

## Description

The isolation amplifier AD-TV 40 GVC is designed for the galvanic isolation and amplification of standard analog signals (0/4-20 mA and 0/2-10VDC). The standard signals 0/4-20 mA and 0/2-10 V are freely selectable via switch or terminal on both the input and at the output. All ranges are calibrated fixed, but can be adjusted via front-trimmer. In addition, this device comes standard with a configuration interface AD-PC, with which the input and output measurement signal with the optional AD-Studio programming software in the range of max. 20 mA or 10 VDC can be freely programmed. The selected linear output signal follows the input size up to a limit independent of the connected load. Input, output and power supply voltage are galvanically isolated from each other with high insulation. An integral electronic wide range power supply with high efficiency prevents strong heating and allows high output loads.

## Application

Galvanic isolation of standard signals with simultaneous amplification or conversion of the analog standard signal.



## Specific characteristics

- All standard signals at the input and output are freely selectable
- Switchable zero and span trimmer
- Special signals can be parameterized via interface
- Weitbereichsnetzteil

## Business data

**Order number**  
AD-TV 40 GVC

## Information

**Downloads**  
Tender text

[tv40gvc.zip](#)

## Technical specifications

### 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 VarioConfig)

Filter	10 ms/filter value (0 ... 30.000)
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### 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
Min. burden	10 kOhm
Residual ripple	<20 µAss
Linearity error	<0,5 % of full scale

### Accuracy

Basic accuracy	0,3 %
Temperature influence	<100 ppm / K
Response time	approx. 70 ms

### Trimmer function

Trim range	approx. +/- 20 %
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### Configuration interface

AD-PC -> USB (optional programmable with VarioConfig software)
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### Supply

Supply voltage	20 ... 253 V DC / 50 ... 253 V AC
Max. power consumption	1,2 W/2,8 VA

### Housing

Dimensions (WxHxD)	18x110x128 mm
Type of protection	IP 20
Connection method	detachable terminal clamp
Bolting torque terminals	0,5 Nm
Terminals, wire cross section	2,5 mm <sup>2</sup> flex wire / 4 mm <sup>2</sup> one wire
Manner of fastening	DIN rail 35mm 35 mm
Weight	ca. 130 g

### Environmental conditions

Ambient temperature	-10 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

## Technical specifications

### EMC

Product family standard	EN 61326-1
Emitted interference	EN 55011, CISPR11 Cl. B, Gr. 1
During checking, slight signal deviations are possible	

### Electrical safety requirements

Product family standard	EN 61010-1
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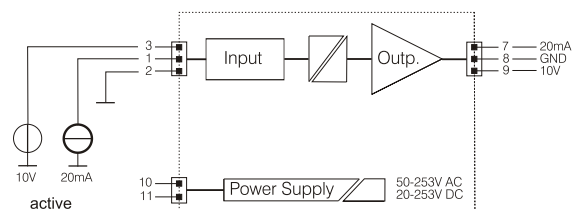
### Galvanic isolation, test voltages

Input/output	2,5 kV RMS (1 min.)
Signal/auxiliary voltage	3 kV RMS (1 min.)

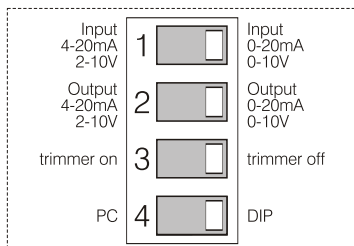
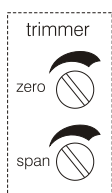
### Protective systems

Input/output	over voltage and over current
Power supply	over voltage, over current and over temperature

## Block and wiring diagram



### Function DIP-switch



Trimmer on  
Factory setting, according to standard signals switches 1 and 2

Trimmer off  
Activates the front trimmer for Offset (zero) and span  
Adjustment range: + / -20%

DIP Factory settings, input and output signals such as switches 1-3

PC AD-studio setup position, Switches 1-3 functionless

## Dimensions

