

Description

The AD-TV 588 GVD is used for measuring the rms value of alternating current by a built-in current transformer up to 5A or by an external clamp on / split core current transformer up to 600A. The detected current is output as a galvanically isolated standard current signal in the range 0 to 20 mA and a standard voltage signal in the range 0 to 10 volts. An additional relay output can indicate a limit value or a window. All parameters such as range, output range, relay functions, limits, etc. are freely set by the configuration software.

Application

Measuring the current of single-phase loads up to 600A. Monitoring of current consumption to certain limits with hysteresis threshold by limit function. Monitoring a certain range of the current consumption by window function.

**Specific characteristics**

- Detection of the rms value of alternating currents up to 600A.
- Current and voltage output can be used simultaneously.
- Relay output, NO.
- Wide range power supply. Supply with 24V DC or 230V AC available.
- External clamp on/split core current transformers as accessory available.
- Configuration information, such as limits, input current, etc. can be adjusted by the customer via configuration software or be specified when ordering.

Business data**Order number**

AC Isolation Amplifier AD-TV 588 GVD

Accessory

Configuration software AD-Studio USB

| | |
|-----------------------------------|--|
| Clamp on Current Transformer 5A | SWL-5A 25x33x41mm, 60g Diameter max. 10mm |
| Clamp on Current Transformer 50A | SWL-50A 26x23x48mm, 45g Diameter max. 10mm |
| Clamp on Current Transformer 100A | SWL-100A 31x30x54mm, 85g Diameter max. 16mm |
| Clamp on Current Transformer 200A | SWL-200A 36x45x76mm, 190g Diameter max. 24mm |
| Clamp on Current Transformer 400A | SWL-400A 60x40x80mm, 310g Diameter max. 35mm |
| Clamp on Current Transformer 600A | SWL-600A 60x40x80mm, 350g Diameter max. 35mm |
| All Clamp on Current Transformers | Accuracy 1% open-circuit voltage max. 7,5V |

Technical specifications**Input current directly**

| | |
|---------------------|---|
| Measuring range 1 A | 0 ... 1 A AC |
| Measuring range 5 A | 0 ... 5 A AC |
| Remark | DO NOT CONFUSE THE INPUT OF THE CLAMP ON CURRENT TRANSFORMER. |

Current input via Clamp on Current Transformer

| | |
|-------------------------------|------------------|
| Measuring range 5 A | 0 ... 1,66 mA AC |
| Converter type 5 A | SWL-5A |
| Input resistance 5 A | 200 Ohm |
| Measuring range 50 A | 0 ... 16,6 mA AC |
| Converter type 50 A | SWL-50A |
| Input resistance 50 A | 20 Ohm |
| Measuring range 100 A | 0 ... 33,3 mA AC |
| Converter type 100 A | SWL-100A |
| Input resistance 100 A | 10 Ohm |
| Measuring range 200/400/600A | 0 ... 66,6 mA AC |
| Converter type 200 A | SWL-200A |
| Converter type 400 A | SWL-400A |
| Converter type 600 A | SWL-600A |
| Input resistance 200/400/600A | 5 Ohm |

All current inputs

| | |
|-----------------|---------------|
| Rated frequency | 50 Hz |
| Frequency range | 40 ... 400 Hz |
| Sampling | 2 kHz |

Technical specifications

All signal outputs

| | |
|-------------------------------|--|
| Simultaneous use | Yes. Minus (terminals 10/12) may not be connected. |
| Bit width D/A converter (PWM) | 11 Bit |

Output current

| | |
|----------------------|-------------|
| Maximum output range | 0 ... 20 mA |
| Resolution | ~10 uA |
| Max. burden | 500 Ohm |

Output voltage

| | |
|----------------------|------------|
| Maximum output range | 0 ... 10 V |
| Resolution | ~5 mV |
| Min. burden | 1 kOhm |

Relay output

| | |
|---------------------------------|-----------------|
| Maximum switching load AC | 250 V, 2 A |
| Maximum switching load DC | 50 V, 2 A |
| Contact construction | closing contact |
| Switching operations mechanical | 10.000.000 |
| at 230V/2A AC, cos(phi)=1 | 600.000 |
| at 230V/2A AC, cos(phi)=0,4 | 200.000 |
| at 24V/1 A DC | 200.000 |

Transmission behaviour

| | |
|-------------------------|---------------------|
| Maximum linearity error | 0,5 % of full scale |
| Rise time 0..90% | 200 ms |
| Temperature influence | +/- 100 ppm/K |

Supply

| | |
|----|----------------------------|
| DC | 20 ... 253 V DC, max. 1,5W |
| AC | 50 ... 253 V AC, max. 3 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 | ~120 g |

Environmental conditions

| | |
|--------------------|---------------|
| Operation | 0 ... 50 °C |
| Storage, transport | -10 ... 60 °C |

EMC

| | |
|-------------------------|-------------------------|
| Product family standard | EN 61326 ¹⁾ |
| Emitted interference | EN 55011, CISPR11 Cl. B |

Electrical safety requirements

| | |
|-------------------------|------------|
| Product family standard | EN 61010-1 |
|-------------------------|------------|

Galvanic isolation, test voltages

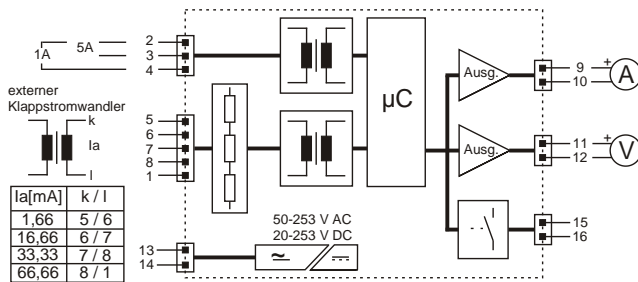
| | |
|----------------------|-------------|
| Input/output | 4 kV, 1 min |
| Input, output/supply | 4 kV, 1 min |

Notifications

| | |
|-----------|---|
| Operation | green LED. Blinks when signal outside range |
| Relay | red LED. Lit when relay is energized |

¹⁾During electromagnetic disturbance minor changes in output signal are possible.

Block and wiring diagram



AC- Trennverstärker
AD-TV 588 GVD T_A: 0 ... +50 °C

Dimensions

