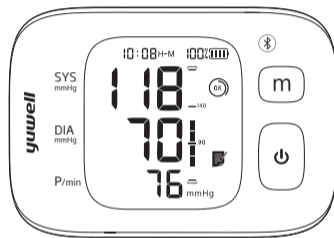


yuwell



EC REP

Shanghai International Holding Corp.GmbH(Europe)
Eiffestrasse 80,20537 Hamburg Germany

 JIANGSU YUYUE MEDICAL EQUIPMENT & SUPPLY CO.,LTD.
Yunyang Industrial Park 212300 Danyang jiangsu
PEOPLE'S REPUBLIC OF CHINA

<http://www.yuwell.com>

Tell: +86-0511-86900833

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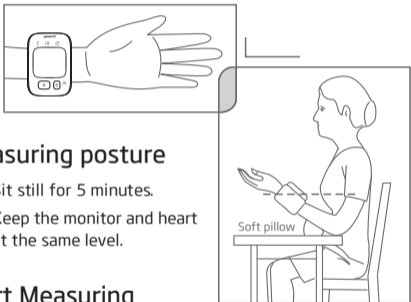
W10、W10S、W10T、W10F Electronic Blood Pressure Monitor

User's Manual

Please read the user's manual closely before using!

Using method


- Wear the monitor on the wrist as the following picture.
- The suitable circumference for wrists is 13.5cm~19.5cm.



Measuring posture

- Sit still for 5 minutes.
- Keep the monitor and heart at the same level.




















Start Measuring

- Press the "  " button to measure.
- Do not speak or move while measuring.
- Don't eat, smoke, drink, take bath or do any high impact sport within half an hour before measuring.

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Cautions

Pay attention with the symbols shown here to prevent harm or damage to the user.

	Attention
	Note on important information
	Type BF application part
	Follow instructions for use
	Manufacturer
	Date of manufacture
	EC-Representative
	Symbol for the marking of electrical and electronics devices according to Directive 2002/96/EC
	Temperature range
	Humidity range
	Atmospheric pressure range
	Safety and environmental protection use period for 10 years
	IP Classification
	CE marking and notify body number
	Class II Device
	DC Current
	AC Current
	Serial Number
	Indicates the item is a medical device

Important notes

Statement: the device is a medical device.

1. Range of application

This product is intended to measure the blood pressure and pulse rate of adult whom more than 12 years old at household or medical center (not suitable for neonate, pregnancy or pre-eclampsia.)

2. Attention items

Pay attention to the following points when measuring or it may cause the incorrect results.

- Sit still for 5 minutes before measuring to ensure quiet and stable mode.
- Do not take the measurement while standing, walking or having body pressed.
- Do not take the measurement after smoking, drinking wine or coffee (black tea).
- Do not take the measurement after sport or bath.
- Do not speak, move, shake arm or bend fingers while measuring.
- Do not take the measurement at extreme temperature condition or the varied severely environment.
- The incorrect measurements of the equipment may be caused by external interference, such as accelerating during transportation or transportation.

Important notes

- It will affect the measurement accuracy if the wrist circumference is out of the given value.
- Do not measure continuously. (2~3 minutes or more should be spared between two measurements).
- Do not use mobile phone near the monitor.
- Do not keep the cuff in the aerated state for a long time.
- The patient is an intended operator, this monitor is used for adult whom more than 12 years old.
- Do not swallowed small parts that may cause choking hazard.
- The device must not be used with high frequency surgical equipments.
- Do not use the CUFF over a wound arm or being on an intravenous drip.
- Consult your doctor if using the device on the arm with an arteriovenous (A-V) shunt.
- Do not use the cuff on the arm where the side of a mastectomy or lymph node clearance.
- Note that It will lose function of other device on the same limb while cuff inflating.
- Do not allowed frequent measurements, the resulting restriction of the blood flow may cause injury.
- Please using soft dry cloth stained with 75% ethanol to clean the device in the case of many people use it, but do not let the ethanol flow into the monitor and cuff.
- Please report serious incident that has occurred in relation to the device to the manufacturer and the competent authority of the Member State.

Important notes

- Please turn off the device and unplug the adapter before cleaning.
 - The AC adapter cable may cause accidental strangulation in infants.
 - Please pay attention to product storage to prevent damage caused by pets, pests or children.
 - Operator can't touch the accessible part of adapter/main unit and patient at the same time.
 - According to the local laws and regulations to deal with battery.
 - Don't interconnect this device to other equipment not described in the user's manual.
- ⚠ **Note:** Do not diagnose with the measurement, Please follow doctor's instruction.

Statement: If the monitor has not been stored in the required temperature and humidity range, it may not conformance to specification.

Tips!

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

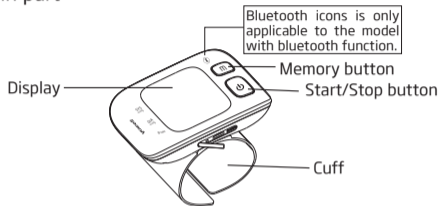
- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

- ❶ Please observe the following items to protect the device and ensure the accuracy of measurement.
 - Please store the monitor and accessories properly after use.
 - Do not place the monitor and accessories in high temperature, moisture, dust, or exposure to sunshine.
 - The cuff contains an airbag inside, please care in applications, do not fold, pull or twist it.
 - Do not disassemble or repair the device without authorization or modify the device without authorization.
 - Don't service or maintain while the device is in use.
 - Please clean the monitor with soft dry cloth. If it's necessary, please use wiped soft cloth with water or neutral detergent before cleaning by soft dry cloth.
 - Using absorbent cotton to wipe gently with rubbing alcohol, disinfection of the machine when it necessary. Do not use detergent to clean.
 - Do not let water seep into the device.
 - Manufacture will make available on request circuit diagrams, component part lists, descriptions, calibration instructions, or other information that will assist service person to repair those parts of ME EQUIPMENT that are designated by the manufacture as repairable by service person.
 - Degraded sensors and electrodes, or loosened electrodes can degrade performance.

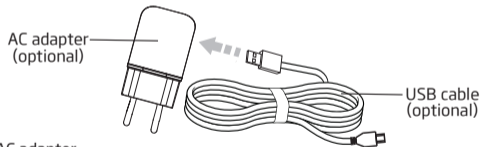
Tips!

We advice to calibrate the monitor according to local laws and regulations (at least once a year) .

1. Main part

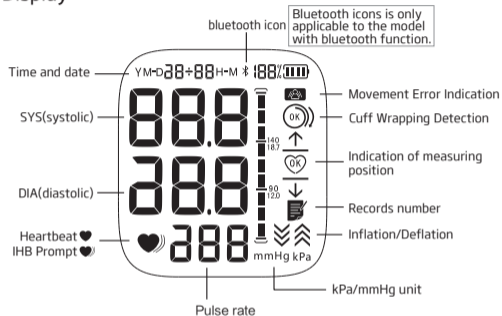


2. AC adapter and USB cable



AC adapter
 INPUT: 100-240V~
 50/60Hz 0.35A MAX
 OUTPUT: 5V= 1000mA
 MFR: WEIHAI HITAI ELECTRONICS Co.,LTD.
 US Model: HT-C38B-0510WW
 EU Model: HT-C38B-0510EW



3. Display



4. Accessories

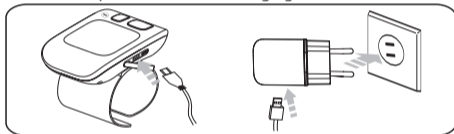
User's manual, Warranty card



This product is powered by lithium battery. Please make sure the battery is sufficient when using the product.

- ▶ The "  " icon appearing and showing 25% or less mean the battery is low and needs to be charged.
- ▶ The "  " icon appearing and showing 5% or less mean the battery is running out. Please charge before using.

Power-on

1. Connect the power source for charging as shown below.



2. The "  " icon flashes during charging, and the "  " icon stops flashing when the battery is fully charged.
3. Please unplug the power adapter from the socket after charging.

- ⚠ Note: Do not measure blood pressure when charging, so as not to cause abnormal measurement.
- ⚠ Note: Please charge the device in a position where it is easy to disconnect from supply mains.

Tips!

Please use only the authorized yuwell AC Adapter (output DC 5V 1A) to charge, and you can contact the local dealer for consultation about the relevant information.

Product charging

Tips!

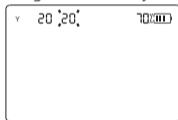
- ⊖ Do not place equipment with lithium batteries near the fire source.
- ⊖ Do not remove and replace the battery or squeeze the battery with hard objects.
- ⊖ Please charge the device in time when the battery is low.
- ⚠ In order to extend the service life of lithium battery, it is recommended to maintain more than half of the power.
- ⚠ When the equipment is not used for a long time (more than 6 months), it is easy to cause the passivation of the electrode material and lead to the decline of the battery performance. It is recommended to make it frequently.
- ⚠ Please dispose of waste batteries in accordance with local environmental protection regulations.

Time and date setting

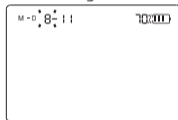
Time and date setting

The monitor will store the measuring results automatically by the management system. It is necessary to reset time and date after installing new batteries. Please operate as following steps. (For example: setting the date as 2020-8-11 and and time as 08:18)

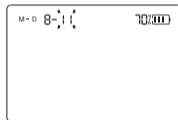
1. Year setting: Press the "m" button and "⏻" button for more than 3 seconds till the number starts flashing.
2. Press the "m" button to advance by increments of one year.
3. Press the "⏻" button to switch to the month setting.
4. Using the same way for other settings.



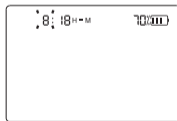
Year character blink



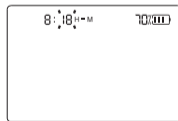
Month character blink



Date character



Hour character blink



Minute character blink

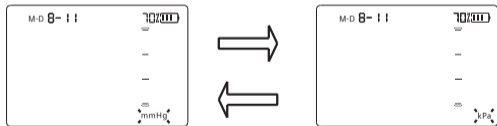
Voice volume setting

Tips! This section applies only to models with voice function.

After finishing the time and date setting, pressing the "⏻" button to enter the voice volume setting. The size of the sound ranges from 01 to 04 and OFF. Press the "M" to choose the sound which you need.

Unit setting

After finishing the voice volume setting, pressing the "⏻" button to enter the measuring unit setting. Press the "M" button to choose unit between mmHg and kPa. Press "⏻" to finish setting.

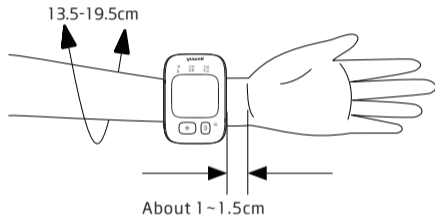


After unit setting, press the "⏻" button to shut down.

Attention:

In the condition of kPa unit, there is no voice prompt for measurement result.

1. Please wear the cuff on bare wrist not too loose or too tight, do not leave cloth inside of the cuff.
2. The distance between palm and the end of monitor should be about 1.0cm~1.5cm.



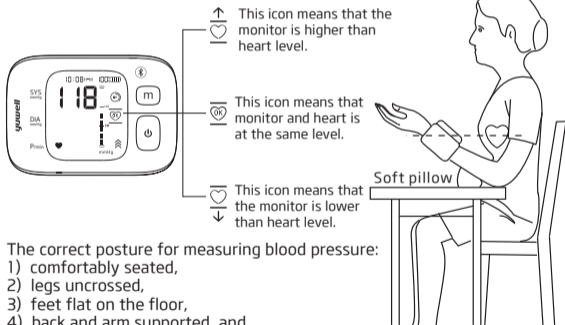
3. Please stick the cuff firmly, or it may get loose while measurement and affect the measurement results.
4. Wind the spare part of cuff properly.

Tips!

Both wrists can be measured.

Measuring posture

1. Sit straightly and keep relax. (as Figure 1)
 - ⊘ Do not bend down or body bend forward.
 2. Take 3 ~ 4 deeply breath then relax shoulder and arm before measurement.
 3. Keep the monitor and heart at the same level. Do not talk, move, shake hand or bend fingers while measurement.
- We suggest supporting the arm with a soft pillow.



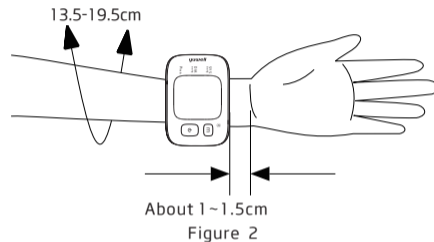
The correct posture for measuring blood pressure:

- 1) comfortably seated,
- 2) legs uncrossed,
- 3) feet flat on the floor,
- 4) back and arm supported, and
- 5) middle of the CUFF at the level of the right atrium of the heart;

Figure 1

Measuring posture

The correct wrist posture(as Figure 2)



⚠ NOTE: Relax fingers and keep a natural extension of state.

Wrong measurement postures

1. Do not clench fists, or may cause higher blood pressure.
2. Do not hold the cuff with another hand.
3. Do not hold the arm hard while measurement. If it is necessary please support the arm with a soft pillow.

Start measuring

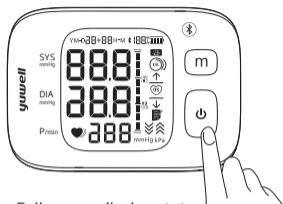
1. Do not move and keep quiet until measurement finished.
 2. Keep the monitor and heart at the same level.
 3. Restart if the cuff got loose while measurement.
 4. Press the "⏻" button to stop measurement. If it does not work, please take off the cuff.
- ⚠ Warning: Upper limit pressure of air inflation is 300mmHg/40.0kPa.
Don't keep the inflated state for a long time to avoid damage.
5. The time interval between two measurements should be at least 2~3 minutes or longer.

Sit still for 5 minutes before the measurement

1. Measurement

All icons on screen appear for 1 sec after pressing the "⏻" button, then disappear. After that the deflation "≡" icon flickers which means the system is in zero testing. Several seconds later the inflation icon "⏴" flashes which means the zero testing is finished. Then inflation starts.

Start measuring



Full screen display state



The zeroing state



The inflation state

Cuff detection icon

Increase with the pressure

- The monitor starts measuring automatically after pressing "⏻" button, and the icon "♥" starts to flicker, Pressure rises gradually.

Start measuring

Please maintain the position during the measurement and don't speak or move body or hand.



The measuring state

2. Measurement finished

After measurement, the monitor will show the SYS, DIA and pulse rate, then deflate the air automatically.



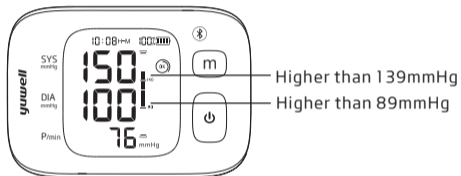
mmHg display



kPa display


Start measuring

- ▶ Please contact with doctor for advice if the SYS is higher than 139mmHg or DIA is higher than 89mmHg.
- ▶ Also the blood pressure range indicator can show the blood pressure intuitively.



3. Take off the cuff

4. Shut down

Press the "  "button to shut down. Then it will power off automatically in 3 minutes without any operation.

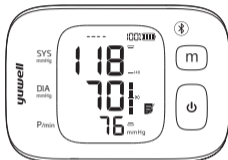
Tips!

Please measure again or consult your doctor if unexpected readings are obtained.

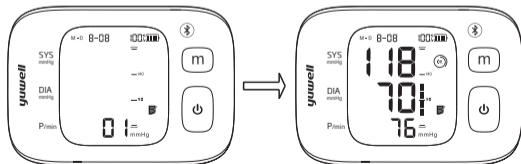
Memory function

1. Press the " M " button for the records.

A. Press the " M " button to show the average value of the latest 3 times measurement.



B. Re-press the " M " button to display the 1st group of memory, the serial number is displayed as "1" to "74". "1" is the latest group and the "74" is the earliest one.



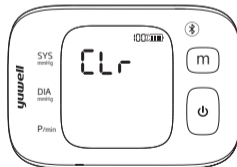
Memory function

Tips! The 74th data may be replaced by the 73rd when the memory capacity is full.

C. Read the recorded data by pressing the " M " button as the sequence: "1", "2" "74"(max). Then return to the 1st.
D. Holding the " M " button to search the data quickly.

2. Delete the recorded data

Press the both " ⏻ " button and " M " button in memory display until the display shown as the following picture, which means the recorded values will be cleared.



⚠ Note: This operation will delete all the recorded values.

Cuff detection

If the cuff is wound properly, it will show the "OK" icon. Otherwise it will show the " " icon, then press the " " button to stop and wind properly to measure again.

Wrong operation indication

It will show the " " icon, if the body moves when measuring. Please measure again or it will show inaccurate results.

Indication for irregular heartbeats

If an irregular pulse signal is detected during a measurement, it will flash the " " icon. If it continues to appear during several measurements, we recommend you to consult with and follow the directions of your physician.

Prompt for correct measurement of position

When the sphygmomanometer is in the correct position, it shows the " " icon. When the sphygmomanometer is higher than the heart, it displays the " " icon, please lower the sphygmomanometer height at this time. When the sphygmomanometer is lower than the heart, it shows the " " icon, please raise the sphygmomanometer at this time.

This function is mainly for professional personnel to enter the static mode to test the monitor through standard pressure gauge.

⚠ Warning: normal users don't need to know this function and also do not operate. The company will not take any responsibility for damage caused by this operation.

1. System restores

Press the " " button, the screen will show the " " icon, which means the system is in restore testing. Several seconds later, the " " icon disappears and the air pump starts inflating at the same time, which indicates the test ended. Then press the " " button to stop inflating and take out the batteries to enter the next step.

⚠ Note: It must restore the system before entering the static mode, otherwise it may cause inaccurate results.

2. Entering the static mode

Press the " M " button and hold, meanwhile poke the side reset key with the tool. Hold on for about 3 seconds then release the " M " button. Then screen will show the pressure value " 0 " , the date and time, mmHg. Now the system has restored and entered the static mode. Now can take the static test.



Tips!

- ▶ After entering the static mode, if the screen still doesn't show " 0 ", please operate again as the system restore. Please contact with the local distributor if it still does not work.
- ▶ The monitor will automatically power off if there is no operation in 4 minutes.

About the blood pressure on wrist and upper-arm

Diabetes, high blood lipids, hypertension will accelerate atherosclerosis and cause nerve ending dysaemia. The blood pressure on wrist and upper-arm may have a significant difference on these patients. Even if in unsuitable conditions, healthy persons may cause about 20 mmHg(2.6kPa) difference. So we suggest do not diagnose by oneself, please consult the doctor. Normally, the blood pressure on wrist and upper-arm are same. But circulatory system disorders may have a significant difference. Please manage your blood pressure with experts. Healthy persons have a 20 mmHg(2.6kPa) difference between blood pressure on wrist and upper-arm.

About measuring posture

If wrist and heart are not at a same level, the blood pressure will change as a result of the weight of blood. When the wrist is higher than the heart, the value measured will be lower, and vice-versa. Every 10cm about 8mmHg(1kPa) difference. Of course the value is more closely related to the measuring posture.

Common questions of blood Pressure measurement

1. What is blood pressure?

Blood pressure is the force exerted by blood against the walls of the arteries. Systolic pressure occurs when the heart contracts. Diastolic pressure occurs when the heart expands. Blood pressure is measured in millimetres of mercury(mmHg). One's natural blood pressure is represented by the fundamental pressure, which is measured first thing in the morning while one is still at rest and before eating.

2. What is Hypertension and how is it controlled?

Hypertension, abnormally high arterial blood pressure, if left unattended can cause many health problems including stroke and heart attack. Hypertension can be controlled by altering lifestyle, avoiding stress, and with medication under a doctor's supervision. To prevent Hypertension or keep it under control: Do not smoke, exercise regularly, reduce salt and fat intake, have regular physical checkups, maintain proper weight.

Common questions of blood Pressure measurement

3. Why measure Blood Pressure at home?

Blood pressure measured at a clinic or doctor's office may cause apprehension and can produce an elevated reading, 25~30 mmHg higher than that measured at home. Home measurement reduces the effects of outside influences on blood pressure readings, supplements the doctor's readings and provides a more accurate, complete blood pressure history.

4. WHO Blood Pressure Classification?

Standards to assess high blood pressure, without regard to age, have been established by the world Health Organization (WHO), as shown below:

Range	Systolic pressure kPa/mmHg	Diastolic pressure kPa/mmHg	Counter measures
Ortho-arteriotomy	12.0~18.5kPa 90~139mmHg	8.0~11.9kPa 60~89mmHg	Self check
Mild hypertension	18.7~21.2kPa 140~159mmHg	12.0~13.2kPa 90~99mmHg	Consult dr.
Medium hypertension	21.3~23.9kPa 160~179mmHg	13.3~14.5kPa 100~109mmHg	Consult dr.
Severe hypertension	≥24.0kPa ≥180mmHg	≥14.7kPa ≥110mmHg	Danger! Go to hospital as soon as possible

Common questions of blood Pressure measurement

⚠ Note: There is no definition about hypopiesia, and generally SYS (systolic pressure) less than 90mmHg or DIA (diastolic pressure) less than 60mmHg is called hypotension.

5. Blood pressure variations?

An individual's blood pressure varies greatly on a daily and seasonal basis. It may vary by 30 to 50 mmHg due to various conditions during the day. In hypertensive individuals variations are even more pronounced. Normally, the blood pressure rises while at work or play and falls to its lowest levels during sleep. So do not be overly concerned by the results of one measurement.


Take measurements at the same time every day using the procedure described in this manual to get to know your normal blood pressure. Regular readings give a more comprehensive blood pressure history. Be sure to note date and time when recording your blood pressure. Consult doctor to interpret the blood pressure data.

Common questions of blood Pressure measurement

6. When is the best time to measure blood pressure?



- ▶ After urination, before breakfast in the morning.
- ▶ Before sleeping at night.
- ▶ Before taking medicine.
- ▶ Please keep a stable body state and mind every time measuring.
We suggest taking measurements at a same time every day.


Common fault and trouble shooting

Common fault	Solutions
It doesn't work after pressing the "  " button.	Please try again after charging
Multiple occurrences of measuring failure, or measured value is low (or high)	Check the connection and winding of cuff
	Check if the cuff wined too tight or too loose. Take off your clothes if rolled too tight
	Please ensure a quiet, relaxed body state o. Deep breathing to relax yourself before measurement
The monitor is in good condition, but the each measuring result are different	Please read the "blood pressure variations" carefully
The value is different from that measured at a clinic or doctor's office	Write down the value every day, and consult a doctor
Pump works, but the pressure doesn't rise	Check whether the cuff has connected well

Common fault and trouble shooting

The table below shows the possible fault displaying icon, possible reason, and solutions.

Wrong indication	Fault cause	Solution
Err 3	The pressure value did not reach 5mmHg within 4s	Please check the cuff for tightness or leakage
Err 4	Unable to measure pressure	Fasten cuff correctly before measurement
Err 5	Pressurizing error	Check if there is air leakage from the cuff
Err 6	Pressurizing error caused by arm or body motion	Keep arm and body still and measure again
Err 7	Cuff is too loose or fall off	Fasten cuff tightly
Err 8	Pressure exceeds the maximum value (300mmHg)	Measure again please
Showing low voltage icon "  "	Battery is low	Connect the power adapter for charging
Showing low voltage icon "  "	Battery is running out	Connect the power adapter for charging

 **Warning:** If the situations cannot be solved or unexpected problem happens, please consult the local distributor.

Features and technical parameters

1. Features

Small delicate design

74 groups of memory

Average value display of three times measurement

kPa & mmHg units display

Automatically shut down in 3 minutes after measurement.

2. Technical parameters

Displaying: LCD digital display

Measuring method: oscillation mensuration

Measuring range

Pressure: 0~300mmHg

Diastolic: 40-210mmHg Cuff Pressure: 0-450mmHg

Systolic: 60-260mmHg Pulse rate: 40~200 beats/min

Precision

Pressure: within $\pm 3\text{mmHg}$ ($\pm 0.4\text{kPa}$)

Pulse rate: within 5% of reading value

Working system: continuous operation

IP Classification: IP22

└─against ingress of water with harmful effects: dripping (15° tilted)

└─against ingress of solid foreign objects: $\geq 12.5\text{mm}$ diameter

Electric classification: Class II, type BF application part

Service life: 5 years or 50 thousand times

Power supply

battery: DC 3.7V

AC adapter: input 100-240V~ 50/60Hz 0.35A MAX

output 5V= 1000mA

Maximum battery life: the battery can be used about 250 times on a full charge

Features and technical parameters

Suitable wrist circumference: 13.5-19.5cm

Dimensions: Approx.L89 mm x W62 mm x H21 mm

Wight: about 109g

4. Operation and storage conditions:

Operating temperature/humidity: $+5^{\circ}\text{C} \sim +40^{\circ}\text{C}/15\% \sim 90\%\text{RH}$ (no-condensation)

Storage temperature/humidity: $-20^{\circ}\text{C} \sim +55^{\circ}\text{C}/15\% \sim 90\%\text{RH}$ (no-condensation)

Operating and storage atmospheric pressure: 70kPa ~ 106kPa

Operation environment:

Avoid electromagnetic interference, violent shock and noise environment.

The contact materials detail of product

Part		Material
Rear Cover		ABS
Top Cover		ABS
Cuff	Magic paster	Nylon
	cloth	Dacron
Panel		PC

Statement!

The SPHYGMOMANOMETER was clinically investigated according to the requirement of ISO81060-2.

The SPHYGMOMANOMETER complies with IEC80601-2-30.

Electromagnetic compatibility information

Essential performance:

Limits of the error of the manometer, and Reproducibility of the BLOOD PRESSURE DETERMINATION.

- a) no component failures.
 - b) no changes in settings.
 - c) do not reset to default settings.
 - d) change in the reading for the measurement of the CUFF pressure at any point of the NOMINAL measurement range no more than 2 mmHg (0,3 kPa):
 - 1) during and after exposure to non-transient phenomena; and
 - 2) after exposure to transient phenomena.
 - e) The maximum error of repeated BLOOD PRESSURE DETERMINATION is $\pm 3\text{mmHg}$.
- ⚠ Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the SPHYGMOMANOMETER, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- ⚠ This equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.
- ⚠ When the instrument is in use, never put it near other instruments or stack it on other instrument. If you have to put it near other instruments or instruments, please inspect and verify if the instrument could run normally.

Electromagnetic compatibility information

There is the potential risk of radio frequency interference between the device and other devices. If there is, please find out the problems and take the following measures:

- (1) Turn off the device, and turn on again,
- (2) Change the direction of the device,
- (3) Keep the product away from the interferential devices.

Table 1 For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration- electromagnetic emission	
The W10/W10S/W10T/W10F Electronic Blood Pressure Monitor is intended for use in the electromagnetic environment specified below. The customer or the user of W10/W10S/W10T/W10F Electronic Blood Pressure Monitor should assure that it is used in such an environment.	
Emission test	Compliance
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies

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Table 2 For all ME EQUIPMENT and ME SYSTEMS

Guidance and manufacture's declaration-electromagnetic emission		
The W10/W10S/W10T/W10F Electronic Blood Pressure Monitor is intended for use in the electromagnetic environment specified below. The customer or the user of the W10/W10S/W10T/W10F Electronic Blood Pressure Monitor should assure that it is used in such an environment.		
Immunity test	IEC 60601 test level	Compliance level
Electrostatic discharge (ESD) IEC 61000-4-2	± 8 kV contact ± 15 kV air	± 8 kV contact ± 15 kV air
Electrical fasttransient /burst IEC 61000-4-4	± 2 kV 100kHz repetition frequency	± 2 kV 100kHz repetition frequency
Surge IEC 61000-4-5	± 1 kV line(s)to line(s) ± 2 kV line(s)to earth	± 1 kV line(s)to line(s)
Voltage dips IEC 61000-4-11	0% U _r ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°	0% U _r ; 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°
	0% U _r ; 1 cycle and 70% U _r ; 25/30 cycles Single phase: at 0°	0% U _r ; 1 cycle and 70% U _r ; 25/30 cycles Single phase: at 0°
Voltage interruptions IEC 61000-4-11	0% U _r ; 250/300 cycles	0% U _r ; 250/300 cycles
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	30A/m 50Hz or 60Hz	30A/m 50Hz or 60Hz
NOTE: UT is the a.c. mains voltage prior to application of the test level.		

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Table 3 For ME EQUIPMENT and ME SYSTEMS that are not LIFE-SUPPORTING

Guidance and manufacture's declaration-electromagnetic immunity		
The W10/W10S/W10T/W10F Electronic Blood Pressure Monitor is intended for use in the electromagnetic environment specified below. The customer or the user of the W10/W10S/W10T/W10F Electronic Blood Pressure Monitor should assure that it is used in such an environment.		
Immunity test	IEC 60601 test level	Compliance level
Conducted RF IEC 61000-4-6	3 Vrms 0,15 MHz-80 MHz 6 V rms in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % Am at 1 kHz	3 Vrms 0,15 MHz-80 MHz 6 V rms in ISM and amateur radio bands between 0,15 MHz and 80 MHz 80 % Am at 1 kHz
Radiated RF IEC 61000-4-3	10 V/m 80 MHz to 2.7 GHz	10 V/m 80 MHz to 2.7 GHz
NOTE1 At 80 MHz and 800 MHz, the higher frequency range applies. NOTE2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.		
<p>^a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the W10/W10S/W10T/W10F is used exceeds the applicable RF compliance level above, the W10/W10S/W10T/W10F should be observed to verify normal operation. If abnormal performance is observed,additional measures may be necessary, such as reorienting or relocating the W10/W10S/W10T/W10F.</p> <p>^b Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.</p>		

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Table 4 Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment

Test frequency (MHz)	Band ^{a)} (MHz)	Service ^{a)}	Modulation ^{b)}	Maximum power (MHz)	Distance (m)	IMMUNITY TEST LEVEL (V/m)
385	380-390	TETRA 400	Pulse modulation ^{b)} 18 Hz	1,8	0,3	27
450	430-470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0,3	28
710	704-787	LTE Band 13, 17	Pulse modulation ^{b)} 217 Hz	0,2	0,3	9
745						
780						
810	800-960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation ^{b)} 18 Hz	2	0,3	28
870						
930						
1720	1700-1990	GSM 1800; TETRA 1900; GSM 1900; DECT; LTE Band 1,3, 4,25; UMTS	Pulse modulation ^{b)} 217 Hz	2	0,3	28
1845						
1970						
2450	2400-2570	Bluetooth, WLAN, 802.11 b/g/n RFID 2450, LTE Band 7	Pulse modulation ^{b)} 217 Hz	2	0,3	28
5240	5100-5800	WLAN 802.11 a/n	Pulse modulation ^{b)} 217 Hz	0,2	0,3	9
5500						
5785						

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NOTE If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC61000-4-3.

- a) For some services, only the uplink frequencies are included.
 b) The carrier shall be modulated using a 50% duty cycle square wave signal.
 c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.