

## Description

The alternating voltage isolation amplifier AD-TV 591 GS detects the true RMS value of an alternating voltage. The input variable 0-250V AC or 0-450V AC is here freely selectable via terminal. The alternating voltage is galvanic separated and transformed into an impressed DC standard signal 0/4-20 mA or 0/2-10 VDC. The zero point and the range of the measuring signal can be adjusted with trimmers at the front. The trimmers can be activated via a wire bridge. The start of the output range can be modified via a wire bridge from 0 to 4mA or from 0 to 2V, exceeding the measuring range or falling below the measuring range is indicated with a flashing LED at the front of the device. The device can be configured with a PC software via the interface on the front interface.

## Application

Freely configurable transformation of AC voltage signals to DC standard signals, with simultaneous galvanic separation.



## Specific characteristics

- true-rms
- zero point trimmer and final value trimmer can be switched on
- programming via optional AD-Studio Configuration software possible

## Business data

Order number AD-TV 591 GS

## Technical specifications

### Input voltage

Measuring range 0 ... 250 V AC / 0 ... 450 V AC <sup>1)</sup>  
Input frequency 40 ... 400 Hz

### Output current

Max. output range 0 ... 20 mA <sup>1)</sup>  
Max. burden 500 Ohm

### Output voltage

Max. output range 0 ... 10 V <sup>1)</sup>  
Min. burden 10 kOhm

### Transmission behaviour

Trim range +/- 20 % <sup>1)</sup>  
Linearity error 0,5 % of full scale  
Rise time (90%) 200 ms (min. 50 ms) <sup>1)</sup>  
Temperature influence +/- 100 ppm/K

### Supply

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

### Housing

Manner of fastening DIN rail 35mm (EN 50022)  
Type of protection IP 20  
Connector cross section max. 2,5 mm<sup>2</sup>  
Bolting torque screw terminals 0,5 Nm  
Weight ca. 120 g

### Environmental conditions

Ambient temperature 0 ... 50 °C  
Storage and transport -10 ... 60 °C

### EMC

Product family standard EN 61326  
Emitted interference EN 55011, CISPR11 Cl. B

### Electrical safety requirements

Product family standard EN 61010-1  
Overvoltage category II  
Pollution degree 2  
Safety measurement EN 61010-2-030  
Measurement category CAT III

### Galvanic isolation, test voltages

Input/output 4 kV (1 min)  
Input/power-supply 4 kV (1 min)  
Output/power-supply 3 kV (1 min)

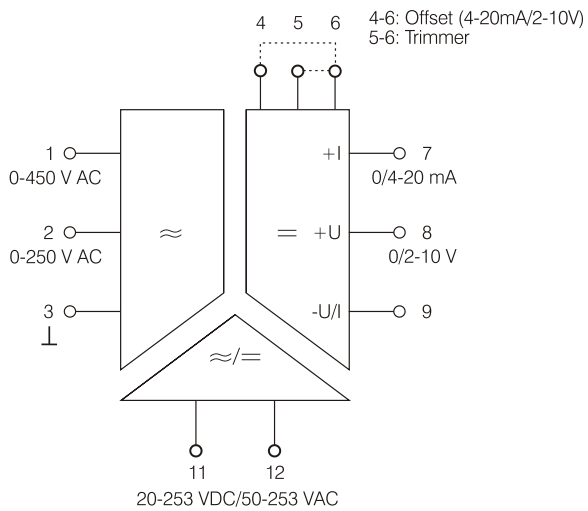
<sup>1)</sup> Different values must be advised by order

<sup>2)</sup> During electromagnetic disturbance minor changes in output signal are possible.

# AC Isolation Amplifier

AD-TV 591 GS

## Block and wiring diagram



## Dimensions

