

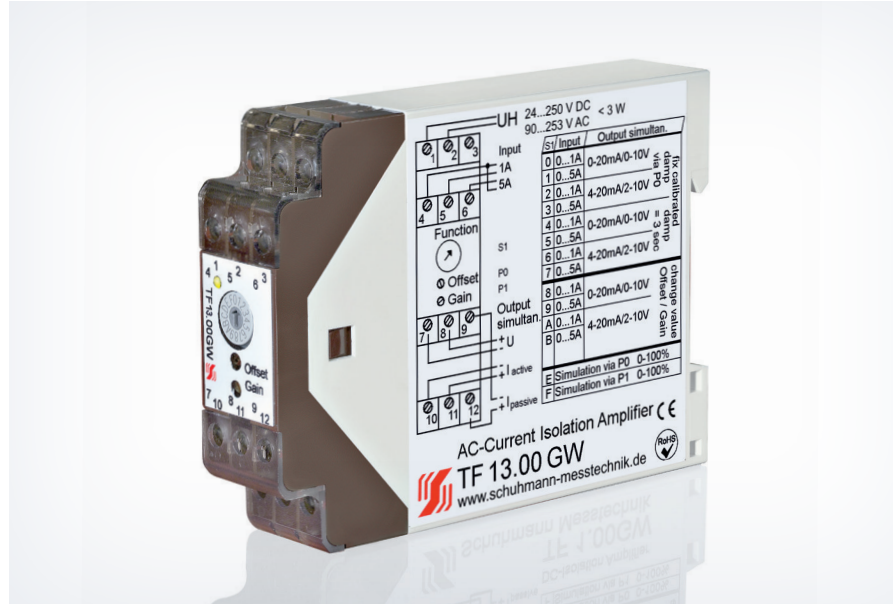


# Adjustable AC current Isolating Amplifier

## TF 13.00 GW

### FEATURES

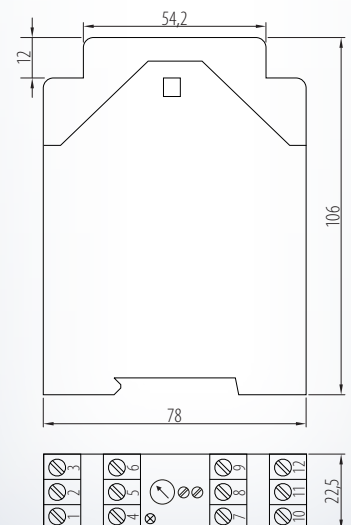
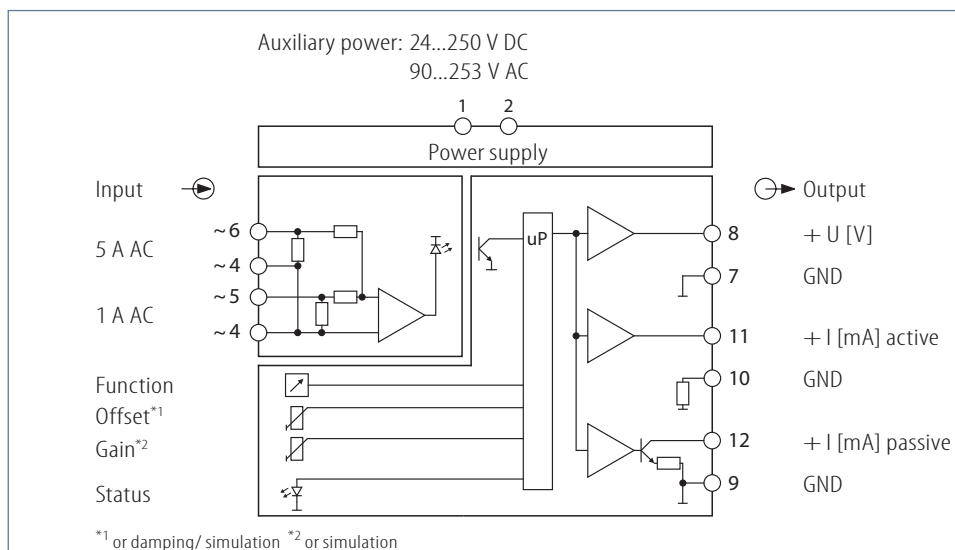
- **1 input for AC current:**  
1 A AC, 50/ 60 Hz or  
5 A AC, 50/ 60 Hz
- **Outputs simultaneous:**  
Voltage 0(2)...10 V and  
Current 0(4)...20 mA active or  
loop-powered
- **Function, switchable:**  
- fixed calibration or  
- adjustable by trimmer or  
- simulation mode for outputs
- **Galvanic 3-way isolation**  
of 2,5 kV
- **Low internal consumption**



### FUNCTION

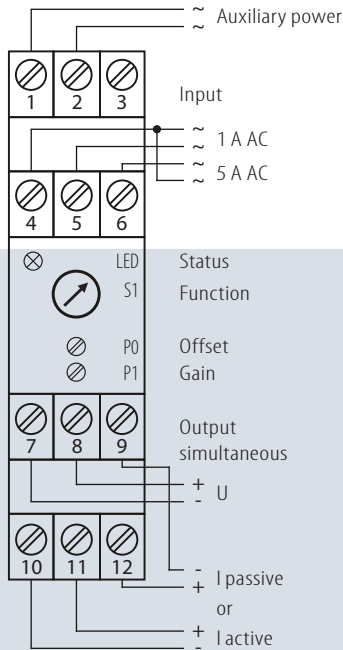
Amplifiers are used for the galvanic isolation or conversion of analog signals. This guarantees a safe decoupling between sensor and evaluation circuit and any influence of other sensor circuit among each other is absolutely impossible. This Amplifier is equipped with one standard **AC current input** (1 A AC or 5 A AC) as well as current and voltage outputs.

The TF 13.00 GW can be switched to different characteristics of transmission by front side turn-switch. Fixed calibrated measuring ranges for input and output are stored in switch setting 0...7. In position 8...D the transmission ranges can be adjusted by zero point and range trimmer. A damping of 3 seconds is selectable in addition. Position E and F are used for simulation during initial operation, here a fixed output value can be generated by zero point and range trimmer, without input signal.



# TF 13.00 GW

Connection diagram:



## Input:

I: AC current:	1 A AC	max. 2 A AC/ 5 sec. 50/ 60 Hz
connection:	terminal 4 ~, 5 ~	
U: AC current:	5 A AC	max. 10 A AC/ 5 sec. 50/ 60 Hz
connection:	terminal 4 ~, 6 ~	

## Output:

I: load-independent DC current:	0(4)...20 mA	permissible load max. 500 Ω
connection:	terminal 10 -, 11 +	
or:		
loop-powered DC current:	0(4)...20 mA	max. permissible voltage 30 V
connection:	terminal 9 -, 12 +	
U: load-independent DC voltage:	0(2)...10 V	permissible load $\geq 2 \text{ k}\Omega$
connection:	terminal 7 -, 8 +	

The maximum limits for current- and voltage output are fixed at 22 mA respectively 11 V.

## Adjustment:

The characteristics of transmission are adjustable by front side turn-switch.

S1	Input	Output simultan.	Damping	Position turn-switch S1
0	0-1 A AC	0-20 mA/ 0-10 V fixed calibrated	0,5...10 s over P0 adjustable	0...7
1	0-5 A AC			
2	0-1 A AC			
3	0-5 A AC			
4	0-1 A AC			
5	0-5 A AC			
6	0-1 A AC			
7	0-5 A AC	4-20 mA/ 2-10 V change value Offset/ Gain	3 s	8...D
8	0-1 A AC			
9	0-5 A AC			
A	0-1 A AC			
B	0-5 A AC	0-20 mA/ 0-10 V	3 s	
C	like „8“			
D	like „9“	0-20 mA/ 0-10 V		
E	Simulation via P0 0-100%			E
F	Simulation via P1 0-100%			F

## Display:

LED status:	green, active	input signals are in standard range, device ready for use
	green, flashing	input signal out of the acceptable range or exceeding of measuring range or simulation mode

## Environmental conditions:

Storage temperature:	-40...+70 °C
Operating temperature:	0...55 °C
Isolation voltage:	2,5 kV eff. 1 sec. input-output 2,5 kV eff. 1 sec. auxiliary voltage

## Auxiliary power:

Wide range:	24...250 V DC 90...253 V AC < 3 W
Influence of auxiliary power:	< 0,1 %

## Characteristics of transmission:

Transmission error:	< 1 %
Resolution:	13 bit
Linearity error:	< 1 %
Temperature error:	< 200 ppm/ K
Load influence I:	< 50 ppm of final value
Load influence U:	< 0,2 % at 2 kΩ load
damping:	0,5...10 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 10 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 $\leq 2 \times 2,5 \text{ mm}^2$

**Please check switch position before initial operation!**

## Ordering information:

Type: **TF 13.00 GW** wide range

Schuhmann GmbH & Co. KG  
Römerstraße 2  
D-74363 Güglingen  
Tel. + 49 71 35 50 56  
Fax + 49 71 35 53 55  
www.schuhmann-messtechnik.de