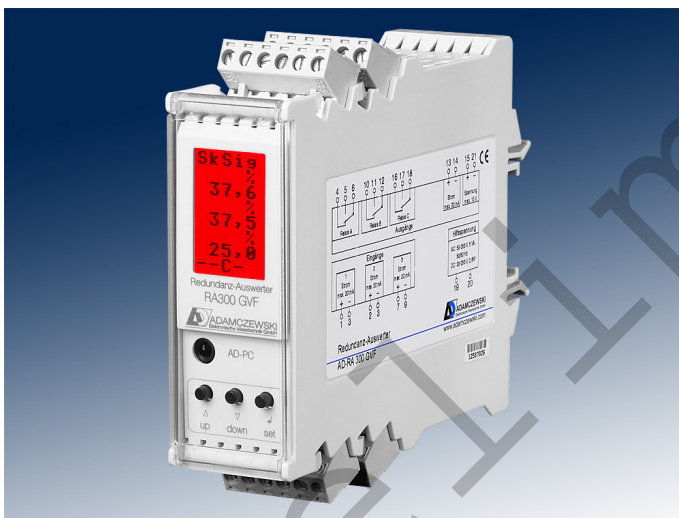


Description

For important analogue values it must be considered that a measuring value can also be incorrect if it is inside the admissible measuring range. Such an error can be determined through redundancy measuring, here three analogue values are measured and a mean value is obtained. If the difference between the channels exceed a user-defined limit, the deviating input is reported via a potential-free relay and is at the same time excluded from the averaging. Consequently a secure analogue signal continues to be present at the output. If more than one channel deviates, the output is set to the measuring range start and all relays report an error. The redundancy evaluator AD-RA 300 can also be operated with only 2 inputs. In this case, the percental difference of the two measuring signals is monitored. If the difference is too great, the two relays would in this case also report an error and the output signal is set to the measuring range start. All necessary parameters can be configured directly at the device or via a PC software.

**Specific characteristics**

- 3 current inputs (bipolar)
- the deviating input is reported via a respective potential-free relay
- current and voltage input are freely scalable and simultaneously operational
- multicoloured (RGB) illuminated LCD display
- simulation mode (auto/manual)

Business data

Order number AD-RA 300 GVF

Technical specifications**Current inputs**

| | |
|------------------|-----------------|
| Measuring range | -20 ... + 20 mA |
| Number | 3 |
| Input resistance | 60 Ohm |

Output current

| | |
|-------------------|---------------|
| Max. output range | 0 ... 20,4 mA |
| Max. burden | 500 Ohm |
| Residual ripple | 20 µAss |

Output voltage

| | |
|-------------------|--------------|
| Max. output range | 0 ... 10,2 V |
| Min. burden | 5 kOhm |
| Residual ripple | 10 mVss |

Resolution

| | |
|--------|--------|
| Input | 13 bit |
| Output | 10 bit |

Relay outputs A...C

| | |
|-----------------------------|------------------------|
| Contact type | 3 changeover contact |
| Max. AC-breaking capacity | 250 V AC, 2 A AC, 50Hz |
| Max. DC-breaking capacity | 50 V DC, 2 A DC |
| Switching operations | |
| Mechanical | 10 ⁷ |
| AC: 230V / 2A, cos(phi)=1 | 6 * 10 ⁵ |
| AC: 230V / 2A, cos(phi)=0,4 | 2 * 10 ⁵ |
| DC: 24V / 1A | 2 * 10 ⁵ |

Display

| | |
|------------------|---|
| Graphic-LCD | 42x64 Pixel, background RGB lights |
| Digital display | 4-digit, can be configured |
| Display function | scaled input signal, input signal, output, limits, scaling unit |

Transmission behaviour

| | |
|-----------------------|-----------------------------|
| Basic accuracy | 0,2 % of full scale |
| Temperature influence | +/- 100 ppm/K of full scale |
| Rise time | 100 ms (output auf 90 %) |

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 | 2,2 VA / 1W |

Housing

| | |
|-------------------------|--------------------------|
| Manner of fastening | DIN rail 35mm (EN 50022) |
| Type of protection | IP 20 |
| Connector cross section | max. 2,5 mm ² |
| Weight | ~ 200 g |

Technical specifications

Environmental conditions

| | |
|-----------------------|-----------------------------|
| Ambient temperature | -10 ... 60 °C |
| Storage and transport | -10 ... 70 °C (no bedewing) |

EMC

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

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

Electrical safety requirements

| | |
|-------------------------|------------|
| Product family standard | EN 61010-1 |
| Overvoltage category | II |
| Pollution degree | 2 |

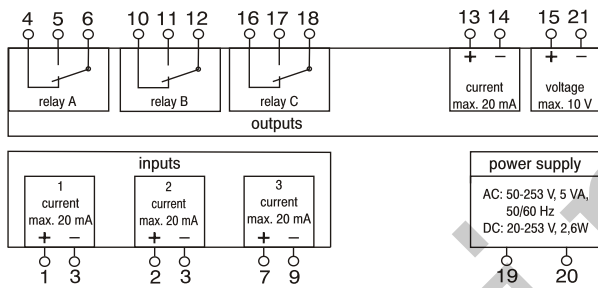
Galvanic isolation, test voltages

| | |
|--------------------------|----------------|
| Input/output | 2,5 kV (1 min) |
| Signal/auxiliary voltage | 4 kV (1 min) |

Protective systems

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

Block and wiring diagram



Dimensions

