

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 ¹⁾
Input frequency	40 ... 400 Hz
Max. output range	0 ... 20 mA ¹⁾

Output current

Max. burden	500 Ohm
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Output voltage

Max. output range	0 ... 10 V ¹⁾
Min. burden	10 kOhm

Transmission behaviour

Trim range	+/-20 % ¹⁾
Linearity error	0,5 % of full scale
Rise time (90%)	200 ms (min. 50 ms) ¹⁾
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 ²
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)

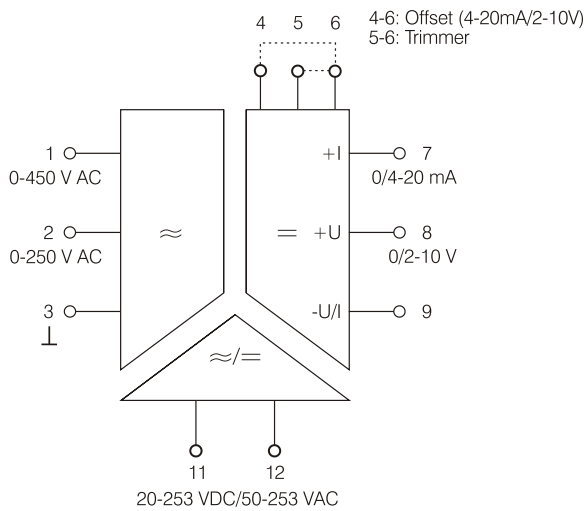
¹⁾ Different values must be advised by order

²⁾ During electromagnetic disturbance minor changes in output signal are possible.

AC Isolation Amplifier

AD-TV 591 GS

Block and wiring diagram



Dimensions

