

Fully programmable constant-current electrical stimulator for functional electrical stimulation

- Delivers biphasic constant current pulses
- Stand-alone device that is configured and controlled from a computer system
- Can send triggers to other devices for synchronization
- Includes electrode impedance check and stimulation current monitoring
- CE-certified (Europe) and FDA-cleared (USA) medical device for use in humans



g·Estim FES description

The g·Estim FES is a constant-current, biphasic electrical stimulator intended for powered muscle stimulation. g·Estim FES has an applied part of type BF with connectors for bipolar stimulation electrodes (anode and cathode). The device is controlled by a computer via USB connection. It also has digital outputs for synchronization with other devices. An optional hand-switch allows you to perform stimulation manually. Alternatively, an optional foot-switch can be used to explicitly enable/disable stimulation. g·Estim FES includes an impedance measurement function and contains a high-impedance stop mechanism that stops stimulation when electrode contact becomes loose. The device is CE certified (Europe) and cleared by the FDA (USA) for therapeutic use in human patients.

The intended use

The g·Estim FES is a powered muscle stimulator and intended for

- temporary relaxation of muscle spasms,
- prevention or retardation of disuse atrophy,
- increasing local blood flow in the treatment area,
- muscle re-education,
- prevention of post-surgical phlebo-thrombosis through immediate stimulation of calf muscles,
- maintaining or increasing range of motion.

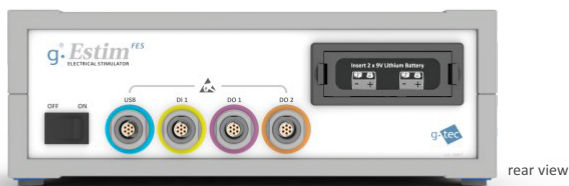
The device must be used by trained and qualified personnel.

General specifications

Stimulus current output	$\pm 1 - 60 \text{ mA} (\pm 10\%)$
Phase shape	rectangular
Work time	2 - 20 s in 0.5 s increments ($\pm 10\%$ accuracy)
Rest time	2 - 50 s in 0.5 s increments ($\pm 10\%$ accuracy)
Phase duration	50 μs - 400 μs in 10 μs increments ($\pm 10\%$ or $\pm 10 \mu\text{s}$ whichever greater)
Pulse rate	1 - 100 pulses/second in 1 pulse increments ($\pm 10\%$) (Pulse period from 1 s down to 10 ms)
Rising/falling ramps	0 - 10 s in 0.5 s increments ($\pm 5\%$ accuracy)
Power supply	2 x 9 V battery, USB - connection

The device is designed and manufactured according to the following norms:
IEC 60601-1, IEC 60601-1-2, IEC 60601-2-10, IEC 62304, IEC 62366, ISO 14971

Rx only



rear view



foot switch



hand switch