

Technical Specifications Cardio M series

ECG leads	Standard 12 leads
Display	320 x 240 graphic LCD-Display • (2 x 16 Char. Cardio M)
Recording channel	1, 3, 6 and 12 channel
Sensitivity	5, 10, 20, auto (I-aVF:10, V1~V6:5) mm/mV
Printing speed	12.5, 25, 50 mm/s

Filters	
AC	50/60 -- 20 dB or better
Muscle	25 ~ 35 Hz -- 3 dB
Base line drift	0.1 Hz -- 3 dB or lower
Low pass filter	off, 40 Hz, 100 Hz, 150 Hz

Recorder	
Recording system	Thermal print head
Effective writing width	204 mm
Resolution	
Vertical	8 dots/mm
Horizontal	16 dots/mm
Paper type	Thermal roll paper

Communication	PC connection with RS-232 interface and LAN
----------------------	---

User interface	Keyboard with touch-screen (Cardio M plus)
Character available	Alphanumeric and symbol
Patient data	ID, name, age, sex, height, weight
Basic measurement	Heart rate, PR, QRS, QT/QTc, P-R-T axes
Defibrillation protection	Provided
Signal quality control	Disconnected lead detection
Frequency response	0.05 ~ 150 Hz within -3 db

Electrical	
Input circuit	Floating input, Isolated and defibrillation protected
Input impedance	$\geq 10 M\Omega$
Input range	$\geq \pm 5 mV$
Common Mode Rejection	$\geq \pm 100 dB$
DC offset voltage	$\geq \pm 300 mV$
Time constant	3.2 sec (-0 ~ +20 %)
Patient isolation	$< 10 \mu A$

Power supply	AC or built-in Battery (option)
Power requirement	100 - 240 Vac, 50/60 Hz, 1.0 - 0.5 A
Power consumption	60 W max
Safety	Class I, Typ BF

Dimension	296(W) x 305,5(H) x 92,5(D) mm
Weight	App. 2.9 kg

Environmental Conditions	
Operating Humidity	30 ~ 85 % R.H
Operating Temperature	10° ~ 40 °C (50° ~ 104 °F)
Atmospheric Pressure	70 ~ 106 KPa

Spirometer SPM-300

Measuring Method	Differential pressure method
Sample Rate	200 samples/sec.

Measuring Range	
Flow	0 to $\pm 12 l/s$
Volume	0 to $\pm 11 l$

Measuring Values	
FVC	FVC, FEV 1.0, FIVC, FEV 1.0, FEF 25 ~ 75 %, FEF 200-1200 ml, FEF 50 % / FIF 50 %, PIF, FET 100 %
SVC	SVC, ERV, IRV, TV
MVV	MVV, RR, TV

Prediction Equation	Morris-Polgar, Knudson / ITS, ECCS / Quanjer
----------------------------	--

Presentation	Flow volume loop, Flow time plot, Measurement values table
---------------------	--

Measuring Accuracy	Complies with the American Thoracic Society (ATS) Standards for Spirometry, 1995 Update
Flow Impedance	$< 0,2 mbar s/l$ at 12 l/s
Power Supply	DC 9V Batterie
Dimensions	47(W) x 200(H) x 34(D) mm
Weight	250 g

Environmental Conditions	
Relative Humidity	10 ~ 90 % (non-condensing)
Ambient Temperature	15 ~ 40 °C (59 ~ 104 °F)
Atmospheric Pressure	700 ~ 1060 hPa.

Cardio M series



medical **ECONET**

Medical Econet GmbH
 Mainstraße 6 c-d
 D-45768 Marl
 Telefon +49 (0) 23 65/924 37-0
 Telefax +49 (0) 23 65/924 37-55
 info@medical-econet.com
 www.medical-econet.com

medical **ECONET**



Cardio M series

Cardio M series meets highest demands according to accuracy and capability in the heart and lung diagnosis.

Cardio M

Low-priced Multi-Channel, lightweight, compact and reliable ECG-devices

- inclusive all accessories
- short interpretation



Accessories

- 1 patient cable assembly
- 4 clamp electrodes
- 6 chest electrodes
- 1 chart paper
- 1 electrode gel



Cardio M Plus

Economical Multi-Channel, lightweight, compact and reliable ECG-device with several additional options.



Superior advantages

High resolution LCD indication. 3 selectable ECG leads can be displayed time-synchronous. Proper final result without waste of time and paper.



Easy to use

User-friendly operation of several parameters per touch-screen.



Special option

With the optional Spirometer SPM-300, the Cardio M Series's performance can be further expanded. SPM-300 enables to perform several pulmonary function tests and to get a full A4 size report. FVC, SVC, MVV tests are possible. Nominal/actual differences are calculated automatically and pre/post medication comparisons aid diagnosis. Disposable mouthpieces ensure protection against infections.

Common features

- A Recording**
 - Continuous of 1, 3, 6 and 12 channels
 - Print format selectable
 - Copy mode lets you print various formats with one time recording.
- B Operation expenses**
 - Integrated grid function provides to use normal thermo fax paper.
- C Software**
 - An updating is possible at any time.
- D Fax-function**
 - Offers the possibility to transmit ECG data to another specialist's fax. Only a modem is needed.
- E Interpretation program**
 - Cardio M Plus is equipped with an extended interpretation software.