

Description

The AD-TV 588 GVD is used for measuring the rms value of alternating current via a built-in current transformer up to 5A or via an external clamp on / split core current transformer up to 600A. The detected current is outputted as a galvanically isolated standard current signal in the range 0 to 20 mA and as 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, limiting values, etc. can be freely set via 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
- Operating module as an accessory

Business data

Order number

AC Isolation Amplifier AD-TV 588 GVD

Accessory (optional)

Clamp on Current Transformer 5/50/100/200/400/600 A AC
 Operating module AD-VarioControl
 USB programming adapter AD-VarioPass
 Configuration software [AD-Studio](#)

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, Re | 0 ... 1,66 mA AC, 200 Ohm |
| Measuring range, Re | 0 ... 16,6 mA AC, 20 Ohm |
| Measuring range, Re | 0 ... 33,3 mA AC, 10 Ohm |
| Measuring range, Re | 0 ... 66,6 mA AC, 5 Ohm |

All current inputs

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

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

| | |
|---------------------------|---------------------------|
| Voltage range AC | 50 ... 253 V AC, 50/60 Hz |
| Nominal voltage AC | 230 V AC |
| Voltage range DC | 20 ... 253 V DC |
| Nominal voltage DC | 24 V DC |
| Power consumption AC / DC | 3 VA / 1,5 W |



Technical specifications

Housing

| | |
|--------------------------------|--------------------------|
| Dimensions (WxHxD) | 23x110x134 mm |
| With operating module (bxhxt) | 23x110x138 mm |
| 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 ¹⁾ |
| Emitted interference | EN 55011, CISPR11 Cl. B |

Electrical safety requirements

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

Galvanic isolation, test voltages

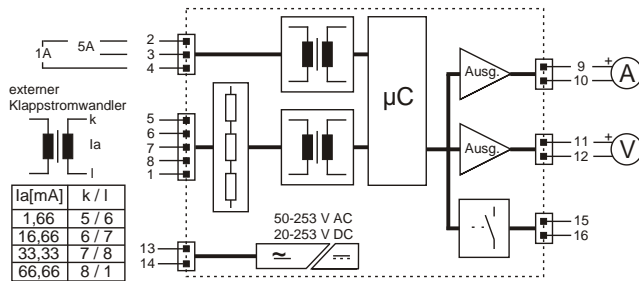
| | |
|----------------------|-------------|
| Input/output | 4 kV, 1 min |
| Input, output/supply | 4 kV, 1 min |

Notifications

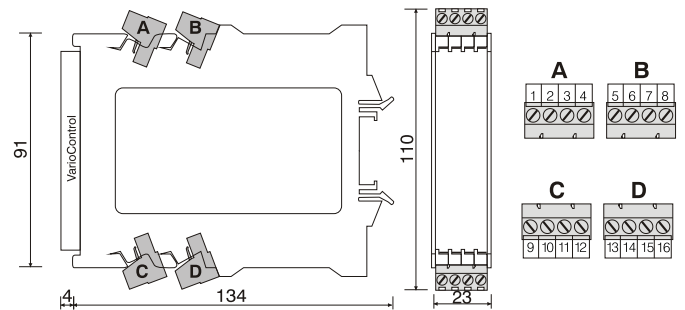
| | |
|-----------|---|
| Operation | green LED. Blinks when signal outside range |
| Relay | red LED. Lit when relay is energized |

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

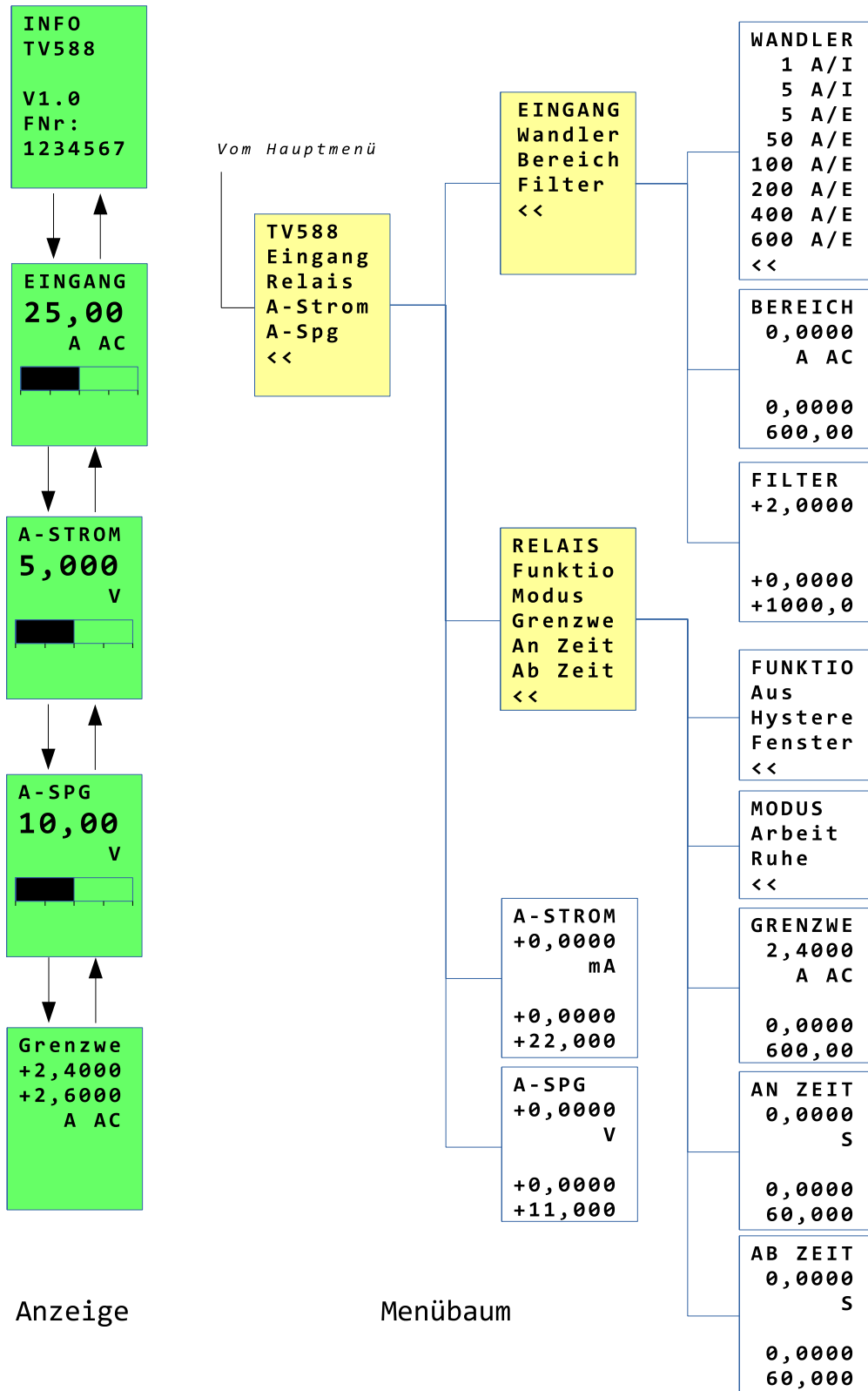
Block and wiring diagram



Dimensions



Circuit examples



Anzeige

Menübaum