

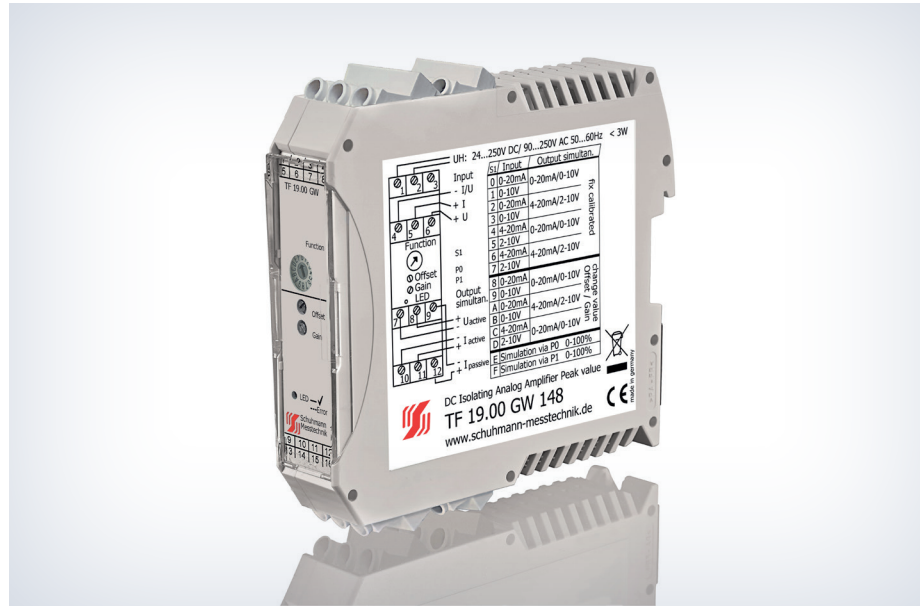


Adjustable Isolating Amplifier Peak value measurement

TF 19.00 GW 148

FEATURES

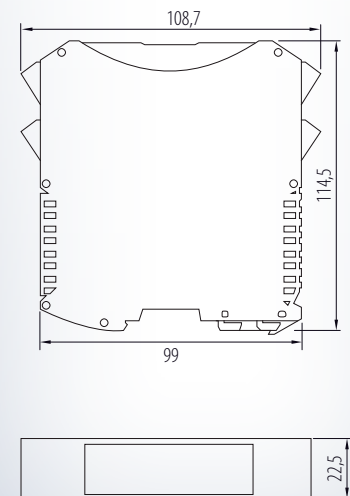
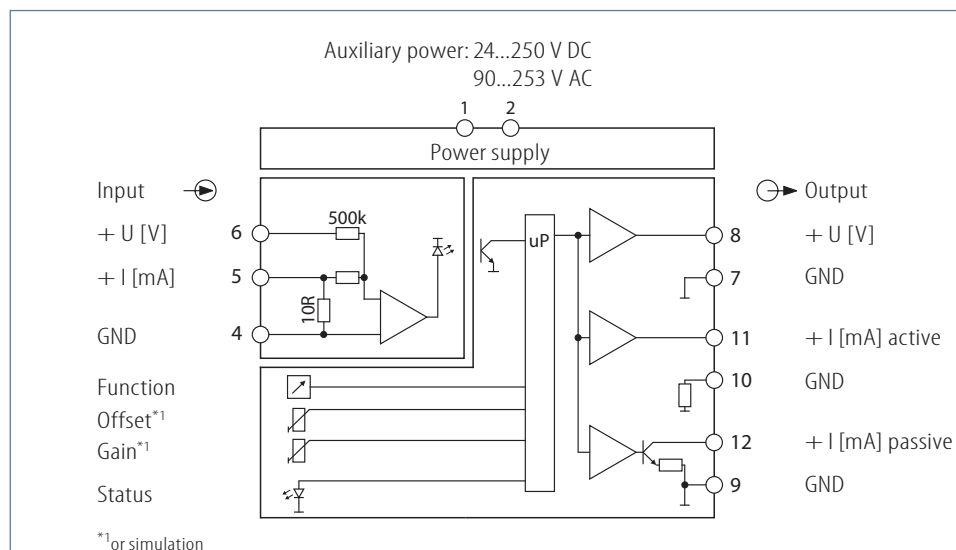
- **Peak value measurement:**
 $f=6$ Hz (half sinus)
 Current 0(4)...20 mA or
 Voltage 0(2)...10 V
- **Outputs simultaneous:**
 Voltage 0(2)...10 V and
 Current 0(4)...20 mA active or
 loop-powered
- **Function, switchable:**
 - fixed calibration or
 - adjustable by trimmer or
 - simulation mode for outputs
- **Galvanic 3-way isolation
 of 2,5 kV**



FUNCTION

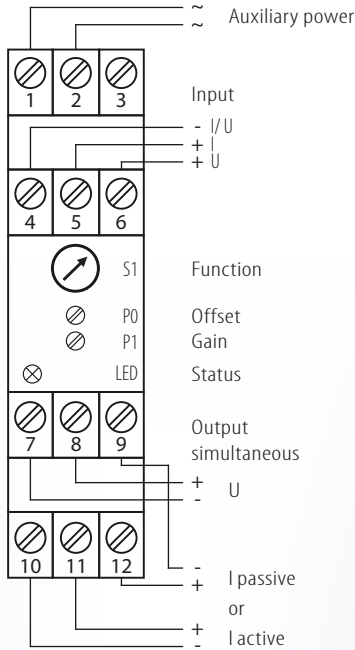
The TF 19.00 GW 148 does the peak value measurement: $f=6$ Hz (half sinus). Amplifiers are used for the galvanic isolation or conversion of analog signals. This guarantees a safe decoupling between sensor and evaluation circuit and any influence of other sensor circuit among each other is absolutely impossible. This Amplifier is equipped with standard current and voltage inputs as well as current and voltage outputs.

The TF 19.00 GW 148 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. 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 19.00 GW 148

Connection diagram:



Input:

I: DC current:	0(4)...20 mA	input resistance approx. 10 Ω
connection:	terminal 4 -, 5 +	
U: DC voltage:	0(2)...10 V	input resistance approx. 500 kΩ
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 ≥ 2 kΩ
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.	Position turn-switch S1
0	0-20 mA	0-20 mA / 0-10 V	0...7
1	0-10 V	fixed calibrated	Inputs and outputs are fixed calibrated, the trimmer for zero point and range are here without function.
2	0-20 mA		
3	0-10 V		
4	4-20 mA	0-20 mA / 0-10 V	8...D
5	2-10 V	change value Offset/ Gain	
6	4-20 mA		
7	2-10 V		
8	0-20 mA		0-20 mA / 0-10 V
9	0-10 V		
A	0-20 mA		
B	0-10 V		
C	4-20 mA	0-20 mA / 0-10 V	E
D	2-10 V		
E	Simulation via P0 0-100%		Simulation with trimmer P0: 0...100% output
F	Simulation via P1 0-100%		

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:	< 0,12 %
Resolution:	15 bit
Linearity error:	< 0,1 %
Temperature error:	< 100 ppm/K
Load influence I:	< 50 ppm of final value
Load influence U:	< 0,2 % at 2 kΩ load
Setting time:	< 100 msec.

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 20 housing
	IP 20 clamps
Rail-mounting fixed according to	EN 50022-35 x 7,5 mm
Width:	22,5 mm
Weight:	140 g
Material:	Polyamide PA
Flammability class:	V0 (UL94)
Approval:	CE
Connection:	screw clamps
	$\leq 2,5$ mm ²

Please check switch position before initial operation!

Ordering information:

Type: TF 19.00 GW 148

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