

Specification of JAXA Holter ECG (FM-180 and MMC)

1. Specifications of FM-180

Overall

· CPU	: 16 bit single chip
· SRAM	: 512 K Bytes
· LCD Resolution	: 112 dot × 72 dot (graphics)
· Recording time	: Continuous 24 hours
· Internal Clock	: RTC
· Backup battery	: Lithium battery Service life six (6) years or more
· Patient EVENT recording	: EVENT switch Records up to twelve (12) times / min
· Recording media	: Multimedia card (MMC-64)
· ECG signal recording unit	
Number of recording channels	: bi-polar 2/3 channels, unipolar 2/3 channel
Input impedance	: 10 MΩ or more
CMRR	: 60 dB or more
Gain ratio	: 300x (A/D input) : 300x (Monitor output)
Frequency response	: 0.05/0.67~40Hz
Monitor output	: 300 mV/1mV
Quantifying bit number	: 10 bits
Sampling frequency	: 125 Hz
Dynamic range	: ±5.00mV
Minimum resolution	: ±9.76 μ V
· Pacemaker pulse detection	
Detection channel	: given 1 channel
· Acceleration sensor	: 3 axial directions (static position information detection)
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· Switches	: 2 units (EVENT, ON@ENTER)
· Buzzer	: 1 unit (separate excitation)
· Power supply	: one AAA battery
· Dimensions (W×H×D mm)	: 65×62×18
· Weight (g)	: 78g (incl. battery and multimedia card)

2. Specifications of MMC

Multimedia Card (MMC-128)

· Memory capacity	: 128 M Byte
· Interface	: MMC System Standard
· Dimensions (W×D×H mm)	: 24×1.4×32
· Weight (g)	: 1.5g
· Backup battery	: Not required
· Card type	: MMC System Standard
· Service life (Electrical)	: Rewritable 100,000 times (Approx. 247 years / everyday use)
· (Mechanical)	: Endures Load/Eject 10,000 times (Approx. 7 years/ 4·Load/Eject a day)
· Error Rate	: 52.8FIT
· Mean Time Between Failures (MTBF)	: 18,914,171 hours
· Vibration-resistance (Operating) (Non-operating)	: 15 Gpp (MAX) : 15 Gpp (MAX)
· Shock resistance (Operating) (Non operating)	: 500G (MAX) : 500G (MAX)
· Acceptable card	: Fukuda Denshi encoded. Commercially produced multi media cards are not usable.
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Environmental conditions

Operating environments

Temperature	: +10°C - +40°C (50°F to 140°F)
Relative humidity	: 30-85% (No condensation)

Storage environments

Temperature	: -10°C - +60°C (14°F to 140°F)
Relative humidity	: 10-95% (No condensation)