

DK2000-CDA xx xx M series

0~10V PWM dimming controller

【Product Manual】

(Note: This manual takes DK2000-CDA0616M as an example for functional introduction)



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Chapter 1 Instructions for Use



Note

The equipment is dangerous when installed in an environment with poor heat dissipation conditions!

The temperature rise of the equipment is too high, which affects the normal operation of the equipment.

The device cooling holes must be kept facing up on one side and the other side facing down, with air circulating up and down.

When installing equipment, consider the ambient temperature and ventilation and heat dissipation conditions where the equipment is located.

(Refer to Chapter 2. Section 2-3, ambient temperature: -25-60 °C).



Note

Equipment loop output overload operation danger!

Overcurrent and overvoltage operation of the equipment will cause damage to the equipment.

The system should be designed with load voltage, current, and load nature in mind.

When 0-10V, PWM, 0-20mA output is controlled, the upper limit of each output port with dimming drive capability is 200mA

(Refer to Chapter 2. Section 2-3 Maximum Output Current of the Loop).



Note

The power supply of the equipment is not normal, and it is dangerous!

The power supply of the device control power supply is unstable and the system will not function properly.

Consider using a reliable DC power supply when installing the device.

(See Chapter II. Section 2-5 Wiring Instructions).



Note

The power adapter must use a DC output 24V power supply with overload and overvoltage protection; its rated current is 1.5A;

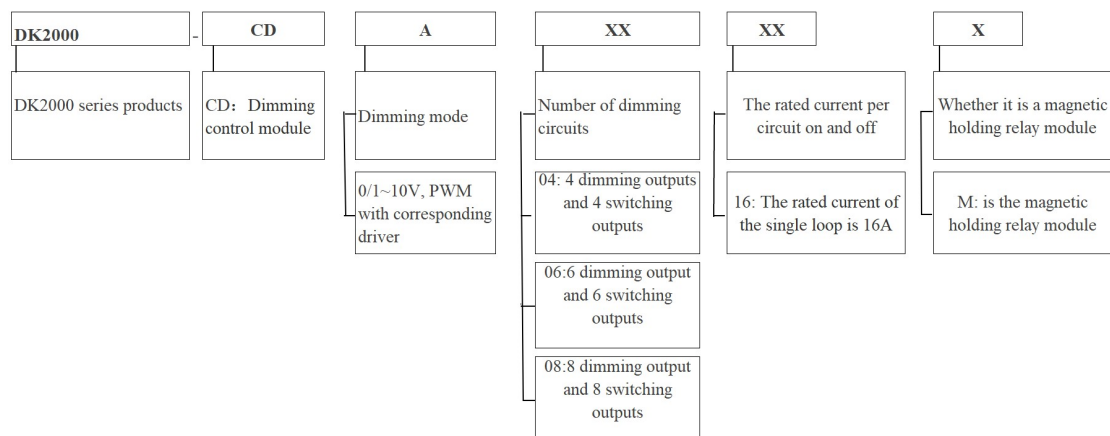
It is recommended to use the supporting power supply of Shanghai Dikong Electronics Co., Ltd. (DK2000-HDR-30-24).

Chapter 2 Product Introduction

2-1 DK2000-CDA xx xx series dimming module

DK2000-CDA0616M product is an intelligent 0~10V dimming module that adopts Chinese and English menu-style operation interface, no programming, and can be used after setting parameters independently by the user, and the main circuit adopts magnetic holding relay output, small power consumption, high reliability. When the brightness of the lamp is less than 5% (default value), the working power of the lamp is automatically cut off, so that users can use it safer and more energy-saving; The 0~10V dimming circuit has 2 output modes: DC 0/1-10V and PWM, which can support various brands of 0~10V dimming drive power supply on the market; It can realize brightness adjustment for lamps in hotels, restaurants, shopping malls, hospitals, schools, movie theaters, gymnasiums, factories, tunnels and other places; It can also be combined with computers, WEB embedded web servers, intelligent scene panels and other sensors such as illuminance, human body sensing PIR, etc. to form a complete intelligent lighting control system.

Dimming controller model (nameplate) definition



Note: The dimming controller can select the corresponding dimming mode and supporting dimming driver according to the type of lamp.

DK2000-CDA xx xx M series products basic parameters comparison table

Model	Power supply	Dimming loop	Current rating (A)	Weight approx (g)	Dimming method	Current sensing	Dimensions (mm)	Installation	Ambient temperature(°C)	Use ambient humidity
DK2000-CDA0416M	DC24v	4	16	600	0/1~10v	-	216*90*63	Guide rail	-25 to 60	10 to 85%RH
DK2000-CDA0616M	DC24v	6	16	770	0/1~10v	-	216*90*63	Guide rail	-25 to 60	10 to 85%RH
DK2000-CDA0816M	DC24v	8	16	930	0/1~10v	-	244*90*63	Guide rail	-25 to 60	10 to 85%RH

2-2 Product functions and features

1. It adopts aluminum alloy shell. to improve heat dissipation and protection performance.
2. Chinese LCD display: menu-based full-Chinese interface, can be combined with function keys, very convenient to do various parameter settings and scene calls and other functions, under special circumstances can be manually operated and managed locally.
3. The switching circuit adopts a 50A magnetic holding relay: low power consumption, low heat generation, high reliability, and anti-inrush current up to 500A.
4. Each channel 0~10V dimming drive capacity of 200mA and above, and three dimming modes are optional: DC0/1-10v, PWM.
5. Longitude and latitude time control and timing function: longitude and latitude time control is also known as astronomical clock function, after selection, in the four seasons, you can automatically call different lighting modes with the time of sunrise and sunset.
6. Automatic control function according to illuminance and human body sensing: it can be realized after being equipped with a multi-function sensor (illuminance and human movement PIR are integrated).
7. Fire alarm linkage control function: when receiving the fire strong start signal, all emergency lighting circuits are forced to open.
8. Reserve 2 sets of switching and 2 sets of analog signal input ports: specific functional requirements can be realized according to user needs.
9. The dimming circuit fade in and fade out time can be set: 1S-99S is adjustable, that is, it can be lit instantly, or it can be slowly brightened and slowly darkened.

2-3 Product specifications and characteristics

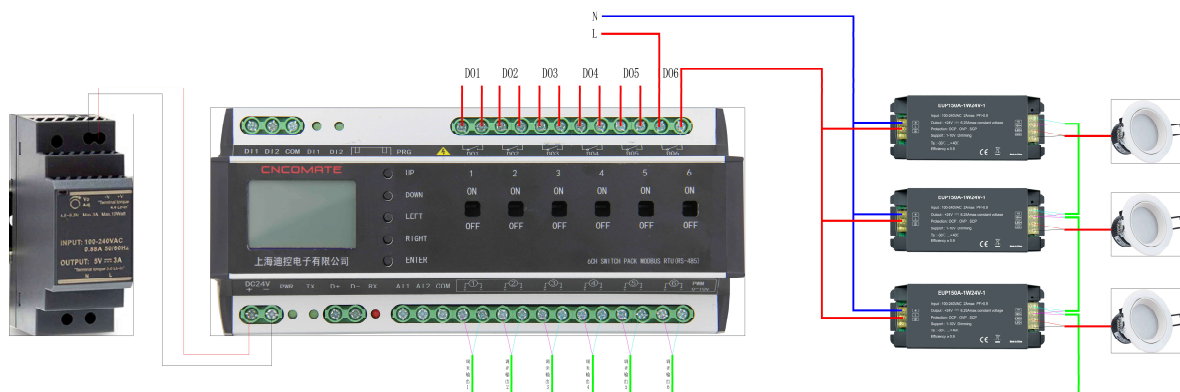
Power consumption:	DC 24V/6VA
Environment / Use:	-25 to 60 °C; 10 to 85% RH
Storage environment:	-25 to 60 °C; Less than 90% RH
Hmi:	12864 LCD screen, 'Menu/Confirm', 'Up', 'Down', 'Left', 'Right' buttons
Microprocessor:	ARM series single-chip microcomputer Watchdog device Automatic reversion.
Relay output:	High power on-off capability magnetic holding relay.
Dimming drive capability:	Single channel 200mA, total circuit not more than 800mA.
Communication method:	1xRS-485 1/2 duplex/Modbus RTU Protocol
Communication Rate:	9600~76.8k bps (工厂内设 / 建议 9600 bps)

Maximum communication distance:	4000 ft (1.2 km)
Communication signal input:	Modbus RTU
The range of correspondence address settings:	Up to 16, that is, a maximum of 16 controllers (32 customizable) can be connected to one panel
Dimensions:	4-way dimming module: 216 mm x 90 mm x 63mm 6-way dimming module: 216 mm x 90 mm x 63mm 8-way dimming module: 244 mm x 90 mm x 63mm
Installation:	Standard DIN35 electrical rail
Weight:	For details, please refer to the comparison table of basic parameters in the figure above

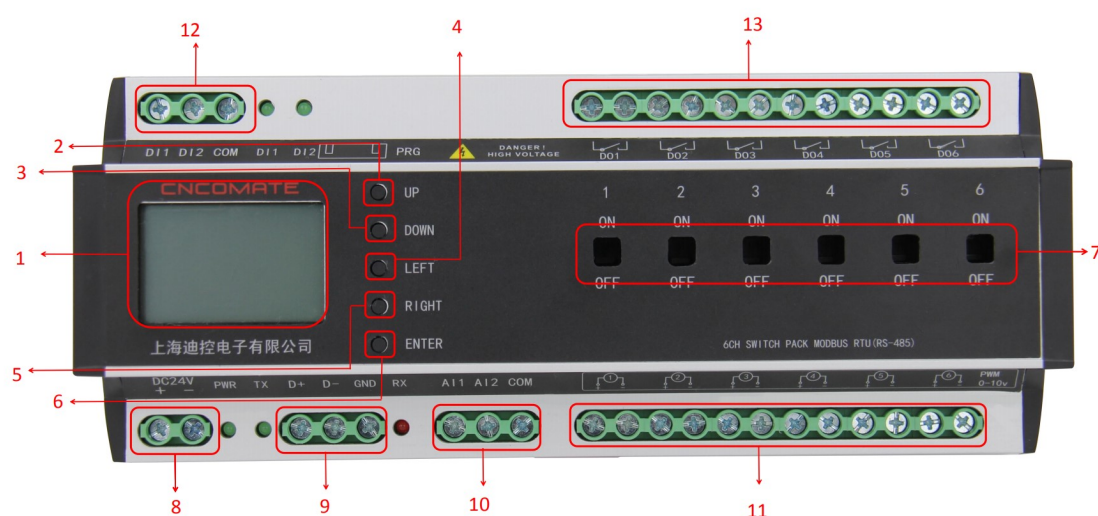
2-4 Product shell dimensions and labeling



2-5 Wiring diagram

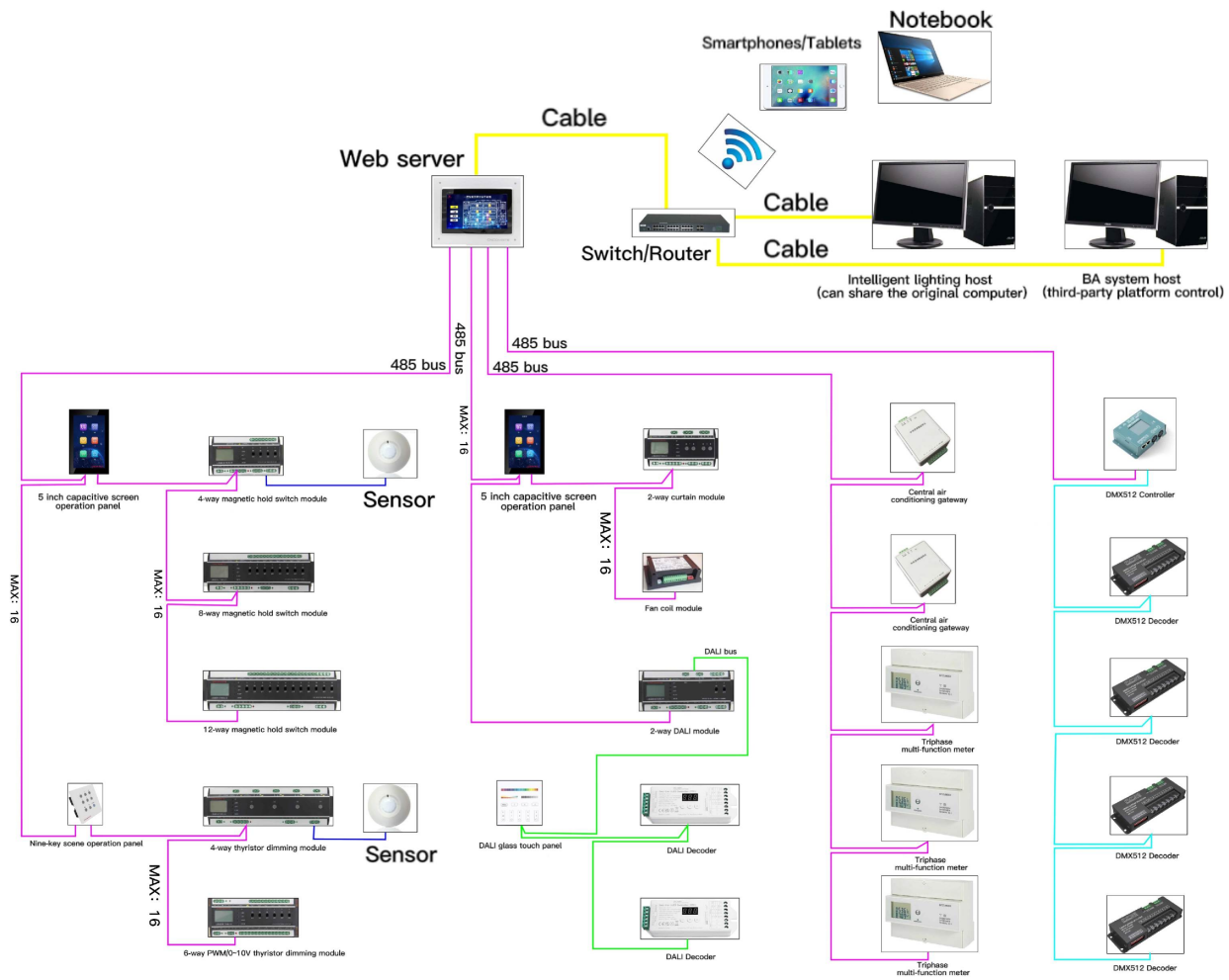


2-6 Controller hardware description



DK2000-CDA0616M controller hardware description			
Project	Name	Function	Remark
1	LCD screen	Human-machine interface, showing functions related to settings	
2	Press the key Up	Adjust the setting parameter value / state	
3	Press Down		
4	Press Left		
5	Press Right	Move the menu and select the desired menu item	
6	Press Enter	The 'Confirm' button, when a menu or option is selected, will be the inverted effect state.	
7	Manually force the loop to turn on	ON-loop forced closure; OFF - The loop is forcibly disconnected	For safe operation, it is necessary to use tools such as a screwdriver to toggle
8	Terminal blocks 24+,24-	Power supply DC24V input	Power power indicator, the indicator is on when normal operation
9	Terminal block 2 groups communication D+, D-, GND	RS485 communication line. D+ connection communication line positive; D- Negative communication line, GND ground, one set of incoming wire, one set of outlet.	Tx, Rx indicators, when the communication is normal, the two indicators flash
10	Terminal blocks AI1, AI2, AIG	The analog signal input AI1, AI2, AIG is the public end. The input source can be 0-10V, or NTC signal source.	Select the source input method by changing the JP route position
11	Terminal blocks AO1-AO6	6-loop dimming signal output.	DC0/1-10v, PWM
12	Terminal blocks DI1, DI2, COM	The passive switching inputs DI1, DI2, and COM terminals are common terminals	When the switch closes the input, the corresponding indicator lights of DI1 and DI2 are on
13	DO1-DO6	6-loop switching output	

2-7 System diagram



Chapter 3 Operational Instructions

3-1 Introduction to man-machine operation interface

The man-machine interface is composed of 12864 LCD screen and 5 buttons of "menu/confirmation", "up", "down", "left" and "right". Users can set parameters and call functions of the controller through the man-machine interface

Note: 'Menu/Confirm' When an item menu or option is selected, it will be an inverted effect state.

'Left' 'Right' moves the menu and selects to the desired menu option

'Up' 'Down' adjusts the parameter value / state

One. Parameter settings:

1. Set the controller address ID
2. Perpetual calendar time setting
3. Each loop of the controller On/Off interval delay time setting
4. Scene settings
5. Timing settings
6. Illuminance value setting
7. Latitude and longitude
8. Data synchronization is enabled
9. Abnormal alarm clearing
10. Factory reset

Two. Function call:

1. Scene call
2. Timing call
3. Warp and latitude time control enablement
4. Real-time operation of the loop
5. Master-slave scene switching is enabled
6. Illuminance enabled
7. Fade in/fade out time value setting
8. Switching/dimming switching threshold and enabling setting
9. Check the software version

3-2 Main Page:

After the system boots, you will be taken to the main page:

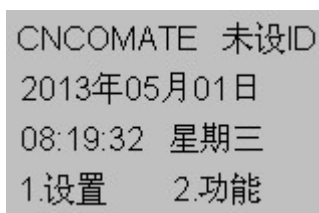


Figure 2-1

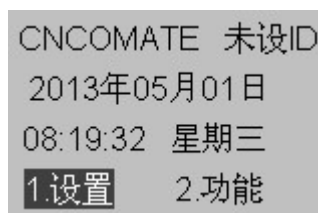


Figure 2-2

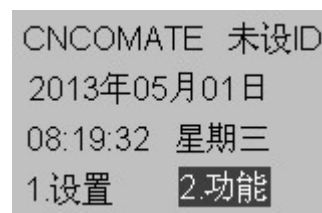


Figure 2-3

Figure 1-1 When clicking the 'Menu/Confirm' button will bring up the status of Figure 1-2, you

can select the desired option by 'left' or 'right', and click 'Menu/Confirm' to enter the corresponding interface. Press the Confirm key when setting the option, and you will enter the setting interface Figure 2-1. Press the Confirm key while Functions Options, and you will enter the function interface Figure 13-1

Note: After the ID address is set, the ID address number of the controller will be displayed in the upper left corner, and the ID address must be set before the system runs normally.

3-3 Setting interface:

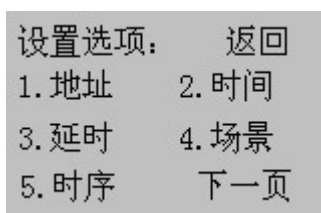


Figure 3-1

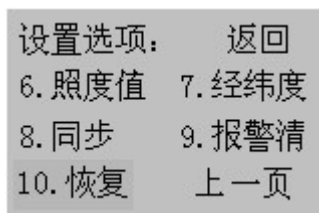


Figure 3-2

1. Controller local ID address settings. Values: 1-16
2. Set the current time.
3. Set the value of the delay interval between closed and disconnected circuits of the controller. Values: 0.2s-2.0s
4. Scene settings. 12 built-in scenes can be set. 6 main scenes, 6 sub-scenes.
5. Timing settings. One built-in timing can be set.
6. When the illuminance function is enabled, set the predetermined illuminance action value.
7. When the latitude and longitude function is enabled, set the predetermined longitude and latitude values, and you can also select the corresponding city.
8. The data synchronization function, when connected to the control of the host computer, is used to synchronize the scene set by the host computer, perpetual calendar time and other data.
9. Clear fire alarms and loop abnormal alarms.
10. Factory reset.

There are two pages of the setting interface, as shown in Figure 2-1 and Figure 2-2, pressing the Confirm button in the corresponding setting option will enter the setting interface required by the user, as described in item 3 - item 11 below. When the Back option, press the OK key, and you will be returned to the Home page Figure 1-1.

3-4 Controller ID address setting:

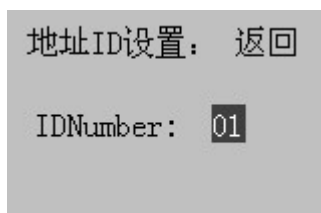


Figure 4-1

When the IDNumber option is selected, set the ID address number of the controller by the 'Up' or

'Down' key, press the OK key, that is, the ID address of the controller will be set, and the ID address number of the controller will be displayed in the upper left corner of the home page. On the Back option, press the Confirm key, and you will be returned to the setting interface Figure 2-1.

Note: Please make sure that you do not set duplicate ID addresses in the same network.

3-5 Time setting:

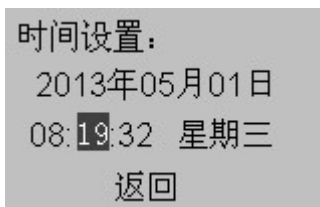


Figure 5-1

Select the setting options you need to adjust by the 'left' and 'right' keys, add or subtract the corresponding values through the 'up' and 'down' keys, adjust the set date and time values, and press the OK button, that is, the time will be saved as the current time.

On the Back option, press the OK key, and the interface will return to the setting interface in Figure 2-1.

3-6 Loop on/off interval delay setting:

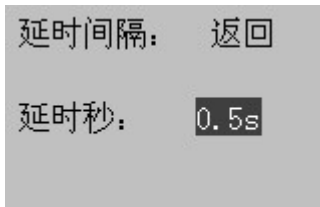


Figure 6-1

This interval value is used to ensure that when the controller loop is closed/disconnected, the loops do not act at the same time to avoid large inrush currents. Add or subtract the corresponding values by the 'up' and 'down' keys, adjust the interval value, and press the Confirm key, that is, the interval is saved as the current delay interval. On the Back option, press the OK key, and the interface will return to the setting interface in Figure 2-1.

3-7 Scene settings:

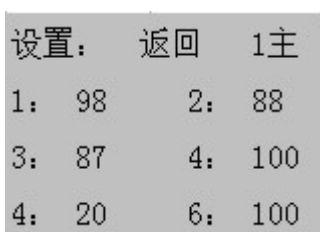


Figure 7-1

The controller allows users to customize 12 scenes, divided into 6 main scenes and 6 sub-scenes, 6 sub-scenes can be opened in the 'function' - 'main and sub-scene' switch in the menu, and the system defaults to 6 main scenes when the sub-scene is not enabled. That is, main 1 - main 6, after enabling the sub-scene will be main 1, sub-1, main 2, sub-2、---- main 6, sub-6. Set the number of the scene you want to save by using the 'up' and 'down' keys, i.e. Save scene.

Use the 'left' and 'right' keys to select the loop, and the 'up' and 'down' keys to set the output value of the corresponding loop 0-100. When the 'up' and 'down' keys are pressed once, the quantity is added/subtracted by 1; When you press and hold the 'Up' and 'Down' keys, the quantity continues to increase/decrease. After setting all 6 loop values, press the 'Confirm' button to save the scene state to the corresponding scene. In case the scene is invoked in the function or the scene is invoked in the timing.

Note: Sub-scenes can only be edited and saved if the sub-scenes are enabled in 'Main and Sub-scene'.

Press the 'Confirm' key while the 'Back' option and the interface will return to the settings interface Figure 2-1.

3-8 Timing settings:

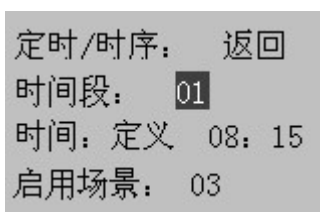


Figure 8-1

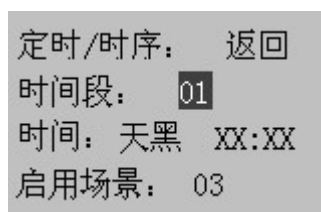


Figure 8-2

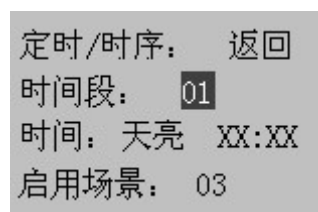


Figure 8-3

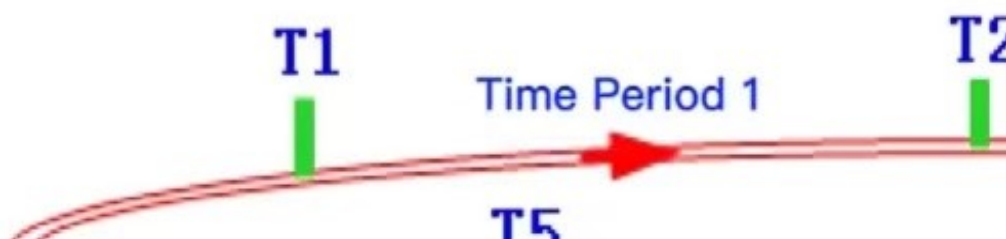


Figure 8-4

The controller user can set up a set of timing controls according to their needs. The 24-hour day is separated from T1, T2, T3, T4, and T5 into time period 1-time period 5, and the corresponding required scene can be set to call in each time period (scenario 1, scene 2, scene 3, scene 4, scene 5, scene 6, all off, full on). Time value T1-T5 setting, can be user-defined time value, can also be through the 'up' 'down' key to select the dark and dawn time value calculated by the astronomical algorithm, when the selection is defined time value, the user can set the custom time value through the 'left', 'right', 'up' 'down' key; when selecting the dark/dawn time value, the system will automatically assign the daily dark/dawn time value to the time value.

When the desired timing function combination is set, press the OK button, and the set timing

combination will be saved to the system in case the function is enabled in the function call.

Press the Confirm key when the Back option, and the interface will return to the setting interface
Figure 2-1.

Note: The time values T1~T5 must be arranged in increasing order from 0 to 23 points.

3-9 Illuminance + timing + human body detection automatic control settings:

3-9-1 Illuminance + timing control

The path to enter the illuminance control parameter setting is:

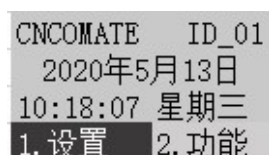


Figure 8-1

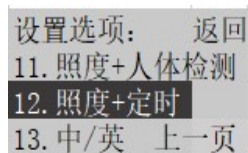


Figure 8-2

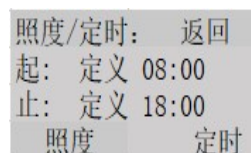


Figure 8-3

Figure 4-3 shows that the illuminance control is enabled during the daytime period of 8:00~18:00, and 5 illuminance interval segments are tentatively determined; Click "Illuminance" in Figure 4-3 to open the illuminance setting page, as shown in the following figure



Figure 8-4

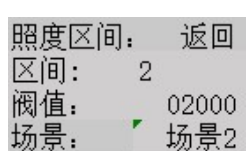


Figure 8-5

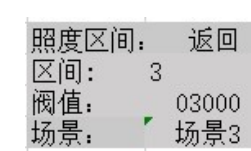


Figure 8-6

Figure 4-4 ~ to Figure 4-6 means:

When the current illumination is lower than 1000, call scenario 1

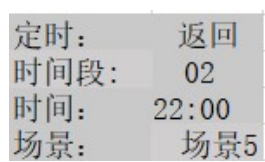
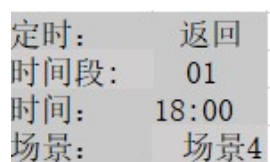
When the current illumination is lower than 2000 and higher than 1000, call scenario 2

When the current illumination is higher than 3000, call scenario 3.

Note: If you want to use timing control at night, see the following for details.

Outside the specified time period, perform timing control, tentatively set five time periods. **When the set set time start and end times are equal, only illuminance logic control is 24 hours a day.**

The entry path is: select the "Timing" button in Figure 8-3 above to enter the following interface
(give 2 examples to illustrate)



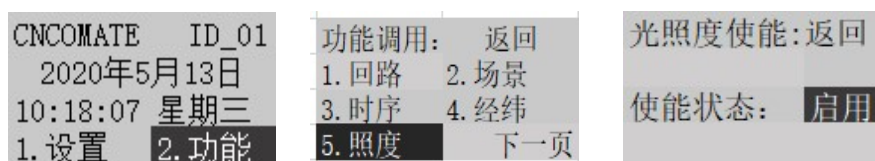
The picture above means:

At 18:00, call scenario 4

At 22:00, call scenario 5

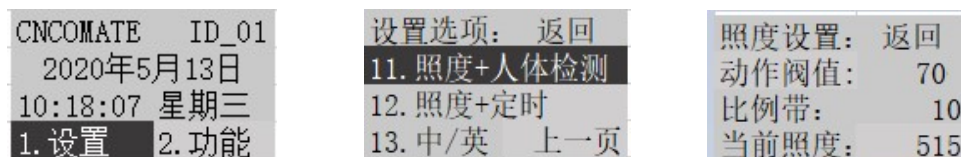
Note: The illuminance control function has an "enable" button, and the above functions are performed only when "Enable" is enabled.

The enable path is as follows:



3-9-2 Illuminance + human body detection control

The setting path is as follows:



The figure above shows that the current ambient brightness is very high, reaching 515LUX, and the action threshold higher than the human body induction is 80 (70+10), at this time, even if there is activity in the room, the light will not automatically turn on. Human body sensing will only take effect when the ambient illumination is lower than 60 (70-10) LUX, and the light will automatically light up once someone is active.

Note: All proportional belts should be set to avoid frequent switching of electric lights and affect the service life of lamps.

The port parameters are as follows:

DI1 defaults to the signal input of the fire dry contact, the signal point is closed, and all loops are forced to start.

DI2 is connected to the dry contact signal of the human detector by default, the signal point is closed, scene 2 is turned on, and the signal is withdrawn, and scene 2 is closed.

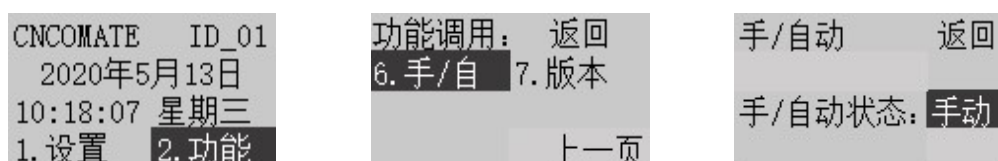
AI1 default analog signal input, connect to the illuminance sensor standard 4-20mA signal, collect ambient illumination.

AI2 defaults to the dry contact signal of the human detector, the signal point is closed, scene 4 is turned on, signal is revoked, and scene 4 is closed.

(Note: AI2 can also be used as an analog signal input)

Note: The human body sensing function (DI2, AI2) is subject to 'hand/automatic', and the above logic functions are only performed when "automatic"

The path to enable the Motion Sensing Hand/Auto feature is as follows:



3-10 latitude and longitude settings:

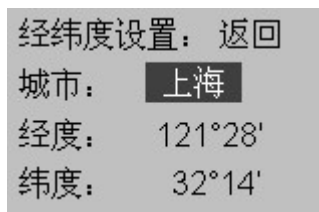


Figure 10-1

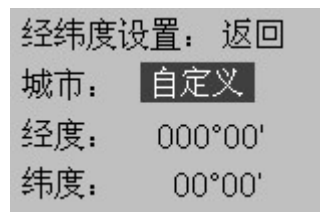


Figure 10-2

The user can set the latitude and longitude values according to the region used by the controller, and the representative continental area is defined inside the controller

Some cities such as: Shanghai, Beijing, Shenzhen, Harbin, Haikou, Urumqi..., the user can select one of these cities by 'up' 'down' keys, or select Custom, when the city option is selected as Custom

Users can enter the required latitude and longitude value, after setting, press the Confirm button, that is, the set latitude and longitude value will be saved to the system for reference in the latitude and longitude enablement.

Press the Confirm key when the Back option, and the interface will return to the setting interface Figure 2-2.

3-11 Data Synchronization Enable:

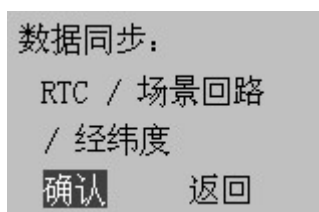


Figure 11-1

This function facilitates the RTC time value of the controller and the loop status of each scene to synchronize with the host computer. When the Confirm key is pressed during the Confirm option, the controller RTC Time scene loop status is synchronized with the host computer.

Press the Confirm key when the Back option, and the interface will return to the setting interface Figure 2-2.

3-12 Abnormal alarm clearance enable:

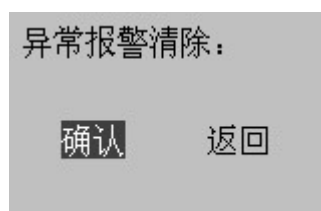


Figure 12-1

This function is used to clear the circuit abnormal alarm and fire abnormal alarm, when pressing the Confirm button in the Confirm option, the circuit abnormal alarm and fire abnormal alarm will be cleared, after the fire alarm is cleared, the system loop status will return to the pre-power state state. Note: Please make sure that the hardware failure/event of the abnormal alarm is indeed

resolved, otherwise the system will activate the corresponding abnormal alarm within a certain period of time.

Press the Confirm key when the Back option, and the interface will return to the setting interface Figure 2-2.

3-13 Restore factory value:

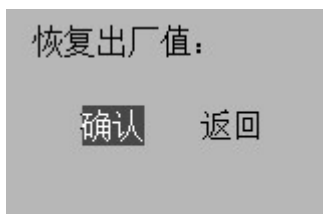


Figure 13-1

When pressing the Confirm button during the Confirm option, the relevant parameters and settings of the controller will be restored to the factory default state: each saved scene will be cleared, the timing setting will be cleared, and the loop interval delay time will be restored to 0.5s;

3-14 Function call interface:

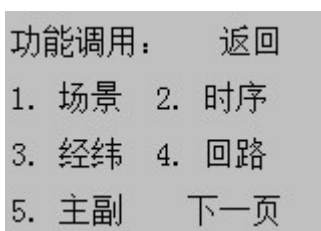


Figure 14-1

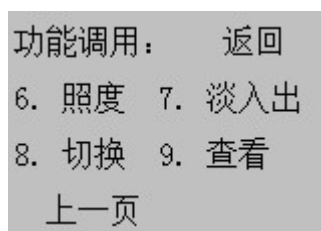


Figure 14-2

1. Invoke (view) the corresponding built-in scene.
2. Invoke (view) the corresponding set timing.
3. Enable/disable the latitude and longitude timing feature.
4. Loop real-time operation (viewing).
5. Built-in subscene enablement.
6. Illuminance enabled.
7. Fade in/out time settings.
8. Loop relay action threshold setting.
9. Software version view.

On the main page Figure 2-3 When you press the Confirm key, the interface will enter the function call interface Figure 14-1. You can select the desired option by using the 'Menu/Confirm', 'Left' and 'Right' keys and enter the corresponding function call interface. As shown in items 14-18.

Press the Confirm key when the Back option, and the interface will return to the setting interface Figure 2-1.

3-15 Scenario call:

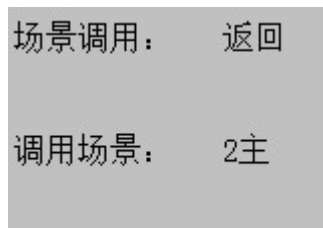


Figure 15-1

Select the scene to be called by the 'Up' and 'Down' keys: Main 1, Main 2, Main 3, Main 4, Main 5, Main 6, (Vice 1, Vice 2, Deputy 3, Deputy 4, Deputy 5, Deputy 6), All Off, Full Open. After clicking the Confirm button, the corresponding scene function is called.

Note: The secondary scene can only be called if the secondary scene is enabled in the 'main and secondary'.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-1.

3-16 Timing Control Enable:

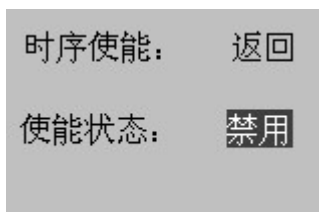


Figure 16-1

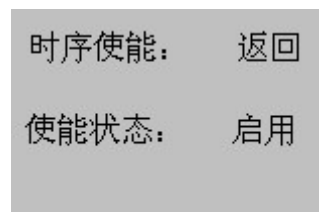


Figure 16-2

Select the Enable/Disable timing feature by the 'Up' and 'Down' keys, and when you click the Confirm key when the corresponding feature option is selected, the Timing feature is enabled/disabled.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-1.

3-17 latitude and longitude time control enablement:

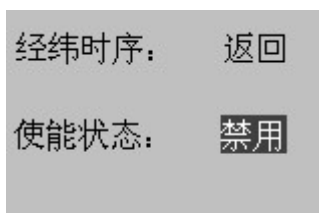


Figure 17-1

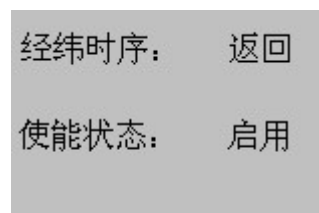
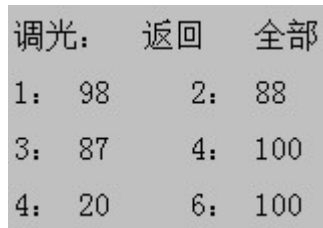


Figure 17-2

Select the enable/disable Matrice timer function by the 'Up' and 'Down' keys, and click the Confirm key when the corresponding function option is selected, that is, the Matrice and Latitude timing control function is enabled/disabled.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-1.

3-18 Loop real-time operation:



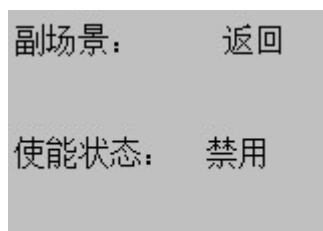
调光:	返回	全部
1:	98	2: 88
3:	87	4: 100
4:	20	6: 100

Figure 18-1

Use the 'Confirm' key to activate dimming, the 'Left' and 'Right' keys to select the circuit to be dimmed or 'All', and the 'Up' and 'Down' keys to adjust the output value of the corresponding circuit from 0-100. When the 'up' and 'down' keys are pressed once, the quantity is added/subtracted by 1; When you press and hold the 'Up' and 'Down' keys, the quantity continues to increase/decrease. When 'All' is selected and the 'Up' and 'Down' keys are pressed, the 6 circuits will be added/subtracted at the same time.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-1.

3-19 Sub-scene enablement:



副场景:	返回
使能状态:	禁用

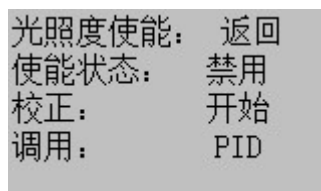
Figure 19-1

Use the 'Up' and 'Down' keys to select whether the Enable/Disable sub-scene function is enabled, and when you click the Confirm key when the corresponding function option is selected, that is, the sub-scene is enabled/disabled.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-1.

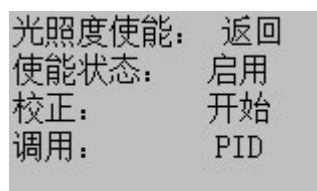
Note: When the sub-scene function is enabled, you can edit, save, and call 12 scenes.

3-20 Illuminance control enable:



光照度使能:	返回
使能状态:	禁用
校正:	开始
调用:	PID

Figure 20-1



光照度使能:	返回
使能状态:	启用
校正:	开始
调用:	PID

Figure 20-2

Select the Enable/Disable illuminance control function by the 'Up' and 'Down' keys, and click the Confirm key when the corresponding function option is selected, that is, the illuminance control function is enabled/disabled.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-2.

3-21 Fade time setting:

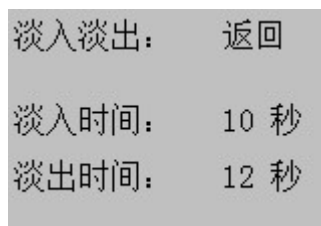


Figure 21-1

Set the required fade-in/fade-out time value by pressing the 'left', 'right', 'up', 'down' keys, and after pressing the 'confirm' key, the corresponding time value is saved.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-2.

3-22 Relay circuit action threshold setting:

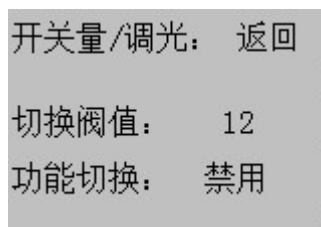


Figure 22-1

Set the required relay action threshold via the 'left', 'right', 'up', 'down' keys, and after pressing the 'confirm' button, the corresponding time value is saved.

Note: If the set threshold value is 12, when the dimming value of the circuit is lower than 12, the corresponding circuit relay is disconnected; When the dimming value of the circuit is greater than or equal to 12, the relay of the corresponding circuit is closed.

Press the OK key when the Back option, and the interface will return to the setting interface Figure 14-2.

3-23 Software Version View:



Figure 23-1

Press the OK key when the Back option, and the interface will return to the setting interface Figure 13-1.

3-24 Functional modes and interlock states:

The defined function modes are: 1. full open; 2. full off; 3. single-loop operation; 4. scene call; 5. illuminance control; 6. Timing call; 7. Warp and latitude time control; 8. Scene overlay; 9. Data Synchronization.

Interlocking constraints:

1. Timing, latitude and longitude time control, full on, full off, with the last started state as the current state, the last state will be terminated.
2. Single-loop operation operates with a two-position switch that forces on at the 'On' bit and turns off at the 'Off' bit.
3. Timing, latitude and longitude time control, full on or all off, when called, the scene state can be terminated by these four states.
4. When the time series or latitude and longitude time control is called, and the scene is enabled again, the time series or latitude time control will not be terminated by the scene.
5. When the timing or latitude and longitude timing control is invoked, the overlay function will be disabled and the overlay function cannot be enabled.
6. Fade-in/out-out intervention: when booting, fade-in will intervene; When the full open, full off, and the scene switches to each other, the fade in/out will intervene; This function does not intervene when single-loop real-time dimming.
7. Data synchronization is independent of other functions and is always operational. After this function is enabled, the RTC time of the controller and the scene loop status will be synchronized to the host computer, if the host computer is not connected, or the host computer is not set to save the scene, the data is synchronized and the scene loop status of the controller will be fully off.
8. When full on, full off, call timing, call latitude and longitude time control, or call scene, you can operate the illuminance control function.
9. After the illuminance control enable is enabled, if you want to turn it on, off all, call the timing, or call the scene, you must first turn off the illuminance control enable, because the illuminance control enable has the highest priority.
10. When calling a scene that has not been edited, it will be the output state of Full Off.
11. When invoking a timing that has not been edited, it will continue the output state of the previous controller.
12. When the fire alarm is activated, all loops of the controller are turned on. After the fire alarm is lifted, the circuit status returns to the pre-fire alarm state.

3-25 Default values for various systems:

1. The time interval when the loop is closed, the system defaults to 0.5 seconds.
2. Longitude and latitude setting, the system defaults to Shanghai: 121°28' east longitude 32°14' north latitude
3. The system defaults to 12 seconds for the activation time of abnormal alarms.

Chapter 4 Installation, Commissioning and Maintenance

4-1 Transportation/Storage



Prompt

The equipment is transported in Shanghai Dikong packaging to avoid crushing the equipment, but the equipment should still be carefully protected from rain, even if it has been packaged.



Prompt

The equipment must be dustproof and moisture-proof.



Prompt

In principle, the equipment in storage must not be subjected to mechanical loads, shocks or oscillations.

4-2 Installation and maintenance



Prompt

The communication signal line uses the models and specifications recommended by Shanghai Dikong Company to ensure the quality of communication signals.



Prompt

The equipment is mounted on a standard DIN35 electrical track and requires a secure fixation.



Prompt

The device should not be installed in the open air.



Note

After the wiring is completed, before power transmission, ensure that the load circuit has no short circuit and no ground fault.

Chapter 5 Common Faults and Troubleshooting

Item number	Symptom	Actions / Possible causes
1	After power transmission, the device does not respond, and the screen does not display	1. Confirm whether DC24V is input normally and whether the positive and negative polarities are correct. 2. Check whether the device software version is loaded correctly.
2	The system does not work properly after power delivery	1. Make sure that the device address is set correctly and that there can be no duplicate addresses. 2. Whether the parameter settings are correct. 3. Whether the communication line wiring is correct and whether there is no short circuit.
3	The loop output LED is normal, but the loop load is not working	1. Check whether the loop output is normal. 2. Check that the load loop wiring is correct.
4		
5		
6		

Quality assurance

Thank you for purchasing our products!

1. Warranty commitment

- 1) The warranty period of the whole product is two years;
- 2) Free maintenance during the warranty period;
- 3) The scope of warranty refers to the problem of the product under normal use;
- 4) The company does not provide home service, please hand over the faulty product to the dealer or express delivery to our company.

2. Warranty Exceptions

The above commitments do not apply to:

- 1) The whole machine or parts of the product have exceeded the free warranty period
- 2) The product has been dismantled and repaired privately;
- 3) The product has physical damage, such as falling, extrusion, deformation, screen breakage, etc.;
- 4) Failure or damage caused by the working environment not specified by the product (such as: too high temperature, too low, too wet or dry, abnormal physical pressure, electromagnetic interference, unstable power supply, electrostatic interference, excessive zero ground voltage, input inappropriate voltage, etc.);
- 5) Failure or damage caused by unexpected factors or human reasons (such as: circuit board burnout due to short circuit of the line, etc.);
- 6) Failure or damage caused by force majeure (force majeure refers to objective events that cannot be foreseen, inevitable or overcome, including natural disasters such as floods, fires, explosions, lightning, earthquakes and storms, and social events such as wars, turmoil, etc.);
- 7) The product cannot be used due to the above reasons, and the company repairs it according to the cost;
- 8) This product is maintained for life, if the warranty period is exceeded, the company provides cost maintenance.

3. Supplementary Provisions

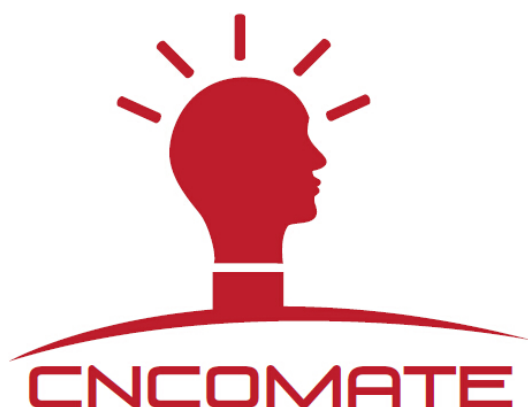
1) The validity, performance, interpretation and dispute resolution of these Regulations shall be governed by the laws of the People's Republic of China, and if there is no conflict with national laws and regulations, these Regulations shall be followed.

2) The right to revise and interpret these Terms belongs to the Company to the extent permitted by law.

Change History

Version	Illustrate
V1.0.0	Originally issued
V2.0.0	2019-4-13
V2.0.1	2021-08-28

Issue Date: August 2021



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