

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 condensation)

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

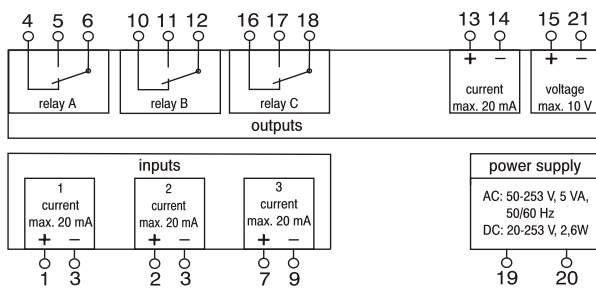
Galvanic isolation, test voltages

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

