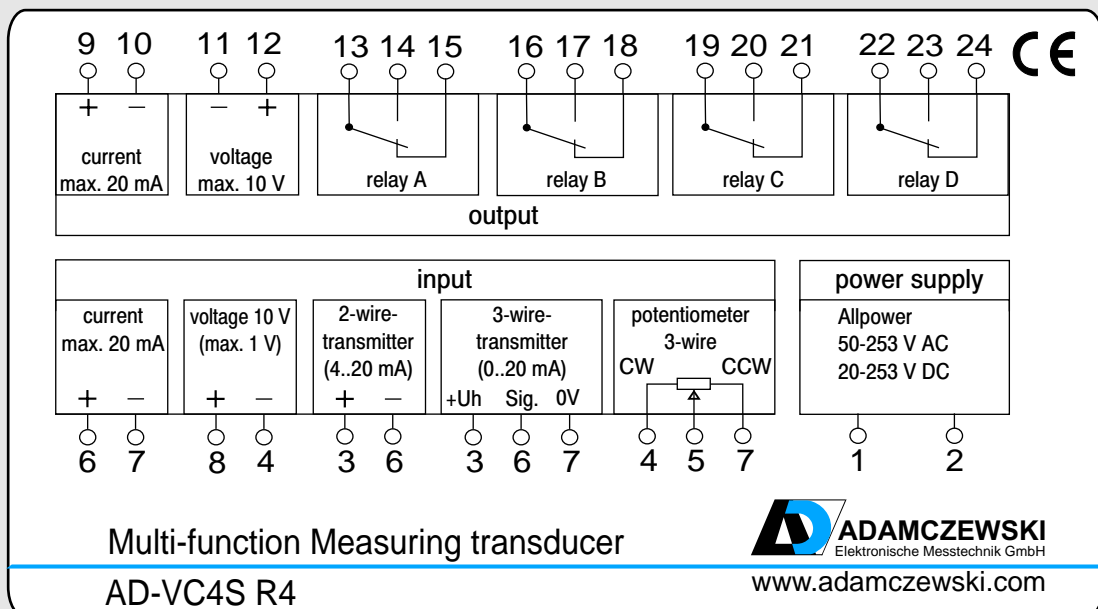
The digital multi-function measuring transformer of series VarioCheck VC4S R0-R4 are freely programmable digital measuring transformer with two analogue outputs and up to 4 limiting value relays. Extensive standard equipment and additional options solve almost all imaginable tasks of a modern evaluation. The input of all characteristics is carried out directly at the device or, alternatively, via the configuration software „VarioConfig“.

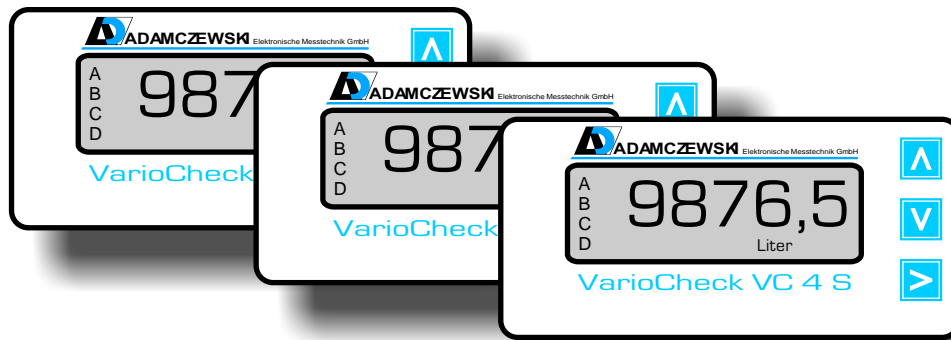
VarioCheck fulfils all tasks of a universal and secure measuring value recording through integral function modules such as limiting value messages, freely adjustable hysteresis, selectable relay functions, time-delayed switching, automatic or manual simulation modus, free linearizing curves and a wide range of supply voltage.

Features

- Bipolar voltage inputs
- Unipolar current input
- Supply of 2-/3-wire transmitter
- Potentiometer input
- Galvanic 3-circuit separation of input, output and supply.
- Error message with missing or defective sensor at measuring range 4-20 mA
- Display backlight detachable, display contrast adjustable
- 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
- Automatic or manual simulation operation
- Monitoring of the measuring signal with up to 4 freely adjustable limiting values
- Slave pointer function (saving min. and max. value)
- Locking the parameterizing via edit lock
- Non-volatile saving of all set parameter
- Menu languages switchable to: German, English, French
- Pluggable and codable terminal strips

connecting diagram:
AD-VC 3 GVF R4





Special functions of the multi-measuring transducer VarioCheck® VC4S

- ✓ **For instance: ...the simulation mode**
 In simulation mode, the VC4S R0-R4 offers the possibility to specify the scaled value manually. This possibility is, for instance, an important aid during commissioning, if no measuring values, or not the required measuring values, from the process exist yet. All other device functions, such as limiting value editing and analogue output, continue to function without limitation, as if the scaled value is derived from the measuring value. This characteristic can also be utilised, for instance, to specify the nominal value on the analogue output.
- ✓ **For instance: ...the linearizing of characteristics**
 A free table with 24 x/y value pairs is available for characteristics linearizing. During this, it is very helpful that the Y-values are entered already in scaled values. The characteristics data for a horizontal cylinder and a ball container are already completely entered and have only to be activated.
- ✓ **For instance: ...the diversity of the limiting value functions**
 The limiting value functions can be set separately for each individual relay. Whether hysteresis function or window function, time delays can also be defined singly for each operating mode. Also, the mode of action of the relays can be adapted to the application.
- ✓ **For instance: ...the user-friendly operation**
 The device is equipped with three short-stroke keys at the front for operating, for display of the measuring value and the parameter in a graphic display with clout background lighting and a communication interface for configuration via a PC. The menu language can be defined directly in the device, the colour of the display immediately indicates the operating mode or errors and with the PC-interface, the documentation of the complete configuration is ensured.
- ✓ **For instance: ...the functional housing**
 The devices are intended for front mounting in switchboards. And with the standard clamps, which can be pulled off, it can be clamped on without problems.

Specification VarioCheck® VC4S

Current input

Measuring range	0-20 mA
Resolution/Accuracy	10 bit / approx. 21 μ A
Input resistance	54 Ohm

Voltage input 10V

Measuring range	-10 V...+10 V
Resolution/Accuracy	10 bit / approx. 21 mV
Input resistance	100 kOhm

Voltage input 5 V

Measuring range	-5 V...+5 V
Resolution/Accuracy	10 bit / approx. 11 mV
Input resistance	> 1 MOhm

Voltage input 1 V

Measuring range	-1 V...+1 V
Resolution/Accuracy	10 bit / approx. 2,5 mV
Input resistance	100 kOhm

Voltage input 100 mV

Measuring range	-100 mV...+100 mV
Resolution/Accuracy	10 bit / approx. 0,3 mV
Input resistance	100 kOhm

Potentiometer input

Connection method	3-wire
Admissible total resistance	100 Ohm...10 kOhm

Transmitter supply

Supply voltage, no-load running	23 V
Supply voltage, 20mA	21 V
Current limiting	approx 50 mA

Current output

Output range	max. 20 mA
Resolution/Accuracy	10 bit / approx. 20 μ A
Maximum burden	500 Ohm
Residual ripple	10 μ Ass

Voltage output 10V

Output range	max. 10 V
Resolution/Accuracy	10 bit / approx. 11 mV
Maximum burden	10 kOhm
Residual ripple	10 mVss

Relay outputs A...D

Version	up to 4 change-over contacts
Max. switching voltage AC/DC	250 VAC / 50 VDC
Max. switching current AC/DC	2 AAC / 2 ADC

Transient response

Rise time	100 ms (output to 90% with input of 0-20mA)
Linearity error	<0,2 % of end value
Temperature influence	+/- 100 ppm/K of end value

Supply

supply voltage	20..253 VDC and 50..253 VAC
Max. power consumption	at 24VDC / 230VAC 2,5W / 4,4VA

Housing

Manner of fastening	for panel mounting DIN43700
Front panel	48 x 963 mm
Protection class	front IP65, terminals IP20
Clamp cross section	max. 2,5 mm ² (power supply) max. 1,5 mm ² (all other)
Weight	approx. 320 g

Environmental conditions

Admissible ambient temperature	0...50°C
Storage and transport	-40...85°C

EMC

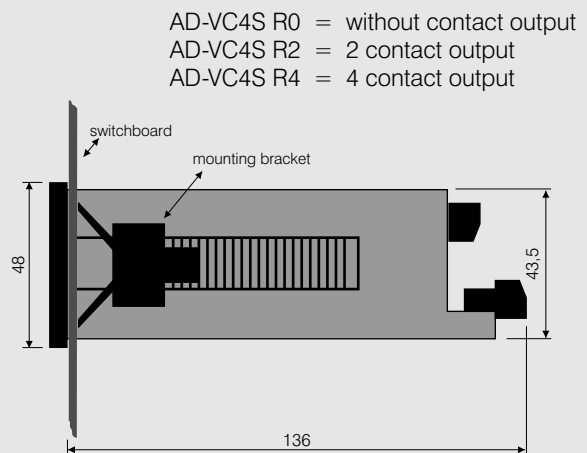
EN 61326	EN 61326
Discharge static electricity, ESD	IEC 61000-4-2
Electromagnetic fields ¹⁾	IEC 61000-4-3
Quick transients, burst	IEC 61000-4-4
Impulse voltage, surge	IEC 61000-4-5
Route controlled HF-signals	IEC 61000-4-6
Error transmission	EN55011, CISPR11 class B, living area

¹⁾ During checking, slight signal deviations are possible

Galvanic separation, test voltages

Input to output	2,5 kV, 1 min
Input/output to auxiliary voltages	4 kV, 1 min

Dimensions and model code:



AD-VC4S R0 = without contact output
AD-VC4S R2 = 2 contact output
AD-VC4S R4 = 4 contact output

