

# Moving Ring Distribution Controller Operation Guide

**Please read this manual:**

It provides important installation, operation, and maintenance wizards to give your device maximum performance and extended device life.

**Please keep this manual:**

It contains important guidance on the safe use of moving rings and access to services.

# catalogue

<b>1. Overview .....</b>	<b>1</b>
<b>1.1 Product Introduction .....</b>	<b>1</b>
<b>1.2 Main characteristics of the products .....</b>	<b>1</b>
<b>1.3 Equipment description .....</b>	<b>2</b>
<b>1.4 Equipment reset .....</b>	<b>3</b>
<b>2. Device connection diagram .....</b>	<b>3</b>
<b>2. 1 Connect of dry contact sensor .....</b>	<b>3</b>
<b>2.2 Power distribution and air-conditioning connection .....</b>	<b>4</b>
<b>2. 3 Network device connection .....</b>	<b>5</b>
<b>2.4 Connecting of the control part .....</b>	<b>5</b>
<b>2. 5 Equipment installation environment .....</b>	<b>5</b>
<b>3. Software use .....</b>	<b>6</b>
<b>3.1 Software Login .....</b>	<b>6</b>
<b>3.2 Main interface of the software .....</b>	<b>6</b>
<b>3.3 Equipment information viewing .....</b>	<b>7</b>
<b>3.4 Equipment Settings .....</b>	<b>8</b>
<b>3.5 Network Settings .....</b>	<b>9</b>
<b>3.6 Sensor settings .....</b>	<b>10</b>
<b>3. 7 User management .....</b>	<b>11</b>
<b>3.8 Door lock control .....</b>	<b>12</b>
<b>3. 9 Log information .....</b>	<b>12</b>
<b>3.1 0 Software upgrade .....</b>	<b>13</b>
<b>4. Schematic diagram of the typical system connection .....</b>	<b>13</b>
<b>5. After-sales service .....</b>	<b>14</b>

# **1. Overview**

## **1.1 Product Introduction**

The dynamic ring distribution controller collects infrastructure data through network SNMP, RS 485, etc. The default IP address of the distribution controller is 192.168.0.1 00, the factory setting is 192.168.2.191, and the account password is admin. The distribution controller has built-in network services that can be accessed directly through the browser login.

This product is always designed around the concept of high reliability power environment detection, and it is a system specially designed for monitoring and managing the environmental parameters and equipment status in the data center or computer room. It can be applied to a variety of different environmental monitoring and management scenarios, to meet the personalized needs of users.

## **1.2 Main characteristics of the products**

### **1.2.1 Highly intelligent**

The moving ring distribution controller system of VK adopts advanced intelligent technology, which can realize the real-time detection and control of the dry contact state and sensor state of the data center equipment, so that the managers can handle the abnormal state of the data center in time and ensure the normal operation of the data center.

### **1.2.2 Real-time monitoring and early warning**

The moving ring distribution controller system has real-time monitoring function, and can timely find equipment failure, abnormal temperature, energy waste and other problems, and timely issue early warning notice. This can help the data center operations and maintenance personnel to respond quickly and solve problems, and improve the stability and reliability of the overall operation.

### **1.2.3 Precise energy management**

VK moving ring distribution controller system can accurately monitor the energy consumption of data centers, including power, cooling and other aspects. Through real-time analysis and optimization of energy data, energy

conservation suggestions and strategies can be provided to help data centers reduce operating costs and improve energy efficiency.

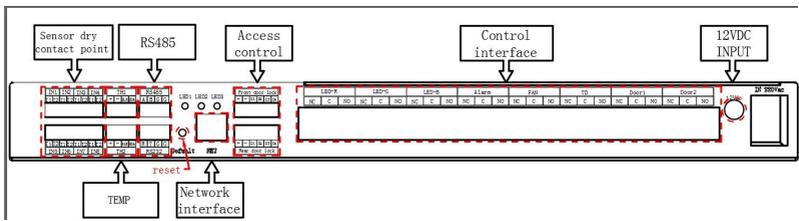
### 1.2. 4 Expansibility

VK moving ring distribution controller system has good scalability, which can be flexibly increased and adjusted with the expansion of data center scale. Users can expand and upgrade the system according to their own needs to adapt to the changing business needs and data center development.

### 1.2.5 Data security and privacy protection

Data security and privacy protection: VK dynamic ring system attaches great importance to data security and privacy protection, and adopts strict data encryption, authority management and access control measures. User data will be protected from access or compromised by unauthorized personnel.

### 1.3 Equipment description



name	meaning	name	meaning
IN	Dry contact input interface	RS485/232	Serial port communication interface
LOCK	Access control interface	NET	network interface
TH	Temperature and humidity sensor interface	terminal board	Relay interface

\* 12V power port: Dynamic ring distribution controller supports DC 12V power input.

\* IN 1-5: Support 5 ordinary dry contact input detection. The dry contact name and the trigger mode can be customized. Can set the normal open or normal closed trigger alarm.

\* IN 6-8: IN 6 corresponds to the smoke sensor dry contact, IN 7 and IN 8 correspond to the front and rear door dry contact, can set often open or close trigger alarm.

\* Relay interface: 8-way relay dry contact output, support normally open or normally closed output. LED-R / G / B is the output interface of atmosphere lamp, DOOR 1 / 2 is the output interface of front and rear door switch, TD is the skylight or shutter output interface, FAN is the fan output interface, and Alarm is the buzzer / sound and light alarm output interface.

#### **1.4 Equipment reset**

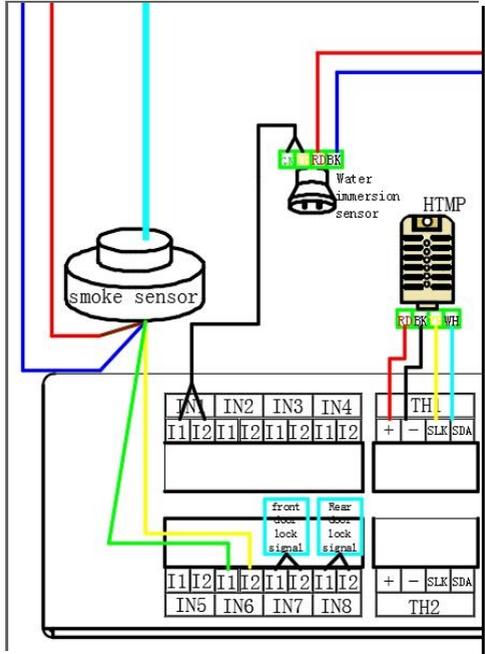
If you forget the device login password and other circumstances, you can choose to reset the moving ring host device.

Reset operation: In the normal operation of the moving ring host, press and hold the default pinhole reset button for about 15 seconds, and then release, and the moving ring host network light flashes, and the moving ring main chance starts after about 1 minute. Account number, password, setting and other information will be restored to the default value. After the operation is completed, the device information will be reconfigured, and some connected devices will need to be reconfigured.

## **2. Device connection diagram**

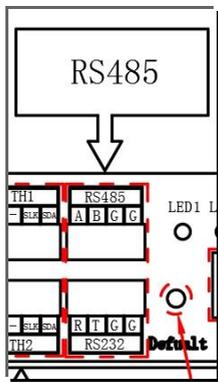
### **2.1 Connect of dry contact sensor**

Smoke, water immersion and other sensors use the dry contact sensor interface access to the moving ring, when the sensor alarm, will transmit the dry contact signal to the moving ring. The connection method is as shown in the figure below.



## 2.2 Power distribution and air-conditioning connection

The distribution controller and power distribution and air conditioner are connected through RS485 or EMS200 as shown in the figure below:



### 2. 3 Network device connection

Distribution controller, PDU, UPS and other network devices using SNMP communication, directly inserted into the switch to realize network communication and connection.

### 2.4 Connecting of the control part

The distribution controller controls other equipment through the relay, and the specific control connection part can consult our company.

#### **kindly reminder:**

For your future transportation and packaging convenience, please place the packaging materials in the box, and keep them properly.

#### **pay attention to:**

If the accessories are incomplete, please contact the supplier quickly.

### 2. 5 Equipment installation environment

- ◆ The placement position must be smooth.
- ◆ The distance between the outside of the case and the wall shall not be less than 10cm.
- ◆ The distance between the front and rear panels of the chassis and the wall is not less than 60cm.
- ◆ Stay away from the heat source, avoid rain, no direct sunlight, no corrosive.
- ◆ Maintain the normal temperature and humidity.
- ◆ Keep the room clean.

#### **Statement**

This is A class A product, in the living environment, the product of radio interference may be caused, in this case, users may be required to take practical measures for its interference.

### 3. Software use

The factory IP address of moving ring distribution controller is 192.168.2. 191  
The default IP address of VK front-end network device is 192.168.2.X. If the user needs to modify the IP address, please modify it to the same network segment together with the front-end device, otherwise the moving ring distribution controller cannot access the front-end network device, and the front-end network device cannot communicate with the moving ring distribution controller.

#### 3.1 Software Login

Use the PC browser to enter 192.168.2. 191 to log in in the browser. Before login, please confirm the IP network segment of the PC, and enter the correct account number and password to enter the system.

**Link - SNMP system**

**Please enter the correct account and password**

User name:

User password:

\*Please use browsers such as IE9+, Google, Firefox, etc;

#### 3.2 Main interface of the software

On the left side of the main monitoring page is the menu bar, which provides user function selection. On the right is the monitoring bar, showing the

monitoring or setting status.

The screenshot shows the Link-SNMP web interface. The top header includes the logo, 'Het Manager DEV', a 'blue' dropdown menu, and a 'Welcome to the SNMP Link system' message. The main content is divided into two columns. The left column contains a 'User Information' section with fields for 'User:admin', 'Login time:2025-06-25 10:47', and 'Remaining time:00:05:00', along with 'Refresh' and 'Login out' buttons. Below this is a 'Basic information' section with a dropdown arrow and a list of menu items: 'System information', 'PDC status', 'Air conditioning status', and 'Sensor status'. The right column is titled 'Device Information' and contains a 'System information' table, a 'Network information' table, and a 'Device model' section.

Hardware information	Software information	System name	Contact	Location	System time
HET Manager DEV	15.10.11.205-E	PDC	Contact	Contact	2025-06-25 10:48:34

IP address	Subnet Mask	Gateway	DN01	DN02	MAC
192.168.1.184	255.255.255.0	192.168.1.1	192.168.1.1	202.96.128.86	80:18:0c:05:08:10

\*10-100Mbps

Device model:0

### 3.3 Equipment information viewing

Equipment basic information view menu can be classified to view the distribution box PDC, air conditioning, sensor and other information. Click the relevant menu to enter the device information browsing interface. For example, click the distribution state to enter the distribution state view.as illustrated in following figure:

The diagram illustrates the menu structure for viewing equipment information. It starts with a 'User Information' section containing 'User:admin', 'Login time:2025-06-25 10:47', 'Remaining time:00:05:00', and buttons for 'Refresh' and 'Login out'. Below this is a 'Basic information' section with a dropdown arrow and a list of menu items: 'System information', 'PDC status', 'Air conditioning status', and 'Sensor status'. The bottom part of the diagram shows a vertical stack of six blue buttons with right-pointing arrows: 'Devices setting', 'Network configuration', 'Logs', and 'Other'.

### 3.4 Equipment Settings

The equipment setting can set the threshold value of all kinds of equipment. If the equipment detection data exceeds the threshold value, it will produce an alarm and trigger the relay linkage. The moving ring distribution controller records the relevant alarm situation in the data log.

#### 3.4.1 Intelligent distribution cabinet configuration:

enter the equipment Settings, click Basic Settings, select the current distribution protocol, click Save to restart and take effect; enter the distribution setting, set the distribution input and output port, voltage threshold, and custom name.

The screenshot shows the Link-SNMP Net Manager DEV web interface. The top navigation bar includes the logo 'Link - SNMP', the text 'Net Manager DEV', a 'blue' dropdown menu, and a 'Welcome to the SNMP Link system' message. The main content area is divided into two columns. The left column contains a sidebar menu with sections: 'User Information' (showing user 'admin', login time, and remaining time), 'Basic Information', 'Devices setting' (expanded, showing 'Basic settings', 'PDC settings', 'Air conditioning settings', 'Sensor settings', and 'Temperature and humidity settings'), 'Network configuration', 'Logs', and 'Other'. The right column displays the 'Device Information' section, specifically the 'Device Settings' form. This form includes fields for 'Device name' (PDC), 'Contact' (Contact), 'Location' (Location), and 'Protocol type' (PDC\_JPDC1). A 'Save' button is located below the form fields.

Link-SNMP Net Manager DEV blue Welcome to the SNMP Link system

**User Information**

User:admin  
 Login time:2025-06-25 10:47  
 Remaining time:00:04:59  
[Refresh](#) [Login out](#)

Basic Information

Devices setting

- Basic settings
- PDC settings**
- Air conditioning settings
- Sensor settings
- Temperature and humidity settings

Network configuration

Logs

Other

**Device Information**

**PDC settings**

\*This setting is mainly used for PUE calculation. PUE is an indicator for evaluating the energy efficiency of data centers, which is the ratio of all energy consumed by data centers to the energy consumed by IT loads. If this setting is incorrect, it will affect the display of PUE data.  
 PUE=(Total input power\*100)/IT load power

Main input interface selection

1	2	3	4	5	6	7	8
<input type="checkbox"/>							
9	10	11	12	13	14	15	16
<input type="checkbox"/>							
17	18	19	20	21	22	23	24
<input type="checkbox"/>							
25	26	27	28	29	30	31	32
<input type="checkbox"/>							
33	34	35	36	37	38	39	40
<input type="checkbox"/>							
41	42	43	44	45	46	47	48
<input type="checkbox"/>							
49	50	51	52	53	54	55	56
<input type="checkbox"/>							
57	58	59	60	61	62	63	64
<input type="checkbox"/>							

[Save](#)

IT load interface selection

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Link-SNMP Net Manager DEV blue Welcome to the SNMP Link system

**User Information**

User:admin  
 Login time:2025-06-25 10:47  
 Remaining time:00:05:00  
[Refresh](#) [Login out](#)

Basic Information

Devices setting

- Basic settings
- PDC settings**
- Air conditioning settings
- Sensor settings
- Temperature and humidity settings

Network configuration

Logs

Other

59	0.0	Y	280.0	Y	<a href="#">Save</a>
60	0.0	Y	280.0	Y	<a href="#">Save</a>
61	0.0	Y	280.0	Y	<a href="#">Save</a>
62	0.0	Y	280.0	Y	<a href="#">Save</a>
63	0.0	Y	280.0	Y	<a href="#">Save</a>
64	0.0	Y	280.0	Y	<a href="#">Save</a>

**Power distribution port name setting**

No.	Power distribution port name	Save
1	QF1	<a href="#">Save</a>
2	QF2	<a href="#">Save</a>
3	QF3	<a href="#">Save</a>
4	QF4	<a href="#">Save</a>
5	QF5	<a href="#">Save</a>
6	QF6	<a href="#">Save</a>
7	QF7	<a href="#">Save</a>
8	QF8	<a href="#">Save</a>
9	QF9	<a href="#">Save</a>
10	QF10	<a href="#">Save</a>

### 3.5 Network Settings

<b>192</b>	<b>168</b>	<b>2</b>	<b>191</b>
↑	↑	↑	↑
<b>Network number</b>	<b>Network number</b>	<b>Network number</b>	<b>device address</b>

The moving ring distribution controller connects the network equipment through SNMP protocol, so it is necessary to identify the network number of the whole machine room, for example, the moving ring IP address is

192.168.2.192, the other network equipment IP address can only be selected between IP address 192.168.2.1~192.168.2.255 to guarantee the host and the monitored equipment; change the network number of a device, all devices need to be changed with the same network number.

The screenshot displays the Link-SNMP Net Manager DEV interface. At the top, there is a header with the logo 'Link-SNMP', the text 'Net Manager DEV', and a dropdown menu set to 'blue'. The main content is divided into two columns. The left column contains a 'User Information' section with fields for 'User: admin', 'Login time: 2025-06-25 10:47', and 'Remaining time: 00:04:57', along with 'Refresh' and 'Login out' buttons. Below this are navigation buttons for 'Basic information', 'Devices setting', 'Network configuration', 'Logs', and 'Other'. The 'Network configuration' section is expanded to show 'Network settings', 'SNMP settings', 'SMTP settings', 'HTTP and user settings', 'Time settings', and 'Firewall settings'. The right column contains a 'Device information' section with a 'Network Settings' form. This form includes fields for 'IP obtain:' (Static), 'IP address:' (192.168.1.184), 'Subnet Mask:' (255.255.255.0), 'Gateway:' (192.168.1.1), 'DNS1:' (192.168.1.1), 'DNS2:' (202.96.128.86), and 'MAC:' (80:18:0c:05:08:10). A 'Save' button is located at the bottom of the form.

### 3.6 Sensor settings

The sensor is divided into two types of linkage trigger, one is the yellow alarm, the dry contact interface IN 1-IN 5, IN 7-IN 8 (the dry contact of front and rear doors) of the controller panel; the other is the red alarm, and the dry contact interface IN 6 (smoke) interfaces with the temperature and humidity sensor.

Sensor configuration: enter the device Settings, click the sensor Settings, set the sensor name and trigger mode, click enable, and then click Save;

Temperature and humidity sensor setting: enter the device Settings, click the temperature and humidity set, set the temperature and humidity threshold, and click Save.

Link - SNMP Net Manager DEV blue>Welcome to the SNMP Link system

**User Information**

User:admin  
Login time:2025-06-25 10:47  
Remaining time:00:05:00  
[Refresh](#) [Login out](#)

Basic information

Devices setting

- Basic settings
- PDC settings
- Air conditioning settings
- Sensor settings
- Temperature and humidity settings

Network configuration

Logs

Other

**Device information**

**Sensor settings**

Sensor name	Sensor status	trigger condition	Enable	Save
Water Sensor	ON	OFF	<input checked="" type="checkbox"/>	Save
senser2	OFF	OFF	<input type="checkbox"/>	Save
senser3	OFF	OFF	<input type="checkbox"/>	Save
senser4	OFF	OFF	<input type="checkbox"/>	Save
senser5	OFF	OFF	<input type="checkbox"/>	Save
Smoke Detector	OFF	ON	<input checked="" type="checkbox"/>	Save
Front door magnet	ON	OFF	<input checked="" type="checkbox"/>	Save
Back door magnet	OFF	OFF	<input type="checkbox"/>	Save

Link - SNMP Net Manager DEV blue>Welcome to the SNMP Link system

**User Information**

User:admin  
Login time:2025-06-25 10:47  
Remaining time:00:04:59  
[Refresh](#) [Login out](#)

Basic information

Devices setting

- Basic settings
- PDC settings
- Air conditioning settings
- Sensor settings
- Temperature and humidity settings

Network configuration

Logs

Other

**Device information**

**Air conditioning settings**

Name	Maximum temperature	Name	Maximum humidity	Save
Maximum temperature	60.0 °C	Maximum humidity	80.0 %	Save
Minimum temperature threshold for air conditioning	0.0 °C	Maximum temperature threshold for air conditioning	60.0 °C	Save
Minimum humidity threshold for air conditioning	0.0 %	Maximum humidity threshold for air conditioning	90.0 %	Save

### 3.7 User management

Users are divided into administrators and ordinary users, ordinary users can only view but not set.

In the User Management menu, click the new user to create a new user. If you need to modify the user information, click the edit menu of the user list, and the edit user interface will appear.

Link-SNMP Net Manager DEV blue Welcome to the SNMP Link system

**User Information**

User:admin  
Login time:2025-06-25 10:47  
Remaining time:00:04:57  
[Refresh](#) [Login out](#)

- Basic information
- Devices setting
- Network configuration**
  - Network settings
  - SNMP settings
  - SNTP settings
  - HTTP and user settings**
  - Time settings
  - Firewall settings
- Logs
- Other

**Device Information**

**Http Settings**

HTTP port:   
 HTTPS:   
 HTTPS port:

**User Information**

Account	Account type	Edit	Delete
admin	View And Edit(User Manager)	Edit	Delete

### 3.8 Door lock control

The moving ring interface can open the rear door lock (relay) of the integrated cabinet: enter the basic information, click the sensor status, you can enter the access control interface to manually open the front door or back door.

Link-SNMP Net Manager DEV blue Welcome to the SNMP Link system

**User Information**

User:admin  
Login time:2025-06-25 10:47  
Remaining time:00:04:59  
[Refresh](#) [Login out](#)

- Basic information**
  - System information
  - PDC status
  - Air conditioning status
  - Sensor status**
- Devices setting
- Network configuration
- Logs
- Other

**Device Information**

**Temperature and humidity status**

Temperature1	Humidity1	Temperature2	Humidity2
31.3°C	69.5%	31.4°C	65.0%

**Dry contact status**

Water Sensor	sensor2	sensor3	sensor4	sensor5	Smoke Detector	Front door magnet	Back door magnet
ON	OFF	OFF	OFF	OFF	OFF	ON	OFF

**Access control**

front door	back door
<input type="button" value="Open the front door"/>	<input type="button" value="Open the back door"/>

### 3.9 Log information

Equipment information records the alarm event of the device, and if the device exceeds the threshold set by the moving ring, the generated log information will be recorded there. Location: Enter the device settings, click Log Record, and then click Event Record.

Link-SNMP Net Manager DEV blue Welcome to the SNMP Link system

**User Information**

User:admin  
 Login time:2025-06-25 10:47  
 Remaining time:00:04:59

[Refresh](#) [Login out](#)

- ▶ Basic information
- ▶ Devices setting
- ▶ Network configuration
- ▶ Logs
- ▶ Event logs
- ▶ Other

**Device Information**

**Event logs**

No.	Date	Time	Event	detailed information
1	2025-04-28	14:26	Alarm events	Dry connect7(Front door magnet), state changed.
2	2025-04-28	14:24	Alarm events	Dry connect7(Front door magnet), state changed.
3	2025-04-28	14:16	Alarm events	Dry connect7(Front door magnet), state changed.
4	2025-04-28	14:16	Alarm events	Dry connect7(Front door magnet), state changed.
5	2025-04-28	14:16	Alarm events	Dry connect7(Front door magnet), state changed.
6	2025-04-28	14:14	Alarm events	Dry connect7(Front door magnet), state changed.
7	2025-04-15	09:25	Alarm events	Dry connect1(Water Sensor), state changed.
8	2025-04-10	15:16	Alarm events	Dry connect6(Smoke Detector), state changed.
9	2025-04-10	15:16	Alarm events	Dry connect6(Smoke Detector), state changed.
10	2025-04-10	15:16	Alarm events	Dry connect6(Smoke Detector), state changed.
11	2025-04-10	15:15	Alarm events	Dry connect6(Smoke Detector), state changed.
12	2025-04-10	14:54	Alarm events	Dry connect1(Water Sensor), state changed.
13	2025-04-10	14:51	Alarm events	Dry connect1(Water Sensor), state changed.
14	2025-04-10	14:49	Alarm events	Dry connect1(Water Sensor), state changed.
15	2025-04-10	14:46	Alarm events	Dry connect6(Smoke Detector), state changed.
16	2025-04-10	14:23	Alarm events	Dry connect1(Water Sensor), state changed.
17	2025-04-10	14:12	Alarm events	Dry connect1(Water Sensor), state changed.

### 3.1 0 Software upgrade

In the system setting, software upgrade menu, the latest program can be updated, please contact the customer service for the upgrade file. Upload the upgrade file in the upgrade interface, do not modify the file name, please follow the upgrade process.

## 4. Schematic diagram of the typical system connection

