

# **CARDIOVIT MS-2010**

## **Technical Data CARDIOVIT MS-2010**

#### System:

Dimensions: 258 x 193 x 50 mm (I/w/h)

Weight: 1.5 kg including rechargable battery and paper

Electrical data:

Power: Mains or battery operation

Voltage: 100 to 240 V

Current: 0.3 A (115 V) to 0.16 A (240 V)

Frequency: 50/60 Hz

**Battery type:** Rechargeable polymer battery, replaceable by the user, battery capacity for 100 ECG printouts or 3 hours of continuous display (without printing)

**Battery recharging time:** Approx. 3 hours after full discharge (with monitor switched off)

Power consumption: Approx. 40 VA

**Line frequency filter:** Distortion-free suppression of superimposed 50 or 60 Hz sinusoidal interferences by adaptive digital filtering

#### ECG amplifier:

- Sampling frequency: 4000 samples/second/channel
- Measuring range: Dynamic +/- 10mV, DC +/- 300 mV
- Pacemaker detection: > +/- 2 mV / pulse width > 0.1ms
- Frequency range: 0Hz 150Hz (IEC/AHA) / 0.05 Hz 300 Hz (for children and SAECG)
- CMRR: > 100dB
- Digital resolution: 5µV / 18bit
- Input impedance: 100MOhm
- Patient leakage current: < 5µA
- Patient input circuit: Fully floating and isolated, defibrillation protected
- Defibrillation protection: 5000VDC

#### Special recording functions:

- Detection of loose electrodes, electrode impedance, overvoltage, AC noise, baseline fluctuations and muscle tremor
- Heart rate measurement: Up to 300 beats per minute

#### Standard Interfaces:

### Interface for exercise ECG control:

RS-232 (V24) serial interface: Spirometry (Spirovit sensor 250 or 260) QRS trigger output: TTL, +/- 10V

**USB x 1:** Universal Serial Bus connection for USB devices, e.g. optional barcode reader, external USB keyboard, memory stick or laser printer

## Communication:

# SCM (SCHILLER Communication Module):

Communication with SEMA-200 via:

- Ethernet (LAN) RJ-45 connector
- optional GPRS
- optional WLAN module with integrated antenna, supports 802.11g, WPA, WPA2, WEP and SSID (invisible)

## Internal memory: 350 ECG recordings

# Long-term rhythm recording:

**5 minutes memory:** The signals of the past 5 minutes for all ECG channels (full disclosure) can be saved in the memory and transmitted to SEMA.

### Filters:

- Myogram filter: Adjustable to 25 or 35 Hz
- SSF: SCHILLER Smoothing Filter
- SBS: SCHILLER Baseline Stabiliser

### Display:

the user

**Display type:** Resistive colour LCD touch screen with LED back light, diagonal 10.4 inch (264 mm)

Display resolution: 800 x 600 pixels

**Display data:** Heart rate, patient name, patient number, time, curves, lead designations, speed, amplification, filter settings and warnings

Number of leads displayed on the screen: 3, 6, 2x6, 3x4+1 rhy and 12 lead combinations: Up to 12 simultaneous leads: Standard/Cabrera/Nehb; more lead combinations freely programmable by

#### Printer:

**Printing technology:** High-resolution thermal printing, 8 dots/mm

(amplitude axis), 16 dots/mm (time axis), @ 25 mm/s

Frenquency range: 0.05Hz - 150Hz (IEC/AHA) Chart speed: 5, 10, 12.5, 25 & 50 mm/s

Sensitivity: 2.5, 5, 10, 20 & 40 mm/mV

Paper type: Thermo reactive, Z-folded, 114 mm wide, optimal posi-

tioning on a width of 105 mm (20 m of paper)

Writing width: 3-, 6- or 12-channel printout in manual mode

#### (eyboard:

Type: Operation and entry directly via the touch screen keyboard.

### Hardware options:

- Trolley (Kangaroo)
- Suction electrode system
- Transport case
- Barcode reader
- Internal WLAN on SCM
- Internal GPRS on SCM
- QRS trigger

#### Software options

- Software C™ ECG analysis program for adults / children
- Thrombolysis software
- High-resolution, signal-averaged ECG (SAECG)
- Heart rate variability (HRV)
- Spirometry
- Worklist

### Standards:

## Ambient conditions:

**Temperature:** Operation: 10° to 40°C; transport/storage: -10° to 50°C

 $\textbf{Humidity:} \ \ \text{Operation:} \ \ 20\ \%\ \ \text{to 95\ \%}\ \ \text{non-condensing;} \ \ \text{transport/stor-}$ 

age: 15 % to 95 % non-condensing **Pressure:** Operating: 700 to 1060 hPa; transport/storage: 500 bis 1060 hPa

### Certification:

**Protecting class**: Il according to IEC 60601, with functional earth, Ila according to Directive 93/42EEC

Safety Standard: CF according to IEC 60601-1; IEC 60601-1, IEC

60601-1-2, IEC 60601-2-51, ANSI/AAMI EC11

Conformity: CE according to Directive 93/42EEC

### Warranty:

Standard warranty is 15 months.

### Accessories:

All our accessories are available at www.schiller.ch

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