

Isolation Amplifier

AD-TV 40 GVC

Application

The Vario separation amplifier AD-TV 40 GVC serves the galvanic separation and amplification of standard DC analogue signals.

During this, the standard signals 0/4–20 mA and 0/2–10 V are freely selectable via switches or terminals, at the input as well as at the output. All measuring ranges are fixed calibrated, however, they can be adjusted via potentiometer, which can be switched in at the front, in a range of approx. +/-20%.

Furthermore, this series of devices is equipped with a configuration interface AD-PC as standard, with which the input and output measuring signal can be freely programmed with the optional programming software AD-Studio in a range of max. 20 mA or 10 VDC.

The selected output signal follows the input variable linear and is independent up to a limiting value from the connected burden.

Input, output and the supply voltage are separated from each other galvanically with high isolation. An integral electronic wide-range power pack with high-efficiency prevents high heating and permits high output loads.



Specific characteristics

- All standard signals at input and output are freely selectable
- Zero point trimmer and final value trimmer can be switched on
- Programming via optional AD-Studio Configuration software possible
- 18 mm narrow housing with connection terminals, which can be pulled off

Description

input current	
measuring range	0...20 mA; 4...20 mA
resolution	10 Bit
input resistance	50 Ohm
input voltage	
measuring range	0...10 V; 2...10 V
resolution	10 Bit
input resistance	>700 kOhm
input filter (optional programmable with AD-Studio)	
filter	10 ms/filter value (0...30.000)
output current	
output range	0...20 mA; 4...20 mA
resolution	11 Bit
max. burden	400 Ohm
residual ripple	<50 µAss
output voltage	
output range	0...10 V, 2...10 V
resolution	11 Bit
max. burden	10 kOhm
residual ripple	<20 mVss
linearity error	< 0,5 % of full scale
Accuracy	
unit	0,3%
temperature influence	< 100 ppm / K
response time	approx. 70 ms
trimmer function	
trim range	approx. +/-20%
configuration interface	
AD-PC -> USB	
(optional programmable with AD-Studio software)	
supply	
supply voltage	20...253 VDC or 50...253 VAC
max. power consumption	1,2 W/2,8 VA
housing	
dimensions (WxHxD)	18x110x128mm
type of protection	IP 20
connection method	detachable terminal clamp
manner of fastening	DIN rail 35mm (EN 50022)
weight	approx. 130 gr.
environmental conditions	
ambient temperature	0...50°C
storage und transport	-10...+70°C
EMC	
Product family standard	EN 61326
Emitted interference	EN 55011, CISPR11 Cl. B
During electromagnetic disturbance minor changes in output signal are possible	
Electrical safety requirements	
Product family standard	EN 61010-1
galvanic separation. test voltages	
input/output	2,5 kV RMS (1 min.)
signal/auxiliary voltage	4 kV RMS (1 min.)
protective systems	
input/output	over voltage and over current
power supply	over voltage, over current and

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Elektronische Messtechnik GmbH

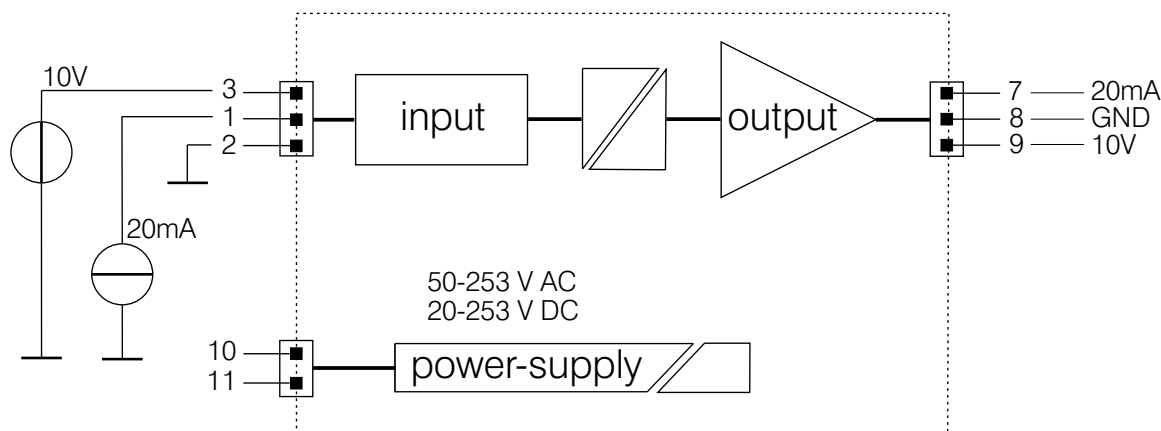
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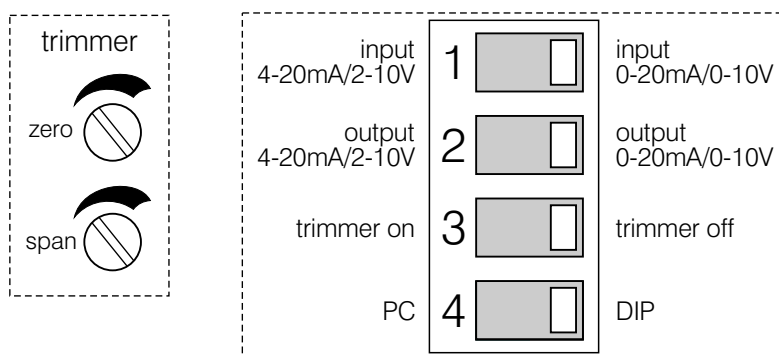
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Block and wiring diagram



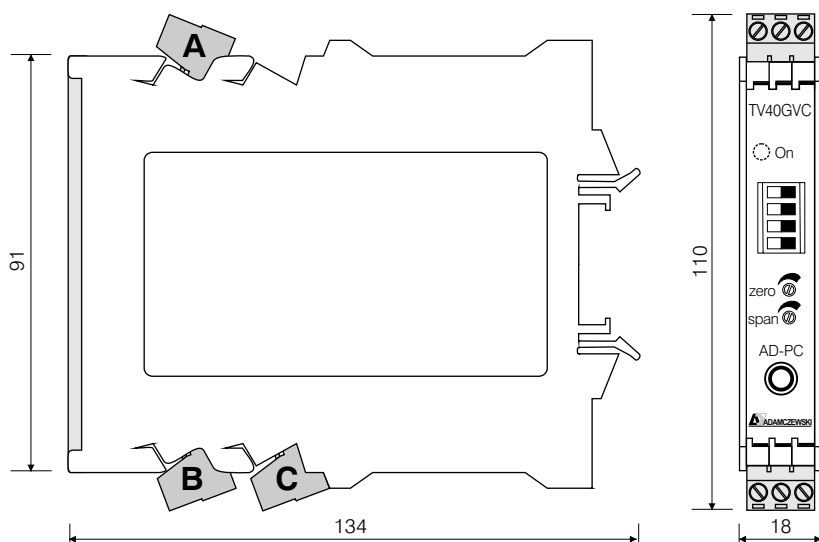
Functional DIP-switch



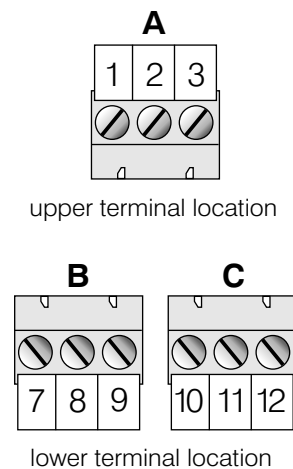
Terminology

- trimmer off:
= signals compare to DIP-switch 1+2, trimmer on frontpanel inactive
- trimmer on
= trimmer on frontpanel active for zero (offset) and span trim range: +/-20%
- DIP = input and output signals compare to switch 1, 2 and 3
- PC = configuration port active for programming software AD-Studio
DIP-switch 1-3 inactive

Dimensions



Terminal location



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