



2-channel Temperature Frequency Converter

AF 2.01 GDC

FEATURES

- **2 Inputs:**
PT 100, 3-wire
- **2 Outputs:**
transistor output 24 V to 5 kHz
- **Indication of operation condition**
by 2 color LED per channel
- **Parameterization via PC-interface**
- **Galvanic 2-way isolation**
of 4 kV



FUNCTION

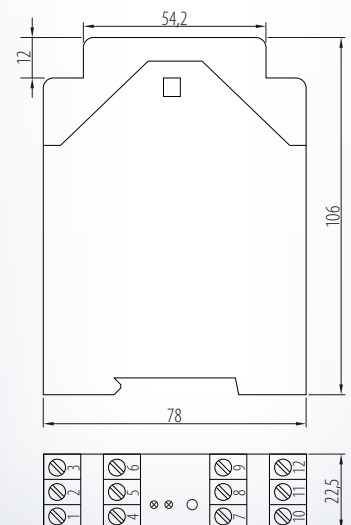
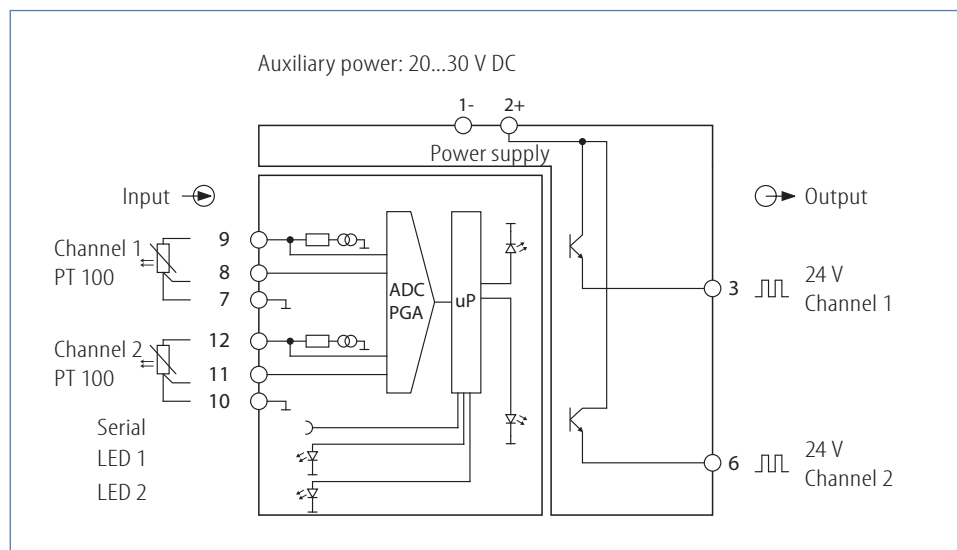
The Temperature Frequency Converter is used to convert a PT 100 value of resistance into a frequency.

Both 3-wire inputs the PT 100 value of resistance get collected and digitised. The measured values will be linearised and scaled according to the settings. This value is being converted into a continuous frequency which can subsequent processed as a 24 V signal at the output by a optocoupler.

With the USB2 Interface in connection with KALIB-Software a frequency range between 0...5000 Hz for -50°C (zero point) plus 500 °C (terminal value) can be selected.

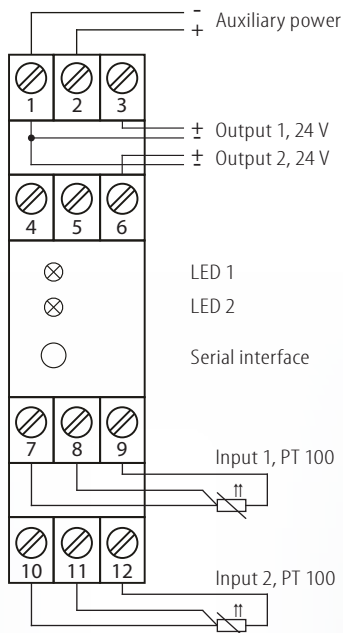
The frequency for sensor break/ short-circuit is adjustable.

The AF 2.01 GDC has 2 transistor outputs whose indication of operation is displayed by 2 LEDs on front side.



AF 2.01 GDC

Connection diagram:



Input:

2 x temperature:	
Type:	PT 100, 3-wire
Measuring range:	-50...0...500 °C
measuring current:	approx. 2 mA
connection channel 1:	terminal 7 (-R), 8 (sense), 9 (+R)
connection channel 2:	terminal 10 (-R), 11 (sense), 12 (+R)

Output:

2 x transistor output:	24 V DC output signal, galvanic connected with the auxiliary power
load:	max. 50 mA
connection channel 1:	terminal 1 -, 3 +
connection channel 2:	terminal 1 -, 6 +

Adjustment:

Measuring ranges, switching points and parameterization are adjustable by KALIB-Software. For this you need a PC as well as the interface adapter **USB2/ USB-Simulator** with **KALIB-Software**.

Both outputs are parameteriseable together (same settings for channel 1 and 2):

Input start:	-50...+500 °C	(factory setting: 0°C)
Input end:	-50...+500 °C	(factory setting: 400°C)
Frequency start:	0...5500 Hz	(factory setting: 0 Hz)
Frequency end:	0...5500 Hz	(factory setting: 4000 Hz)
Frequency at sensor break/ short circuit:	0...5500 Hz	(factory setting: 0 Hz)

Display:

LED 1, 2:	green, active red, orange active	impulse display channel 1, 2 input outside of input measuring range or failure by sensor break/ short circuit, signal output is the frequency set point at failure
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Environmental conditions:

Storage temperature:	-40...+70 °C
Operating temperature:	10...55 °C
Isolation voltage:	4 kV eff. 1 sec. input-auxiliary power

Auxiliary power:

24 V DC:	20...30 V DC < 3 W
Influence of auxiliary power:	< 0,1 %

Characteristics of transmission:

Transmission error:	< 0,1 %
Linearity error:	< 0,3 %
Temperature error:	< 100 ppm/K
Setting time:	< 2 sec.

Directive:

EMC Directive:	2014/30/EU*
Low Voltage Directive:	2014/35/EU
*minimum deviations possible during HF-radiation influence	

Mounting details:

Housing for top hat rail	
Type of protection:	IP 40 housing IP 20 screw clamps
Mounting rail fixed according to	EN 50022-35 x 6,2 mm
Width:	22,5 mm
Weight:	150 g
Material:	Noryl V0 150/ ABS
Flammability class:	ISO R75A 147°C/ 90°C
Approval:	CE
Connection:	screw clamps ≤ 2 x 2,5 mm ²

For safety reasons we recommend to mount the housing for top hat rail with a distance of approx. 5 mm to each other. Please check switch position before initial operation!

Ordering information:

Type:	AF 2.01 GDC 24 V DC
Accessories:	USB2/ USB-Simulator with KALIB-Software

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