



Cardio Q70 & Q50

Datasheet



Cardio Q Series

Qualified Excellence
Providing Advanced Technology in a Complete Solution

1. ECG

Gain	2.5, 5, 10, 20, Auto (I~aVF: 10, V1~V6: 5) mm/mV
Frequency Response	0.05~200Hz (-3dB)
Input Impedance	$\geq 50 \text{ M}\Omega$
Input Voltage Range	$\leq \pm 5 \text{ mV}$
Digital Resolution	1 μV /LSB
Sampling Rate	Analysis Sampling Rate : 500 Sample/s Digital Sampling Rate : 8,000 Sample/s
CMRR	$\geq 105\text{dB}$
ECG Storage	Internal Storage for 500 Data : Built- in Memory
ECG Lead	Simultaneous 12 channel ECG and acquisition
HR Accuracy	30~300 bpm (± 3 bpm)
Recording Type	3CH+3RHY, 3CH+1RHY, 6CH+1RHY, 12CH, 6CH+ST map 1CH Long Time (1min, 3min, 5min, 10min, 20min, 30min) and Special Beat Report (Text, Guide, Vector, ST map)

2. Printing

Printing Type	Thermal Print Head, Z-fold Paper
Dot Density	Vertical : 8dot/mm Horizontal : 16dot/mm (0.125mm pitch)
Paper	Thermal Printing Paper A4 : 210mm x 150mm (half A4) Letter : 215mm x 140mm (half Letter)
Printing Speed	5, 12.5, 25, 50, 100 mm/sec
Printing Resolution	203 dpi

3. Communication Protocol

Communication	LAN, WIFI (Option), USB
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4. Filter

AC	50/60Hz, -20dB or better
Muscle	25~35Hz -3dB or better
Baseline Drift	0.05Hz, 0.1Hz, 0.2Hz, -3dB or better
Low Pass Filter	off, 40Hz, 100Hz, 150Hz

5. Display

Type	Color TFT Wide Display
Resolution	1,024 x 600
Size	10.1 inch (Cardio Q70) / 8 inch (Cardio Q50)
External Display	HDMI (1,024 x 600 @60Hz)

6. Battery

Voltage & Capacity	10.8V, 6,500mA
Recharging Time	Battery recharge to full capacity in 3 hours (The device is turned off)
Operation Time	10 hours of normal use or 350 ECG (12 channel format at 25mm/s and 10mm/mV) or Spiro pages
Battery Type	Replaceable and Rechargeable Lithium Ion

7. Spirometer

Measuring Parameter	<ul style="list-style-type: none"> - FVC : FVC, FEV1, FEV1/FVC, FEF 0.2-1.2L, FEF 25-75%, FEF 75-85%, PEF, FEF 25%, FEF 50%, FEF 75%, FIVC, FEV6, PEFT, FET 100%, Error Code, Extrapolation volume - COPD : FEV1, FEV6, FEV1/FEV6, LFI, COPD Classification - SVC : SVC, TV, ERV, IRV, EC - MVV : MVV, FB, TV
Presentation	Flow Volume Loop / Volume Time Graph / Measurement Values Table
Measuring Range	Flow: 0 to ± 14 L/s / Volume: 0 to ± 12 L
Measuring Method	Differential Pressure Method
Prediction Equation	Morris-Polgar, Knudson-ITS, ECCS-Quanjer, Korea CJK, Pereira
Sample Rate	200 samples/sec
Flow Impedance	< 0.2 mbar s/L at 12 L/s
Measuring Accuracy	-3~3 L (± 0.09 L) / Complies with ISO 26782, ISO 23747
FVC	<p>Accuracy & Repeatability: ± 3.5 % or $\leq \pm 0.1$ L (Bigger one between them)</p> <p>Linearity : 0.4 ~0.6 L (error: < 3 %)</p>
FEV1	<p>Accuracy & Repeatability: ± 3.5 % or $\leq \pm 0.1$ L (Bigger one between them)</p> <p>Linearity : 0.4 ~0.6 L (error: < 3 %)</p>
PEF	<p>Accuracy: ± 12 % or $\leq \pm 0.42$L/s (25 L/min) (Bigger one between them)</p> <p>Linearity : Error between two consecutive test flows is bigger one's 5 % or less</p>

8. Others

Input Type		Capacitive Touch Screen, Function Buttons, Keyboard(Q70 Only)
Power		Input : 100~240 VAC, 50/60Hz, 1.5~0.75A Output : 15 VDC, 4.2 A
Safety Conformity		ECG : Class I, Type CF Applied Parts: ECG Electrodes Spirometer : Class I, Type B Applied Parts: Spirometer Handle
Environmental	Operation	Ambient Temperature : 10 to 40°C Relative Humidity : 30 to 85% Atmospheric Pressure : 700 to 1,060hPa
	Storage & Shipping	Ambient Temperature : -20 to 60°C Relative Humidity : 10 to 95% Atmospheric Pressure : 500 to 1,060hPa
Dimension		Main Body <ul style="list-style-type: none"> - 286(W) x 350(D) x 140(H) mm (Cardio Q50) - 286(W) x 350(D) x 144(H) mm (Cardio Q70) - Approx. 4.2kg Spirometer Handle <ul style="list-style-type: none"> - 48(W) x 39(D) x 201(H) mm - Approx. 250g

9. Configuration

<p>Standard</p>	<ul style="list-style-type: none"> • Main Body 1EA • Power Cable 1EA • ECG Patient Cable 1EA • Limb Electrodes 1 SET • Chest Electrodes 1 SET • ECG Chart Paper 1EA • ECG Gel 1EA • Quick Manual 1EA • ECG Diagnosis Guide 1EA
<p>Option</p>	<ul style="list-style-type: none"> • Rechargeable Battery 1EA • Cart 1EA • Spirometer Handle 1EA • Spirometer Handle Rack 1EA • Spirometer Diagnosis Guide 1EA • Disposable mouthpiece 1 Box (100EA) • Mouthpiece Adapter 1EA • PFT Filter 100EA • Nose Clip 1EA

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