

# TRG line



## SGT-22

- high current and voltage AC/DC signals RMS transducer
- wide range of power supply
- galvanic isolation between input/output/supply circuits
- TS-35 DIN rail mounting
- high accuracy, digital linearization
- standard output signal
- LED indicator on a front panel

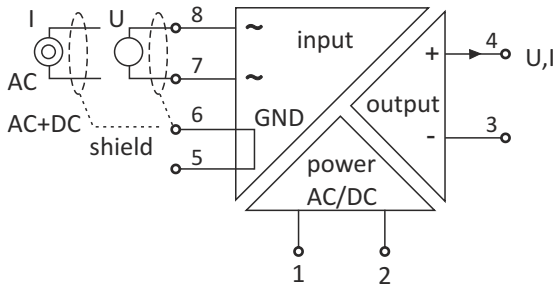
SGT-22 transmitter measures AC/DC current or voltage and converts them into standard output signal. Signal processing is performed according to the RMS value algorithm:

$$U(RMS) = \frac{\sqrt{f^2(t)dt}}{T}$$

Max. current in steady state is up to 5A. For measuring greater currents external shunt is required. Max. instantaneous overload is 25A (for 1 s.). By analogy - for voltage bigger than 750 V AC, transformer is necessary. All the circuits (input/output/supply) are galvanically isolated.

For advanced users the calibrations procedure is also available.

### PIN ASSIGNMENT



### TECHNICAL DATA

Power supply	18 V ÷ 350 VDC; 18 V ÷ 230 VAC
Power consumption	for DC supply: 1.5 W, for AC supply 1.5 VA
Input signal	<u>voltage RMS</u> : max. range 0 ÷ 750 V; resistance ≥ 2 MΩ / 230V <u>current RMS</u> : max. range 0 ÷ 5A; resistance ~ 0,02Ω / 5A instantaneous overload for internal shunt: max 25 A for 1s peak ratio: twice of measuring range
Signal shape	free (DC+AC)
Signal sampling	100 kHz
Frequency	range: 3 Hz ÷ 10 kHz
Output signal	<u>voltage</u> : 0 ÷ 10V / max. load 2kΩ <u>current</u> : 0/4 ÷ 20 mA / max. load 750Ω or any other
Accuracy	0.2%
Nonlinearity	0.025%
Load error	0,05% / FS
Temperature drift	0.006% / °C
Digital filter time constant	standard 1s, other on request
Operating temperature	0°C ÷ +55°C
IP protection	IP 20
Dimensions (WxHxD)	22.5 x 99 x 114.5 mm
Mounting	TS-35 DIN rail

### PRINCIPLE OF OPERATION

The transmitter measures the input signal and converts according to preset parameters then calculates the output signal. Green LED informs that transducer is supplied and processor works properly. There are two potentiometers on the housing, which can be used for calibrating "Zero" and „Range". It is advised to use auto-calibration button for reference voltage, if input signal is AC.

### TRANSMITTER CALIBRATION

**WARNING: The transmitter is preset.**

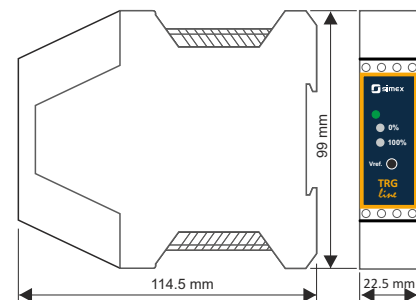
**Incorrect calibration may cause malfunction.**

For RMS AC signals, the calibration should start with setting the reference voltage:

- short the input contacts and push „Uodn" button for 6 s. till the green LED starts flashing. For a further 4 s. the transmitter is calibrated.

Calibration can be improved using „0%" and "100%" potentiometers. Provided that the signal fed to the input is accurately measured.

### CASE DIMENSIONS



### ORDERING

SGT-22-Y-X-2-3-001

**input signal range:**  
0 - 5 A  
0 - 750 V

**output:**  
1 : 0 - 5 mA  
2 : 0 - 20 mA  
3 : 4 - 20 mA  
4 : 0 - 5 V  
5 : 0 - 10 V  
6 : 1 - 5 V

### Ordering examples:

SGT-22-0..3A-5-2-3-001

Isolator, in.: 0-3A, out.: 0-10V



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