WS-120 Wall Scanner
User Manual

Note: please read this manual carefully before using the detector and observe safety rules and cautions in the manual; the manual shall be subject to change without prior notice.

Applications

WS-120 is a handhold wall scanner for quick detection of magnetic metals in wall, rooftop and floor, such as reinforcing steels, iron pipes, and nonmagnetic metals such as aluminum pipes, copper pipes, and nonmetal materials such as beams, PVC water pipes, as well as electrified objects such as live wires.

Technical Data

Maximum scanning depth

Ferrous metal: 110 mm

Non-ferrous metals: 110 mm

Copper conductors (Live): 50 mm

Wood: 25 mm

Working temperature: -10℃~+50℃

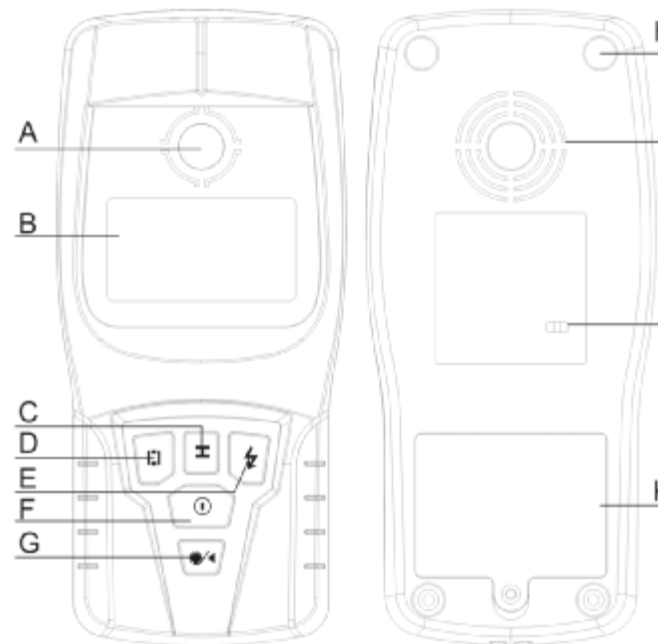Storage temperature: -20℃~+70℃

Humidity: ≤75%   Altitude: ≤2000m
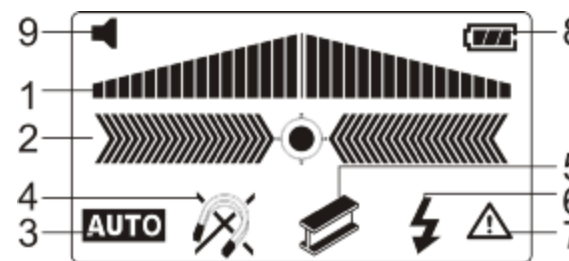
Battery: 3*1.5V AAA

Dimensions: 185*85*33mm

Weight: 180g

Icons and Descriptions

A: Sensing aperture, mark hole	**B:** Result display
C: Live wire mode	**D:** Auto mode
E: Metal/nonmetal mode	**F:** ON/OFF
G: Backlight/alarm ON/OFF	**H:** Nonskid mat
I: Detecting area	**J:** Sensing window
K: Battery case	

LCD Display

1：Scale bar: sensing strength of search	2：Scale point: central position of the searched object
3：Auto searching mode	4：Magnetic metal 🎧 or nonmagnetic metal 🚫
5：Metal or nonmetal	6：Live wire
7：Error	8：Battery level
9：Alarm mute	

Operations
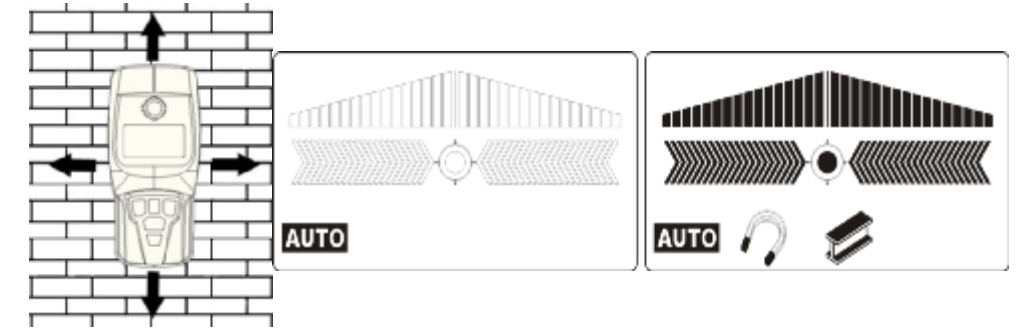
Always put the detector close to the wall surface and slowly move as figure 1, sensing aperture (A) turns green and the system enters standby status; when any object is detected, scale bar (1) shall be gradually full and sensing aperture (A) turns red and alarm, see figure 2 for sensing scale. If you want to find the central position, please move the detector left and right over the hided object repeatedly and observe the scale point (2) (changes of the scale bar and point), when the scale bar is full and central point is displayed as figure 3, it means the central position is got.

1. ON/OFF

Short press ⏻ to turn on the detector and long press for 3s to turn it off; After turning on, the detector initiates automatically and the scale bar displays in full and then disappears, it enters standby status; when no any operation on the detector in 3 minutes, the detector shall turn off automatically.

2. AUTO Mode

The detection mode is defaulted as auto after its turn-on, you may switch to auto mode by ⊡ key in other mode;

If more than one object are detected in auto mode, the icons displaying sequence is live → metal → magnetic → nonmagnetic → nonmetal

3. metal mode

Short press ⊥ key to enter metal mode (for magnetic/nonmagnetic metals)

Long press ⊥ key to enter nonmetal mode (for wood and PVC pipes)

4. AC Wire

Press ⚡ key to switch to AC detection mode

Only AC wires (>110V, 50~60Hz) can be detected

Only solid wires can be detected, not for twisted pairs

5. Turn On/Off Alarm Tone

Short press ☀◀ key to turn on/off alarm tone;

Turn on/off backlight

Long press ☀◀ key to turn on/off the screen backlight (press and hold the key for 3s)

6. Battery Installation and Replacement

Screw off the fastening screws and open the battery cover upwards, install 3 AAA batteries (alkaline) inside, please note the polarities.

Battery level:

▮▮▮ Full

▮▮ 2/3 full or less

▮ 1/3 full or less

☐ Replace with new

7. Calibration

When you move the detector close to an area without metal objects, but you can that the scale bar is full and with alarm, that probably it's interrupted by the environment, in that case, please calibrate the detector by manual and restore it to factory setting.

a) Firstly don't put the detector close to the wall surface, just hold it in an open air, no touching or covering on the detecting area (I).

b) Short press 🔲 key in auto mode, and ⊥ key in metal mode, if you see that the scale bar becomes full and then disappears, entering standby status, it indicates the calibration is completed.

c) Error might also happen if the battery is not enough, 1/3 battery level is required at least.

Cautions

1) Before turning on the detector, please ensure no water on the area to be detected, use cloth to wipe up if necessary, don't let any wet get inside the device, keep it away from the direct sunshine;

2) Don't use the detector in extreme weather, if there is great difference in temperature; Don't use the detector until its temperature is close to the environment;

3) Keep away from electric tools or transmitting devices such as WLAN, UMTS, flying radar, launching tower, microwave oven and other devices of such property;

4) Take out the batteries when not used, to prevent battery leakage and corrosion;

5) Precision and depth might be weakened by environment factors such as wall constitutions (metal building materials, current conducting wallpapers, ceramic tiles or sound absorbing materials), big water content, and quantity, sort, size and position of the object(s), all of them shall affect the detection. Hence it's advised to take necessary protective measures according to other notices before boring or cutting the wall;

6) Keep the sensing window (J) clean, it fails to sense whether it's close to the wall surface if it's dirty or covered;

7) It is easier to detect the live wire if it has been connected to working load (such as lamp or electric appliance). It's hard to detect the live wires laid inside some walls that can isolate the current;

8) Static electricity might cause inaccurate detection, in order to improve the detection, you may put your other hand flatly close on the wall surface beside the detector to eliminate the static electricity;

9) You may mark the position where the object is found; If the object's edge or central point is detected, mark the above position at the mark hole (A);

10) The detector is designed with temperature monitor unit. Constant temperature inside the detector can ensure accurate detection; if alarm icon 11) is displayed, it indicates the temperature is out of working range or there is great difference in temperature; Turn off the detector and let it restore normal temperature, and then turn it on again.

Maintenance

1) Keep the detector clean and dry all the time to ensure accurate detection and safe operation;

2) Don't put the detector into water or other liquids, use dry and soft cloth to wipe up, any detergent or solvent is not allowed;

3) Don't stick any label or mark on the detecting areas, front and back, especially metal nameplate;

4) Don't remove the nonskid mat on the back side.

Warranty

1) If the detector is unable to turn on or work in normal, please return it in attached protective jacket to the dealer or factory for repair service;

2) Any damage arising from dismantlement without permit, improper keeping or wrong operation, and the conditions of warranty paper alteration or no sales paper, shall be out of the warranty;

3) Please observe the above provisions and we shall offer one-year product warranty.