ECG-Simulator **ES-300**



ECG-Simulator for function tests of ECG devices

- ☑ ECG impulse output
- ☑ periodic signals
- ☑ arrhythmia output
- ☑ pacemaker outputs
- ☑ simulation of respiration
- ☑ signal output in accordance with IEC 60601
- ☑ user specific language setting

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TÜVRheinland ZERTIFIZIERT
Management System ISO 9001:2015
www.tuv.com ID 0910095181

Technical Data

Line voltage:	83 – 264 V ac, 50 / 60 Hz or internal accumulator operation
Nominal power:	max. 25 VA – internal power supply
Protection class:	Internal power supply
Environmental temperature:	+ 5 - + 40 °C
Storage temperature:	- 10 - + 50 °C
ECG impulse amplitude:	1 – 5 mV ± 1% in 1 mV steps
ECG signal duration:	1 – 200 ms ± 1% in 1 ms steps
ECG impulse form:	sinus, sinus square, triangle, rectangle, trapeze, ISO, ventricular fibrillation, ventricular tachycardia, mains frequency, NSR
ECG impulse frequency:	10 - 300 bpm ± 2 % in 1 bpm steps
Signal frequency variable:	1 - 100 Hz ± 2 % in 1 Hz steps
Signal frequency sine:	0,3 Hz ± 2 %
Respiration:	Base value ± 1 Ohm
Interface:	1 x RS-232 for PC-connection
Testing device connection:	10 sockets 4 mm for ECG
Digital display:	4 x 16 char display
Keyboard:	6 key foil keyboard
Accessories:	10 x STA8 ECG adapter clip 1 x charger
Mechanical data:	Light weight metal case IP20
Dimensions:	138 x 230 x 37 mm (W x H x D)
Weight:	approx. 0,5 kg
Selectable languages:	german, english, french, polish spanish, Italian, portuguese, turkish

The ES-300 serves as a test signal generator for ECG impulses. It is powered by an internal rechargeable battery.

The ES-300 can be operated as a stand-alone device or PC-controlled.

The ECG simulation is used to output ECG impulses to defibrillators and ECG devices. The parameters of the output impulses are adjustable.

Because of the, as far as possible, freely configurable and variable ECG signal forms, a large variety of signal sequences can be output. The simulation of arrhythmic signal forms offers the possibility to test more complex devices in accordance with a standard.

The generation of the calibration impulse CAL in accordance with IEC 60601-2-51 enables practical operating function-controls for manufacturers and examiners.

Level ratios:

Ratio	Voltage
Abl. I (L - R)	+ 1,00 mV
Abl. II (F - R)	+ 1,56 mV
Abl. III (F - L)	- 0,56 mV
N – R	+ 0,59 mV
N – L	+ 1,59 mV
N – F	+ 2,15 mV
N – C1	+ 0,59 mV
N – C2	+ 1,18 mV
N – C3	+ 1,75 mV
N – C4	+ 2,03 mV
N – C5	+ 2,83 mV
N – C6	+ 3,35 mV

(Technical modifications and errors reserved. 10/2026)

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