LK210

Game Security Guard
(Connection Version)

Product Features:

1. Modular Connection Design

- The game security guard supports flexible connection of host machine + alarm lamp + extension.
- Ethernet cable connections in any topology, ensuring full coverage without blind spots.

2. High-Precision Interference Detection System

- Real-time monitoring of interference behaviors such as radio frequency interference(RFI) and electrostatic discharge(ESD).
- Intelligent identification of characteristic signals of score cheating and coin theft.
- CPU dynamic analysis algorithm greatly reduces false alarm rates.
- Ultra-fast response: delay from interference trigger to alarm display is less than 50ms.

3. Intelligent Diagnostic System

- Accurate positioning of interference sources; digital tube and LED display interference type in real time.
- Self-check of extension connection status with precise fault code location.
- 18-level adjustable sensitivity to adapt to complex electromagnetic environments.

4.Full-Terminal Coordinated Control

- **Host Machine:** Centralized parameter control for all connected extensions, with digital tube showing each extension's status.
- **Extension:** independently adjusts its own parameters and displays working status in real time.
- **Alarm Lamp:** sound-light alarm and detailed interference display.

5. Intelligent Operation & Maintenance Management

- Support dual modes of automatic/manual recovery after alarm.
- Digital tube displays extension ID, sensitivity level, and network status in real time, reducing maintenance costs.
- extensions are plug-and-play; capacity expansion requires no system reconfiguration.

Product Specifications:

Working Voltage	AC100~230V	Individual Packaging	Dimension	18.7*12.5*12CM
Power Consumption	≤60W		Gross Weight	0.065KG
Working Temperature	-15~+50℃	Carton Packaging	Package	20PCS/CTN
			Dimension	65*39*26CM
Alarm Volume	≤120db		Gross Weight	13.8KG ±5%

Function Description:

(1) Core Functions & Status Indicators

1. Default Factory Configuration:

- ✧ The host machine and extensions are set to **Auto Alarm Mode** and **Auto ID Assignment Mode**
- ✧ Each extension defaults to ID F01 with sensitivity level d12 (blue LED, medium sensitivity)
- ✧ The alarm lamp defaults to sound-and-light mode with maximum volume (b-5)

2. Device Status Display:

- ✧ The host machine displays “L + number”; for example, “L04” indicates 4 extensions are connected
- ✧ Each extension displays its own ID, such as “F01”
- ✧ The alarm lamp displays the volume level, ranging from “b-0” to “b-5” (maximum)

3. Alarm Status Description:

- ✧ When the system triggers an alarm, the digital tube on the host machine flashes the extension ID and interference type, while the alarm displays them synchronously.
- ✧ During an alarm, the corresponding interference LED on both host machine and extensions will light up red. The alarm will then trigger based on preset mode (e.g., Buzzer + LED, Buzzer only, or LED only).

During the alarm, if the digital tubes on host machine and extensions show:

- ◆ FXX: wireless high-frequency alarm, XX is the alarming extension ID
- ◆ HXX: high-voltage electric shock alarm, XX is the alarming extension ID

- ✧ In Automatic Alarm Mode (default), the alarm will stop after 10 seconds and return to standby status. Alternatively, press K1 and K2 on host machine simultaneously to cancel the alarm manually.
- ✧ In Manual Alarm Mode, the alarm status can only be canceled by pressing K1 and K2 on host machine simultaneously.
- ✧ Pressing K1 and K2 on the host machine simultaneously will cancel the alarm status for all devices. Pressing K3 and K4 simultaneously on extensions will only cancel its own alarm without affecting other devices. For the alarm unit, pressing any key will only cancel its own alarm status.

4. ID Assignment Mode Instructions

Automatic Assignment Mode (default):

- ✧ New extension automatically assigned ID when connected
- ✧ If an ID conflict occurs, the system will automatically updates the conflicting ID numbers.

(2) Common Functions

1. Extension Sensitivity Setting:

✧ Set on the extension (change apply to the unit only):

1）Press K3 → digital tube displays current sensitivity and flashes

2）Continue pressing K3 to cycle through levels

3）After stopping, extension digital tube stops flashing, automatically saves and syncs to host machine

- Sensitivity levels: d01–d18
  - -d01–d06: low sensitivity (green light)
  - -d07–d12: medium sensitivity (blue light)
  - -d13–d18: high sensitivity (red light)

- ✧ Extension ID defaults to F01, sensitivity d12 (blue light, medium)
- ✧ Alarm defaults to sound-light mode, volume maximum (b-5)

✧ Batch setup on host machine (changes apply to all extensions):

1）Long press K1 for 2 seconds → all indicator lights turn red → release → digital tube spins
2）Press K2 to enter menu (K1= select, K2= confirm, K1+K2= return)
3）Bulk modification: select 0-1 → 1-d → target sensitivity

4）Individual modification: select 0-2 → select extension ID to modify (e.g., F04) → 2-d → target sensitivity

2. Extension ID Modification:

✧ **Set on the extension:**

1) Press K4 → the digital tube flashes to show the current ID
2) Continue pressing K4 to cycle through and select ID numbers.
3) Stop operating. When the digital tube on the extension stops flashing, the data will automatically save and sync to the host machine.

✧ **Set on the host machine:**

1) Press and hold K1 for 2 seconds → All indicators light up red → Release the key → The digital tube shows a rotating animation.
2) Press K2 to enter the menu (K1=Select, K2=Confirm, K1+K2=Back)
3) Batch Modification: Select "0-1" → "1-F" → Randomly reassign IDs to all extensions in sequence.
4) Individual Modification: Select "0-2" → Select the extension ID to modify (e.g., F04) → "2-F" → Target ID.

3. Alarm Lamp Volume Adjustment:

✧ **Set alarm mode for host machine (K1=Select, K2=Confirm, K1+K2=Back):**

1) Press and hold K1 for 2 seconds → All indicators turn red → Release the key → The digital tube shows a rotating animation.
2) Select "0-5" → Select "A-0" or "A-1" → A-0 is the Manual Alarm Mode, and A-1 is the Automatic Alarm Mode.

✧ **Set alarm mode for extensions：**

1) Set on the extension:

1. Press and hold K3 key for 2 seconds → All indicators light up red → Release the key → The digital tube shows a rotating animation.
2. Press K4 to enter the menu (K3=Select, K4=Confirm, K3+K4=Back)
3. "Select A-0 or A-1" → A-0 is the manual alarm mode, and A-1 is the automatic alarm mode.

2) Set on the host machine:

1. Press and hold K1 for 2 seconds → All indicators light up red → Release the key → The digital tube shows a rotating animation.
2. Press K2 to enter the menu (K1=Select, K2=Confirm, K1+K2=Back)
3. Batch Modification: Select "0-1" → "1-A" → "Select A-0 or A-1" → A-0 is the manual alarm mode, and A-1 is the automatic alarm mode.
4. Individual Modification: Select "0-2" → Select the extension ID to modify (e.g., F04) → "2-A" → "Select A-0 or A-1" → A-0 is the manual alarm mode, and A-1 is the automatic alarm mode.

4. Alarm Lamp Volume Adjustment:

- ✧ Long press “+” → all indicator lights on → release → digital tube spins
- ✧ Press “-” to select volume (b-0 to b-5)
- ✧ Press “+” to confirm

5.Query the last alarm log

1) Press and hold K1 for 2 seconds → All indicators light up red → Release the key → The digital tube shows a rotating animation.
2) Press K2 to enter the menu (K1=Select, K2=Confirm, K1+K2=Back)
3) Select “0-4” → The last alarm information will be displayed.
4) If you press K1 and K2 simultaneously, the digital tube on host machine will flash the alarm count 3 times, then the host machine will return to standby status.

6. Power Off and Recovery

- ✧ After power is restored, all extension IDs and settings remain unchanged
- ✧ After powering again, please wait for host machine to complete initialization (for 5 seconds) before adding new extensions. Then host machine will automatically assign a new ID number to each newly added extension.

Host Machine



Number	Name	Function Description	Remark
1	Power Socket	AC Input	Operating Voltage Range: AC100 – 230V.
2	Auto Mode Indicator Light	None	None
3	User Mode Indicator Light	Steady on in user mode (blue)	For daily use. Each new extension automatically gets an ID number and auto-syncs to the host machine (e.g., 1st = F01, 2nd = F02... Nth = FXX, max F29).
4	Radio Frequency Interference(RFI) Indicator Light	LED displays RFI alarm (red)	Steady red when RFI alarm is triggered.
5	Electrostatic discharge(ESD) Indicator Light	LED displays ESD alarm (red)	Steady red when ESD alarm is triggered.
6	Power Indicator Light	LED displays working status (green)	Steady green when power supply is normal.
7	Digital Tube	Multifunctional display of extension and host machine connection status, alarm status, and operation menu interface	In normal state, it displays LXX, indicating the number of connected extensions. For example, L08 means 8 extensions are connected; In alarm state, it flashes to show which extension is alarming. For example, F03 means extension 3 has a Radio Frequency Interference(RFI), H02 means extension 2 has an Electrostatic discharge(ESD); If multiple extensions alarm simultaneously, the display cycles through the IDs; K1 key used in combination with K2 key to access the menu page.
8	K1 Key	Multifunctional key, access to the function menu	Entering the function menu: Press and hold K1 for 2 seconds→all indicator lights turn on→release K1→the digital tube shows a rotating animation→press K2 to enter the

			function menu interface; press K1 and K2 keys simultaneously to return to the previous step. Pressing K1 and K2 simultaneously during an alarm will cancel all alarm statuses.
9	K2 Key	Multifunctional key, press to sequentially query all extensions' parameters	Retrievable Data: ✧ Extension Connection Count (e.g., the digital tube reads L04 to indicate 4 extensions connected) ✧ Extension Sensitivity (Function Menu→Select corresponding extension→Sensitivity Settings. Shows current sensitivity by default.) Extension ID (All connected extension IDs can be viewed while selecting extensions in Function Menu.)
10	RJ45 double-row socket	Host machine communication and power interface	There is no order requirement; the two sockets can be connected to extensions in any sequence via Ethernet cables.

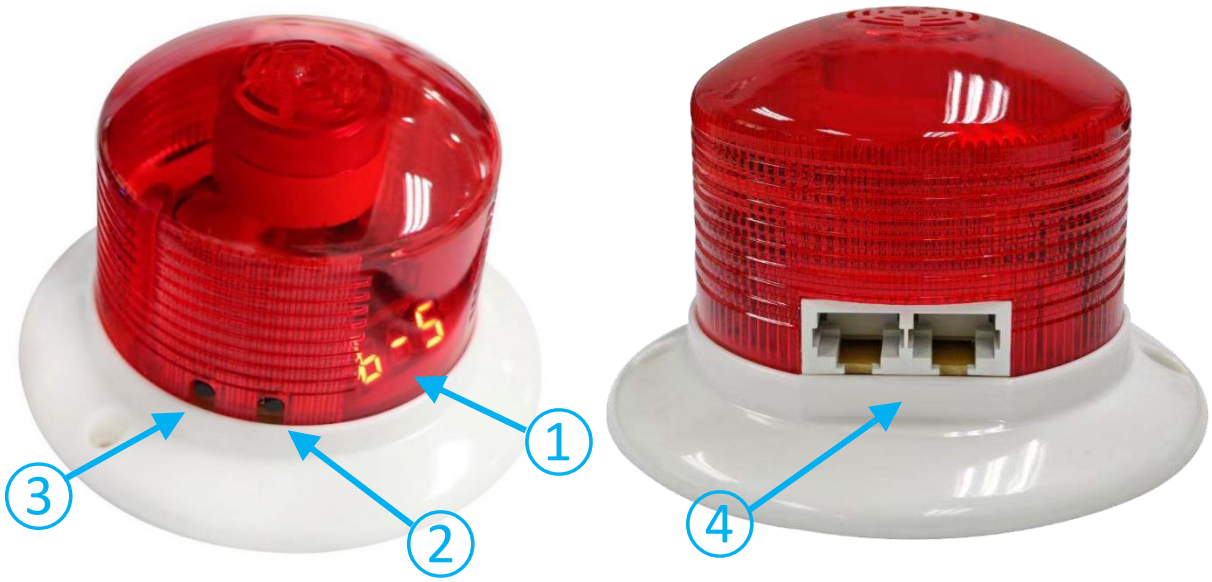
Extension


1
2
3
4
5
6
7
8
9
10
高频/RFI
(蓝/blue)
电击/ESD
(红/red)
Sensitivity
灵敏度
RFI
高频
ESD
电击
POWER
电源
F07
K3
K4
Device
Model: LK210

Number	Name	Function Description	Remark
1	RFI-Resisitant antenna plug	Receive RFI signals	The RFI-Resisitant antenna(blue) is first wrapped around the power wires of the ticket dispenser and coin acceptor, then wrapped around the control panel wire, and other locations susceptible to interference.
2	ESD-Resisitant antenna plug	Receive ESD signals	The ESD-Resisitant antenna(red) is clamped onto the coin chute screws, control panel metal parts, coin acceptor and ticket dispenser panel screws, and other associated metal components.
3	Sensitivity indicator light	Displays the sensitivity of the extension	There are 18 levels in total. The LED, together with the digital tube, shows the extension sensitivity: d01 – d06 indicate low sensitivity (green),d07 – d12 indicate medium sensitivity (blue),d13 – d18 indicate high sensitivity (red).
4	Radio Frequency Interference(RFI) Indicator Light	LED displays RFI alarm (red)	Steady red when RFI alarm is triggered.
5	Electrostatic discharge(ESD) Indicator Light	LED displays ESD alarm (red)	Steady red when ESD alarm is triggered.
6	Power Indicator Light	LED displays working status (green)	Steady green when power supply is normal.
7	Digital Tube	Multifunctional display of extension number, sensitivity, and alarm mode	In normal state, the current extension number is displayed. Press the K3 key to adjust the sensitivity, press the K4 key to change the current ID number,and use the K3 and K4 key in combination to modify the extension's alarm mode.(In automatic alarm mode, the extension

			alarm cancels automatically after 5 seconds. In manual alarm mode, if the alarm is not canceled, the extension will continue alarming every 6 seconds until the alarm is cleared.)
8	K3 Key	Multifunctional key, press to set extension sensitivity	Press the K3 key, the digital tube shows the current sensitivity. Press the K3 key repeatedly to adjust the sensitivity. When the digital tube stops flashing, the adjustment is complete and synchronized with the host machine. Press and hold the K3 key for 2 seconds → all indicator lights turn on → release the K3 key→The digital tube shows a rotating pattern → press the K4 key to modify the alarm mode. Press the K3 and K4 key simultaneously to return to the previous step.
9	K4 Key	Multifunctional key, press to set extension ID	Press the K4 Key, the digital tube shows the current ID number. Press the K4 key repeatedly to adjust the ID number. When the digital tube stops flashing, the adjustment is complete and synchronized with the host machine.
10	RJ45 double-row socket	extension communication and power interface	There is no order requirement; the two sockets can be connected to extensions in any sequence via Ethernet cables.

Alarm Lamp



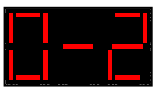
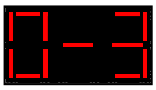
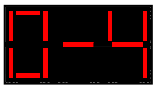
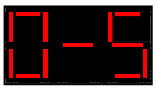
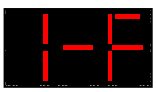
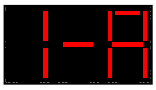
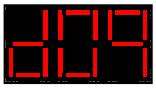
Number	Name	Function Description	Remark
1	Digital Tube	Multifunctional display of volume level and alarm mode	In normal state, the volume level is displayed as b-0 to b-5, where b-0 means volume off, and b-5 means maximum volume.
2	Plus Key (+)	Combination key paired with '-'	Press and hold the "+" → all indicator lights turn on → release the "+" →The digital tube shows a rotating pattern → press "-" to enter the volume setting interface. Continue pressing "－" to select the volume level, and press "+" to confirm. Press "+" and "－" simultaneously to return to the previous step. Press can cancel the alarm status.
3	Minus Key (-)	Combination key paired with '+'	Press and hold the "－" → all indicator lights turn on → release the "－" →The digital tube shows a rotating pattern → press "+" to enter the alarm mode setting page. Continue pressing "+" to select a mode, and press "－" to confirm. Pressing can cancel the alarm status.
4	RJ45 double-row socket	Alarm communication and power interface	There is no order requirement; the two sockets can be connected to extensions in any sequence via Ethernet cables.

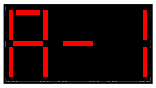
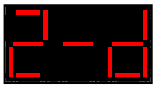
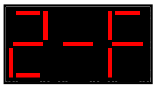
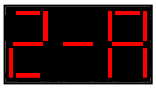
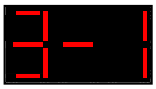
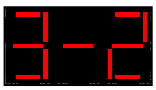
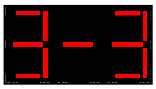
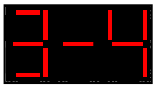
Function menu:

Host machine automatic ID assignment mode operation:

1. Press and hold the K2 key for 2 seconds → all indicator lights turn red → release the K2 key→ the digital tube shows a rotating pattern. 
2. Press the K2 key to confirm and enter automatic ID assignment mode; the automatic indicator light turns blue.
3. Press the K1 and K2 key simultaneously to exit.

Appendix 1: host machine Function Menu Overview

Number	Name	Function Description
	Number of connected extensions	LXX indicates the total number of connected extensions. For example, L01 means 1 extension is connected. The count updates automatically whenever a new extension is connected.
	Centralized Control	Centralized control of all extension functions.
	Independent Control	Independent control of a specific extension's functions.
	Alarm Lamp control	Control Alarm Lamp functions.
	Alarm query	Query the latest alarm record.
	Alarm Mode Setting	Set Alarm Mode for Host Machine.
	Centralized sensitivity control	Centralized control of all extensions' sensitivity.
	Centralized ID assignment	Randomly reassign ID numbers to all extensions in sequence.
	Centralized alarm mode set	Centralized control of alarm modes for all extensions (automatic alarm mode / manual alarm mode).
	Sensitivity selection	There are 18 levels in total: d01 – d06 represent low sensitivity (green), d07 – d12 represent medium sensitivity (blue), d13 – d18 represent high sensitivity (red). For example, d09 indicates medium sensitivity, and the sensitivity LED will be blue, as shown in the figure.

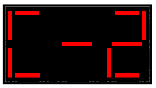
	Alarm mode setting	A-1 indicates automatic alarm mode, and A-0 indicates manual alarm mode. **Host machine alarm mode setting:** In automatic alarm mode, host machine stops alarm for all devices 10 seconds after alarm triggers; in manual alarm mode, alarm must be manually canceled. **xtension alarm mode settings**: In automatic alarm mode, extension stops alarm for all devices 3 seconds after alarm triggers; in manual alarm mode, alarm must be manually cancel.
	Select a specific extension	1.After entering 0 – 2, need to select a specific extension. For example, F04 means selecting extension number 4 for control. 2.After entering 2 – F, select the ID to assign. For example, F04 means assigning ID number 4 to the selected.
	Independent sensitivity control	Independently control the sensitivity of a specific extension (e.g., F04). After entering, the displayed level corresponds to the current sensitivity of the selected extension.
	Independent ID assignment	Independently assign ID to a specific extension.
	Independent alarm mode set	Independently set automatic or manual alarm mode for a specific extension.
	Set alarm volume	Set the alarm volume.
	Alarm mode 1	In this mode, the alarm enables both the alarm LED and the buzzer.
	Alarm mode 2	In this mode, the alarm enables only the alarm LED.
	Alarm mode 3	In this mode, the alarm enables only the buzzer.
	Alarm volume setting	After entering 3-1, there are 6 levels: b-0 to b-5. b-0 means the alarm sound is off, and b-5 is the maximum volume.

Alarm Mode Change Operation:

1. Press and hold the “-” → all indicator lights turn on → release the “-” →

The digital tube shows a rotating pattern.
2. Press the “+” to enter the alarm lamp setting interface.
3. Continue pressing the “+” to select modes.
4. Press the “-” to confirm the change.
5. Press both “－” and “+” simultaneously to return to the previous step.

Appendix 2: Alarm Mode Menu Overview

Number	Name	Function Description
	Alarm mode 1	In this mode, the alarm enables both the alarm LED and the buzzer.
	Alarm mode 2	In this mode, the alarm enables only the alarm LED.
	Alarm mode 3	In this mode, the alarm enables only the buzzer.

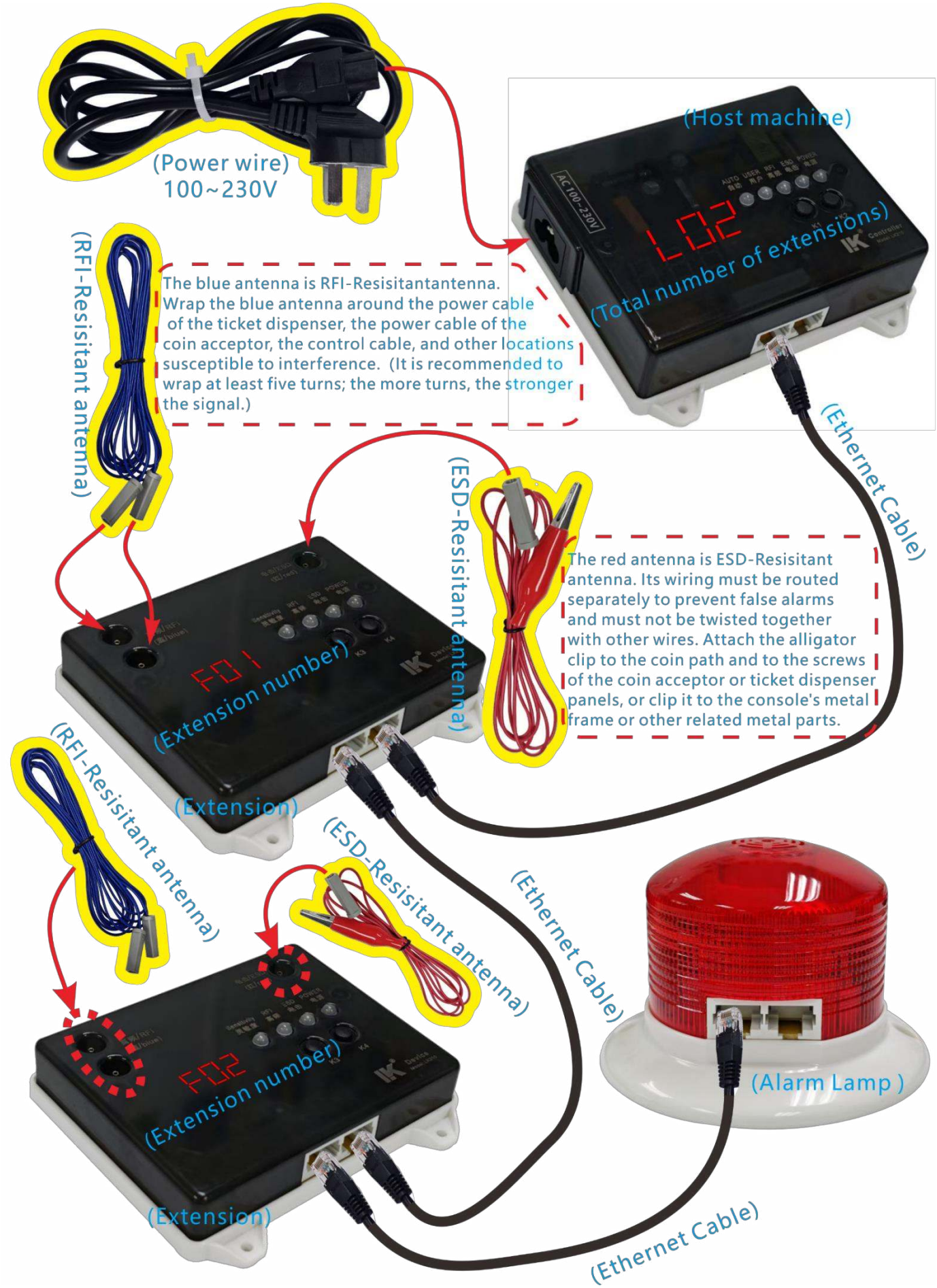
Detailed Explanation:

1. The higher the extension’s sensitivity, the more easily it triggers an alarm. If frequent false alarms occur during use, the extension’s sensitivity can be lowered; conversely, it can be increased if needed. Sensitivity applies to radio frequency interference(RFI) alarms, while discharge interference(ESD) alarms do not have a sensitivity setting.
2. The parameters of the extensions and alarm lamp can be modified directly on the units themselves or via the host machine.
3. Insert the blue RFI-Resisitant antenna with dual connectors into the RFI protection socket. Wrap the blue antenna around the power wires of the ticket dispenser and coin acceptor, the splitter wires, the control console wires, and other interference-prone areas. It is recommended to wrap at least 5 turns (more coils increase signal strength).
4. Connect the red ESD-Resisitant antenna to the ESD protection socket. Note: Do not wrap the red antenna together with other wires; route it separately to prevent false alarms.
5. When powered on, the host machine will automatically obtain information from all extensions. During initial use, if there is an ID conflict, the ID numbers can be configured in three ways: A. Use the host machine to centrally reassign ID numbers; B. Change each extension’s ID individually; C. Use the automatic ID assignment mode.When no conflicting IDs exist on the lines, the error alarm will be automatically cleared.
6. There is no required connection order between the host machine, extensions, and alarm lamp; both interfaces can be used to connect devices freely.
7. During the first 2 .5seconds after power-on, the digital tubes of the host machine, extensions, and alarm lamp will show “888” and all indicator LEDs will light up. This allows you to check whether the displays and indicators are functioning properly.
8. If an extension is removed , the host machine will not automatically update the extension information. Press the the K2 key on the host machine to perform a polling to obtain the latest extension information.
9.Press the K1 and K2 key on host machine simultaneously to cancel all alarm states(host machine,extensions,and alarm lamp).Press either key on alarm lamp to cancel its own alarm state(only cancels its own alarm state ,does not cancel host machine alarm state).
10. After the host machine and alarm lamp cancel the alarm status, the number of triggered alarms will be displayed within 1.5 seconds.
11. The total network length is recommended not to exceed 200 meters (including the host machine, all extensions, and alarm devices).
12. Host machine factory state: user mode LED is always on; Extension factory state: sensitivity is medium d12, alarm mode is automatic alarm mode, ID number is F01; Alarm Lamp factory state: volume is b-5, alarm LED and buzzer are both on.

Fault Handling:

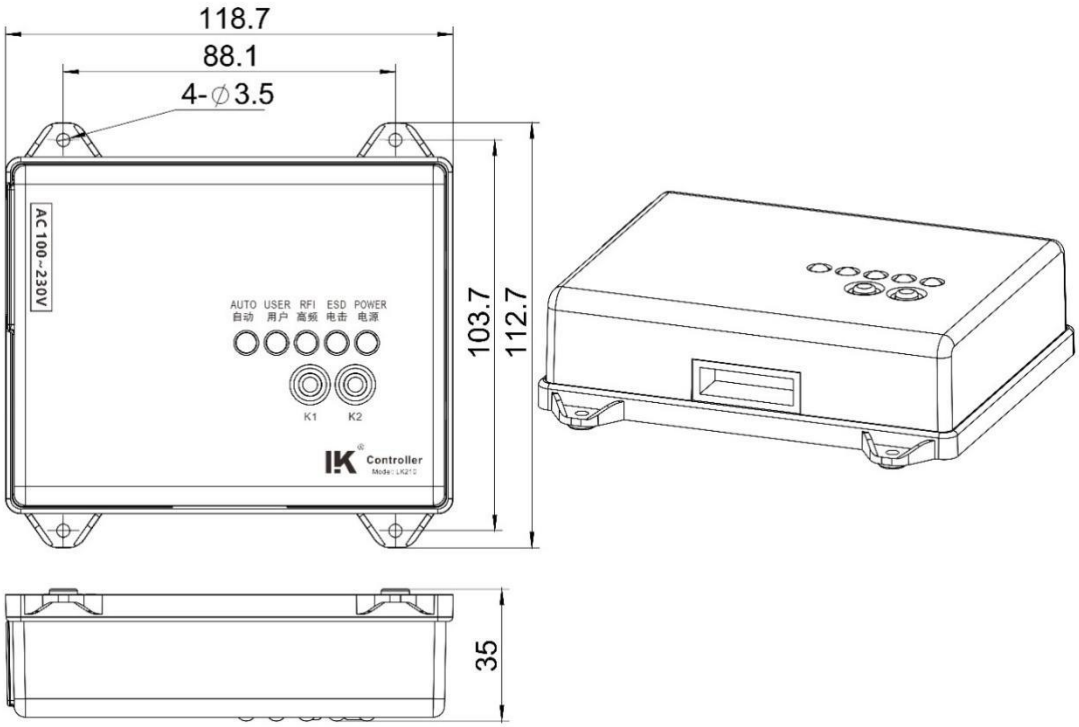
No.	Failure Phenomenon	Solution
1	No response / Status LED is not on	Check if the input is connected and if the external power supply is normal.
2	Fail alarming when affected by RFI	A. Check if the RFI-Resisitant antenna(blue) is connected to the extension B. Ensure the antenna is installed correctly, close to interference-prone areas C. Adjust the extension’s sensitivity
3	Fail alarming when affected by ESD	A. Check whether the ESD-Resisitant antenna (red) antenna is properly connected. B. Check whether the ESD-Resisitant antenna (red) clip is attached to a metal part of the chassis and making good contact.
4	Occasional false alarms	A.Reduce environmental interference, such as power supply box, large motor, welding machine, high-power wireless transmitter, etc. B. Adjust the sensitivity of the extension. C. Reduce the number of turns of the RFI-Resisitant antenna(blue).
5	No new ID assigned after connecting new extension	Check if the network connection is functioning normally, or try replacing the network cable.
6	Alarm on some extension when interference,but host machine/alarm lamp does not alarm	Check whether Ethernet cable connection between host machine/alarm lamp and extension is normal, replace with another network cable for testing.

Usage Diagram:

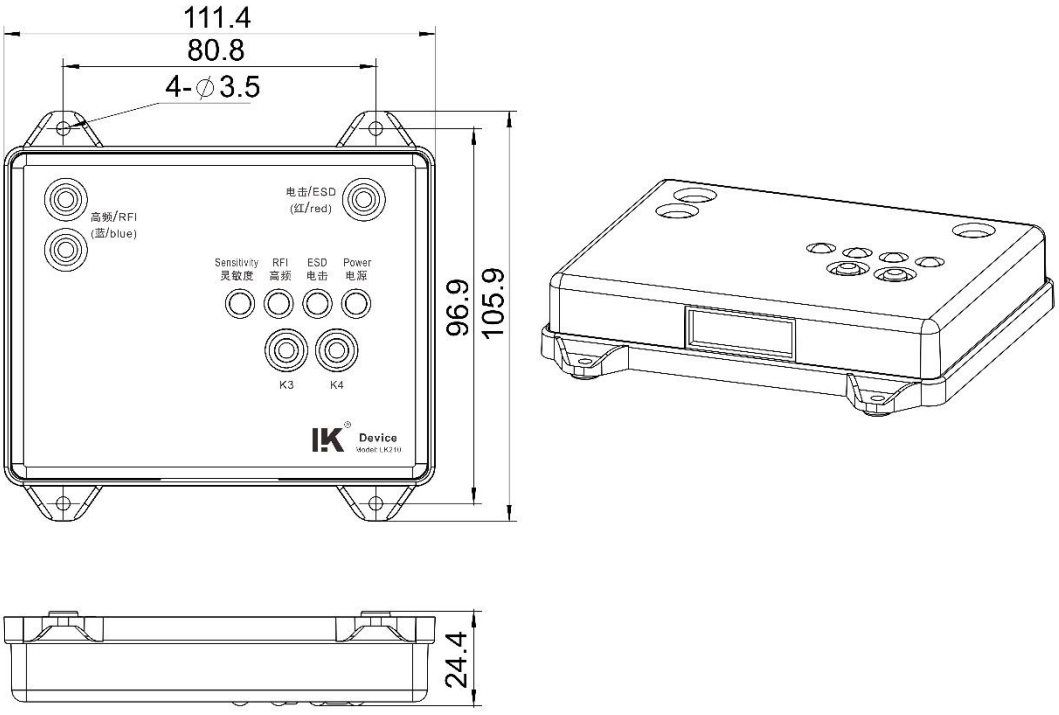


Product dimension diagram:

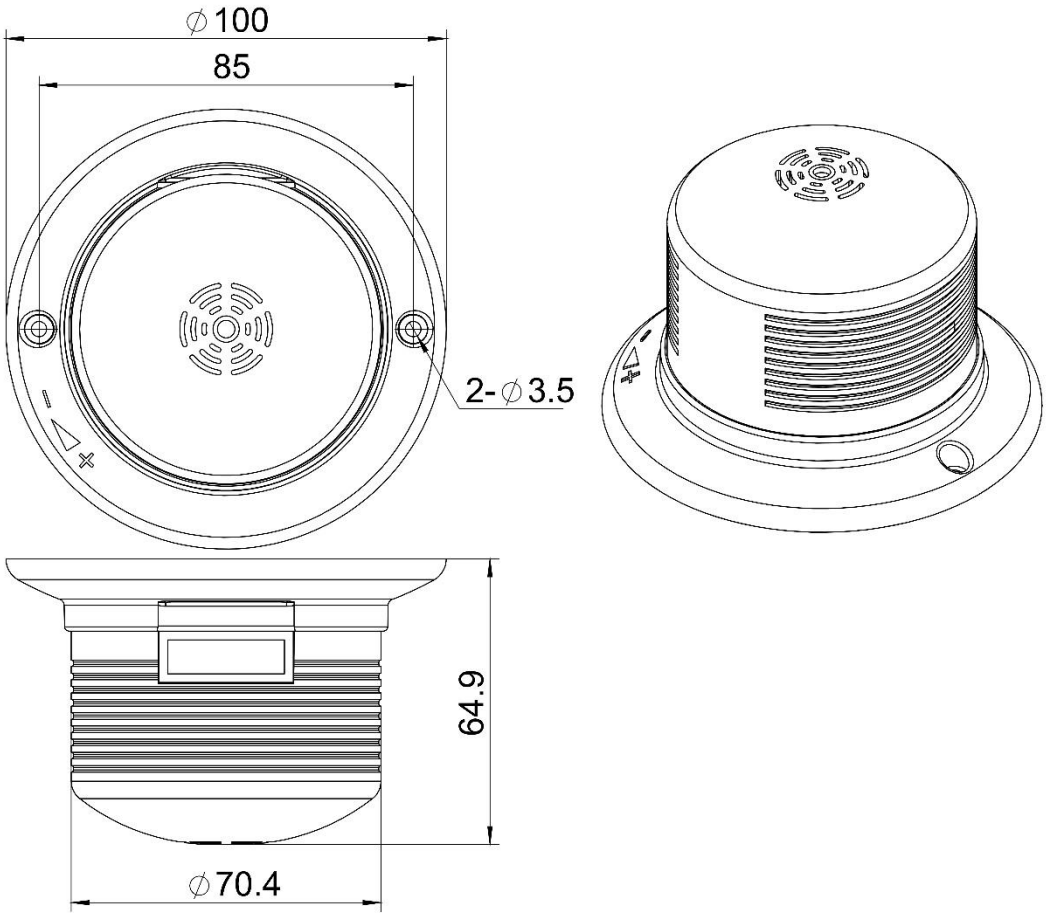
LK210 Host Machine Dimension Diagram:



LK210 Extension Dimension Diagra:



LK210 Alarm Lamp Dimension Diagram:



If product technology improved, it will be edited in the new manual without notice.

The ultimate interpretation of this manual is up to Guangzhou Likang Electronic Technology Co.,Ltd.