Operating Instructions for Waterproof Beam Light

Table of Con tents

1. Notes on Usage and Installation Notes on Usage and Installation

1.1 Declaration

Thank you for choosing our company's product! This product is in good condition and complete in packaging when leaving the factory. In order for you to use this product safely and effectively, please read this manual carefully and completely before using this product. This manual contains important information about installation and use, please install and operate according to the requirements of the manual, and please keep this manual properly for easy access. Our company is not liable for any damage to the fixture or other performance due to individuals not following the manual when installing, using, or repairing.

No technical changes will be advised should they be made to this handbook.

1.2 Maintenance

- Disconnect power before performing maintenance.
- This lighting equipment shall be kept dry and avoid working in a humid environment.
- Intermittent use will effectively extend the life of this fixture.
- To obtain good ventilation and lighting effects, be sure to clean the fan and fan grill, and the lenses, on a regular basis.
- Do not wipe the housing of the lamp with organic solvents such as alcohol to avoid causing damage.

1.3 Product Precautions

- This lighting equipment is for professional users only.
- Ensure that the power voltage is the same as the voltage required by the equipment before running.
- Do not place the product in a place that is prone to loosening or vibration.
- When using the luminaire, if any abnormality is found, stop using the luminaire immediately.
- In order to ensure the service life of the product, this product must not be placed in a damp or leaking place, let alone in a place where the temperatures exceeds 60 temperatures above 120 degrees.

When the bulb is in use, the power voltage should not change over ±10%, voltage too high will shorten the life of the bulb, voltage too low affects the color of the light from a bulb.

- After power off, the lampshade shall be allowed to cool for 20 minutes before it is re-energized.
- The rotating parts of the lamps and the pasted accessories must be checked regularly. If there is any looseness or shaking, reinforce it in time to prevent accidents.
- To ensure the correct operation of this product, please read this manual carefully.

1.4 ProductIntroduction

Lens: imported optical lens Horizontal:540° Vertical:270° Light source:380W Total power:550W Waterproof grade:IP55 DMX512 Signal control Color wheel:14 colors+white light, can be bidirectional speed rainbow effect Pattern wheel:17 fixed pattern slices+white light Prism:8 prisms and 8+16 with rotating function Fog:light fogging Six color:six color wheel

Dimming: 0-100%
Flicker: 1-13 times/second
Focus: Electronic focus
Light output angle: 1.9°-3°
Panel: Button
Appearance: Sunscreen, fire proo
f, anti-fall shell.
Installation method: Front install
ation, hanging
Net weight: 24KG
External box size: 47.5x44.5x68ðl

1.5 Signal Line Connection

Fixtures are equipped with standard 3-pin or 5-pin XLR connectors for DMX in an d out. Use shiel ded twisted pair cable designed for DMX 512; signal runs are generally limited to 150 meters, if lo nger runs are required, a DMX512 signal amplifier must be added. Run a shielded twisted pair ca ble from the DMX output of the controller to the DMX input of the first device and from the DMX output of the first device to the DMX input of the second device and so on until all devices are co nnected. Then, install a terminal plug in the 3-pin output connector of the last device in each run . (Solder a 4/1W, 120 ohm r esistor between pins 2 and 3 in the 3 pin XLR plug with pin contacts).

Important: Lines must not touch each other or touch metal housing.

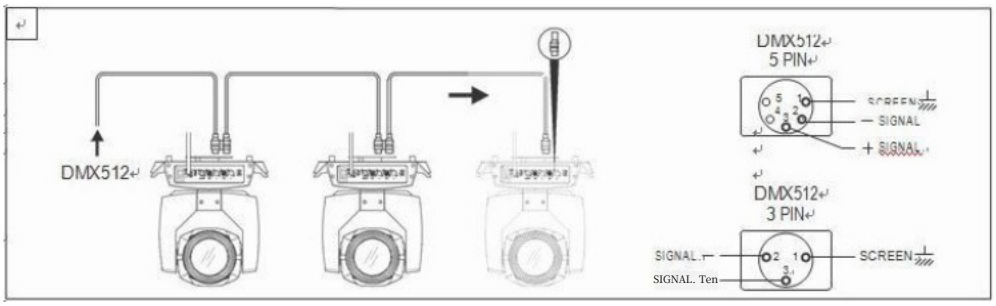

Figure 1 DMX **Signal LineConnection Diagram**

ðØCalculation method for the starting address code of the fixture
:

The starting address code of the current fixture is equal to (the starting address code of the previous fixt ure) + (the number of channels of the fix ture)

Note: 1: The starting address code value of the first fixture is A001.

2: The basic channel number of the controller shall be greater than or equal to the total number of channels used by the lumin aire.

3: Note: When using any controller, each luminaire must have its own starting ad dress code. If the starting a ddress code of the first luminaire is set to A001, the channel number of the luminaire is 16CH; then the starti ng address code of the second luminaire is set to A017; the starting address code of the third luminaire is set t o A033; and so on (this setting method also needs to be determined according to differe nt consoles).

1.6 Fixture Installation

The lamps can be placed horizontally, obliquely hung and hu ng upside down. When obliquely hung and hung upside down, the installatio n method shall be paid much attention to.

The stability of the installation place must be ensured before the positioning of the luminaire as show n in Fig. 2. During the inversion suspension, the luminaire shall not fall down from the support bracket. S afety rope must be used to pass through the support bracket and the handle of the luminaire to assist the s uspension, so as to ensure safety and prevent the luminaire from falling and sliding.

When installing and debugging the luminaire, it is forbidden for pedestrians to pass below. Chec k regularly whether the safety rope is worn and whether the hook scre w is loose.

We do not take any responsibility for any consequences caused by the falli ng of lamps due to unsteady hanging installation.

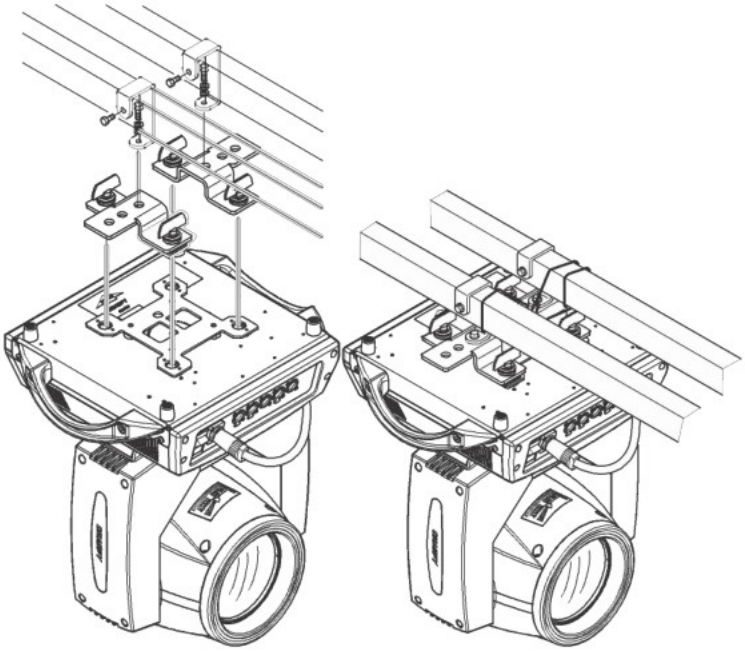

Figure 2 Inverted luminaire diagra m

1. control panel

2.1 Button Descripti ons

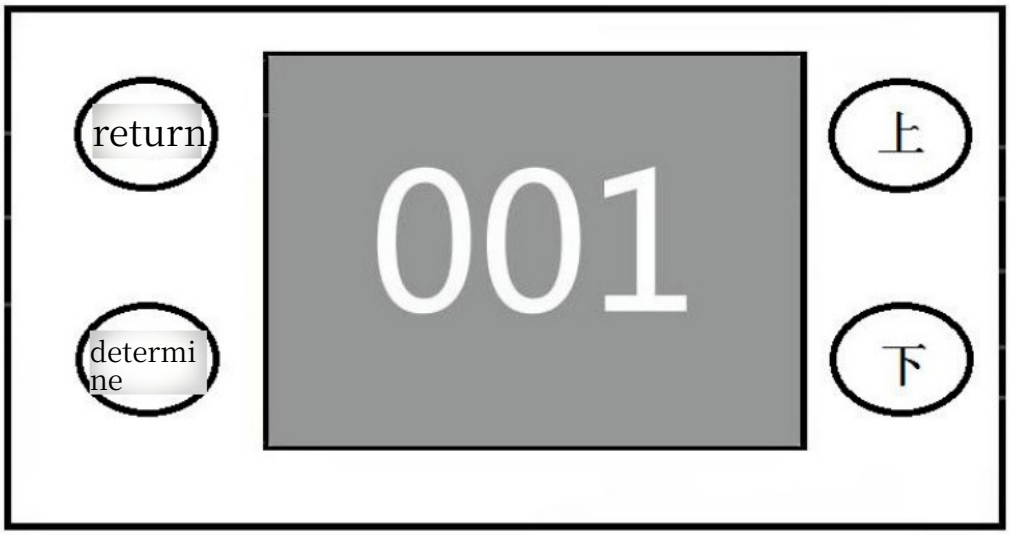

Figure 3 Panel Key Description Schematic

Below is an example of using the keys to modify the DMX address code:

1. If you are not now in the main menu, press the "left" key (o nce or more) to return to the main menu.

2. In the main interface, press the "Up" key or "Down " key to select the "Settings" button.

3. Press "OK" to enter the "Settings " interface.

4. In the "Settings" interface, press the "Up" key or "Down" key to select "DMX Address"

5. Press "Enter" to enter the edit state

6、 Edit the DMX address code by pressing the “up” or “down” key

7. Press the "Enter" key to ex it the edit state

2.2 Menu Explanation

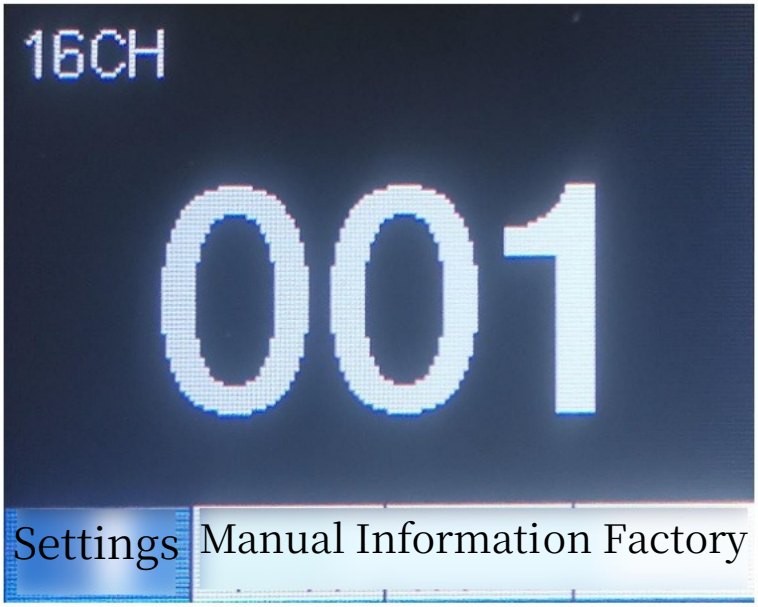

Figure 4. Main Menu Schematic

2.2.1 Setup

Options	Explanation	
operation	DMX	Slave mode: Receive DMX signal from console or master
	Scene	Run the scene you set up
	Self-propelled	Master Status: Auto-walk and send DMX signal to slaves
	voice control	
Scene setting (self-created scene; maximum 20 steps; press "OK"	Scene Selection 01-20	Switch 1-20 steps; total 20 scenes; switch auto-save the data of the previous scene (need to return to the upper menu after editing the last step scene, if not return and directly power off, the last step cannot be saved)
	Scene Time	0-255 seconds; factory default 3 seconds (1 equals 1 second)

Press to enter edit mode.	000-255	
	Scene Ru n On/Off	Switch Scenes; All scenes are off at factory default, a sc ene in the off state will not run in the scene run mode
	1. Color... 2 . Flicker...	Set the function value of the scene; function r eference channel description
DMX Address	1~512	Press the "Enter" key to enter the edit state. At this t ime, the hundre ds digit is selected, and the address code is changed by pressing the "Up" and "Down" k eys. Press the "Enter" key again to select the tens digit for editing. Press the "Enter" key again to select the ones digit f or editing. Press the "Enter" key one more time to exit the edit state.
Light bu lb	clos e	Guan Bao
	Ope n	Bubble Br ight
Motor Reset	clos e	
	Ope n	Fixture Reset
Channel	Standard 24CH	Standard 24-channel mode
languag e	Please tra nslate the following content or words int o English	Set to English interface
	Chinese	Set to Chinese interface
screen flip	clos e	Displayed front ally
	Ope n	Display in reverse
X Inversion	close	
	Ope n	X Motor Direction Rotation 540 Degrees
Y Flip	clos e	
	Ope n	Y Motor direction rotate 270 degrees
XY exchange	clos e	
	Ope n	Swap XY channels (including fine-tuning)
XY Encoder	Ope n	Use the encoder (photocoupler) to detect loss of synchronization and automatically correct th e position.
	close	Do not correct position using the encoder (photocoupler)
DMX Signal	keep	Continue to run as is
	clear to z ero	Motor home, stop running
Power on and di splay the bubble	clos e	
	Ope n	Brighten the bulb after startup
color linearity	Ope n	Color wheel linear change
	close	Color wheel nonlinear change, half-color change
Clear Scene Data	Pressing the "OK" key clears the scene data.	
Reset to Default	After pressing the "OK" key, a confirmation dialog box is seen , press the "OK" key again to restore the default settings	

2.2.2 ManualControl

This interface is used to control the current fixture (not receiving D MX signal), corresponding channel. For details, please refer to the channel table.

Options	Explanatio n	
1CH.	0~255	Press the "Enter" key to enter the edit stat e. At this time, the hundreds place is selected.
.....	0~255	Press the "up" or "down" key to change t he channel value. Press again to "Enter"
15CH.	0~255	The "Enter" key selects the ten-digit edito r. Press the "Enter" key again to select
.....	0~255	Middle position edit. Press once more to exit edit mode.

2.2.3 Infomation

Options	Explanation	
Ver		Display Software Version
DIS		Display board software version
MT		Motor Board Software Version
time information	1. Total Bright Bubbles 2. Total Use	Record the cumulative brightening time and record the lamp usage time.
System Error		If the red ERR is on, it indicates that the lamp operates abnormally, and more details can be checked by entering the sub-interface. After checking, the error record can be cleared by pressing the "Clear" key.
Blower Speed		Display the current fan speed
Hall state	0000	1 if magnetic is detected, 0 otherwise
X-axis code step value	0000	When walking in the positive direction, the step value should increase, and when walking in the negative direction, the step value should decrease. It is normal for the value to be the same every time it turns to the same point.
Y-axis step value	0000	When walking in the positive direction, the step value should increase, and when walking in the negative direction, the step value should decrease. It is normal for the value to be the same every time it turns to the same point.
Permission Duration		9999 Not encrypted; other values can be time-encrypted

A. Error Information Explanation

Common error messages	Explanation
MT Board connection failed	The motor board did not respond. There is something wrong with the serial port communication line connecting the display board and the motor board, or the motor board is faulty.
X Axis Reset Failed	X-axis photo switch or X-axis motor or motor board has a problem.
Y-axis reset failed	Y-axis photoelectric switch, or Y-axis motor or motor board has a problem.
X-axis Hall error	X-axis Hall sensor, or motor board issue.
Y-axis Hall error	Y-axis Hall sensor, or motor board issue.
Color bar reset failed	Color picker hall or the color picker motor has an issue.
Pattern Board Reset Failed	Patterned plate Hall, or patterned plate motor has a problem
Auto Focus Calibration Failure	Focusing Hall, or focusing motor has a problem
Light bulb control failure	Bright or extinguishing failure, trouble with the igniter or bulb

2.2.4 Factory

Calibration	Fan regulation (test)	fan adjustment
		Blower Speed
		Low wind speed foaming on/off
	Data Download	After replacing the display board, download the calibration data of the original display board from the motor board.

	X-axis	After entering the sub-interface, you can adjust the reset of the X-axis, Y-axis, and other motors.
	Y-axis	position, to compensate for errors in hardware installation, adjustment range
	color	-128~+127, +0 represents no adjustment.
	pattern	
	Focusing	
	Fine-tune by halftone steps	
	Dimming Offset	
	Prism 1 Half-step	
	Prism 1 Stroke	
	Prism 2 Half-Step	
	Prism 2 stroke	
	Fogging Half a Step	
	atomizing stroke	
	The Rainbow Mirror Trip	
	clear to zero	clos e
		Open, Data Recovery Defaults
	X Hall	Close, X Hall report error close
		Open, X Hall error open
	Y Hall	Close, Y Hall report error close
		Open, Y Hall error open
	Half power	Off, no half power function
		Open, with half power function

2. Channel function

3. Channel Table

Channel	24-channel mode	28 Channel Mode
1	Color wheel	Color wheel
2	Chopping / Flashin g	Chopping / Flashin g
3	Dimming	Dimming
4	Motif plate	Painted potte ry
5	Prism 1	Prism 1
6	Prisms 1 rotate	Prism 1 Rotation
7	Prism 2	Prism 2
8	Prism 2 Rotation	Prism 2 Rotation
9	Focusing	Focusing
10	X	X
11	X Fine-tuning	X Fine-tuning
12	Y	Y
13	Y fine-tuning	Y fine-tuning
14	XY Speed	XY Speed

15	Fog Machine/Rainbow	Fog Machine/Rainbow
16	Light Bulb & Reset	Light Bulb & Reset
17	LED Dimmable	retain
18	Light source flicker	Color wheel speed
19	Led red	Dimming-prism-atomization speed
20	Lamp bead green	Pitch Disk Velocity
21	Lamp bead blue	Light Ring Dimming
22	LED Color Selection	Lamp ring strobos copic
23	SMD Scene	Light ring red
24	Lamp bead scene speed	Ring Green
25		Ring Blue
26		Light Ring Color Macro
27		Ring of lights scene
28		Ring of lights scene speed

Channel Value (Full Version):

28CH	24CH	Function	Channel number	effect
1	1	Color wheel	000 - 004 005 - 009 010 - 014 015 - 019 020 - 024 025 - 029 030 - 034 035 - 039 040 - 044 045 - 049 050 - 054 055 - 059 060 - 064 065 - 069 070 - 074 075 - 079 080 - 084 085 - 089 090 - 094 095 - 099 100 - 104	White light White light + col or 1 color 1 col or 1 + color 2 c olor 2 color 2 + color 3 color 3 color 3 + col or 4 color 4 col or 4 + color 5 c olor 5 color 5 + color 6 color 6 color 6 + col or 7 color 7 col or 7 + color 8 c olor 8 color 8 + color 9 color 9 color 9 + col or 10 color 10

			105 - 109 110 - 114 115 - 119 120 - 124 125 - 129 130 - 134 135 - 139 140 - 144 145 - 149 150 - 200 201 - 255	Color 10+ Color 11 Col or 11 Color 11+ Color 1 2 Color 12 Color 12+ C olor 13 Color 13 Color 13+ Color 14 Color 14 Color 14+ White light Reverse flow (from fa st to slow) Forward fl ow (from slow to fast)
2	2	Chopping / Flas hing	000-003 004-103 104-107 108-207 208-212 213-251 252-255	Gate closed flicker from slow to fast Gate o pen → (by control of the dimming channel) Pulse flicker from slow to fast Gate open → (by control of the dimming channel) Ran dom flicker from slow to fast Gate open → (by control of the dimming channel)
3	3	Dimming	000-255	from dark to light
4	4	Painted pot tery	000 - 004 005 - 009 010 - 014 015 - 019 020 - 024 025 - 029 030 - 034 035 - 039 040 - 044 045 - 049 050 - 054 055 - 059 060 - 064 065 - 069 070 - 074 075 - 079 080 - 084 085 - 089 090 - 094 095 - 099 100 - 104 105 - 109 110 - 114 115 - 119 120 - 124	Fig. 1 Fig. 2 Fig. 3 Solid Figu re 4 Fig. 5 Figure 6 Figure 7 Figure 8 Figure 9 Fig. 10 Fig. 11 Fig. 12 Fig. 13 Fig. 14 Fig. 15 Fig. 16 Fig. 17 Fig. 18 Figure 1: Jitter (slow to fast) Figure 2: Jitter (slow to fast) Figure 3: Jitter (slow to fast) The amplitude of the oscillations in Fig. 4 decreases (from slow to fast) Figure 5: Jitter (slow to fast) Figure 6: Jitter (slow to fast) Figure 7. Jitter (slow to fast)

			125 - 129 130 - 134 135 - 139 140 - 144 145 - 149 150 - 154 155 - 159 160 - 164 165 - 169 170 - 174 175 - 179 180 - 217 218 - 255	Figure 8: Jitter (slow to fast) Figure 9 Oscillation (slow to fas t) Figure 10 Oscillation (slow to fast) Figure 11 Oscillation (slow to fast) Figure 12 Oscillation (sl ow to fast) Figure 13 Oscillation (slow to fast) Figure 14 Oscillat ion (slow to fast) Figure 15 Osci llation (slow to fast) Figure 16 Oscillation (slow to fast) Figure 17 Oscillation (slow to fast) Fig ure 18 Oscillation (slow to fast) Forward flow (fast to slow) Rev erse flow (slow to fast)
5	5	Prism 1	000-127 128-255	Prism 1 Pop Out Prism 1 Cut In
6	6	Prism 1 Rotation	000-127 128-190 191-192 193-255	Prism 1 angle adjustment Reverse rotation (from fa st to slow) Stop Forward r otation (from slow to fast)
7	7	Prism 2	000-127 128-255	Prism 1 Pop Out Prism 1 Cut In
8	8	Prism 2 Rotation	000-127 128-190 191-192 193-255	Prism 1 angle adjustment Reverse rotation (from fa st to slow) Stop Forward r otation (from slow to fast)
9	9	Focusing	000-255	Pattern clarity from far to near
10	10	X	000-255	Horizontal 540 degree scan
11	11	X Fine-tuning	000-255	Level 1.2 degree of fine -tuning
12	12	Y	000-255	Vertical 270 degree scanning
13	13	Y fine-tuning	000-255	Vertical 1.2 degree adjustment
14	14	XY Speed	000-255	speed from fast to slow
15	15	Fog Machine/Rai nbow	000-127 128-191 192-255	No color grad ient into the misty cut-in
16	16	Light Bulb & Reset	000-025 026-050 061-085 100-109 200-209 251-255	None, no action in areas without s pecified functions. Small motor reset XY motor reset Turn off the light bulb, turn on th e light bulb All motors reset
17		retain	000-255	speed from fast to slow 速度由快到慢
18		Color wheel speed		
19		Dimming-prism-fog		

		Reaction rate		
20		Pitch Disk Velocity		
21	17	Light Ring Dimming	000-255	from dark to light
22	18	Lamp ring stroboscopic	000-003 004-103 104-107 108-207 208-212 213-251 252-255	Gate opening flicker from slow to fast Gate opening → (controlled by the LED strip dimming channel) Pulse flicker from slow to fast Gate opening → (controlled by the LED strip dimming channel) Random flicker from slow to fast Gate opening → (controlled by the LED strip dimming channel)
23	19	Light ring red	000-255	From dark to light 0-100%
24	20	Ring Green	000-255	From dark to light 0-100%
25	21	Ring Blue	000-255	From dark to light 0-100%
26	22	Light Ring Color Macro	000-009 010-255	Invalid ring color macro
27	23	Ring of lights scene	000-014 015-089 090-209 210-224 225-239 240-255	Invalid scene effect 1 (red, green, blue can be the base color) scene effect 2 (colorful running horse effect) scene effect 3 (random color of the lamp beads) jumping light ring gradient light ring
28	24	Ring of lights scene speed	000-127 128-255	Forward galloping; reverse galloping from slow to fast; from fast to slow

Common faults

Procedures for some common faults are described. Any problem that cannot be solved should be handled by professionals. Before servicing the fixture, make sure to disconnect the power.

1. **Light bulb is not lighting up**

ðl Check if the voltage installed matches the voltage of the fixture;

ðl Check whether the connection of the power supply of the luminaire or the control switch is in bad contact;

ðl Check for insufficient power supply;

ðl Check if the DMX512 controller has sent instructions.

2. **Lights do not respond to control console after normal reset**

ðl Check whether the digital starting address value and the function options of the fixture are correct;

ðl Check whether the connection of communication control line is correct, the communication line is too long or has been interrupted;

ðl Check whether the control device is out of order, and check whether the signal amplifier connected in series is out of order;

ðl Check whether the communication line is too long or there is any other equipment interfering with each other;

ð Optimize wiring, shorten the length of control signal lines, and separate high and low voltage lines for wiring;

ð Add signal amplifier;

ð Shielded twisted pair of high quality is used for signal lines.

ð Connect a signal terminal resistor (120 ohms) to the end of the fixture.

3. **Lighting cannot be started**

ð Check that the power supply parameters are consistent with those of the luminaire;

ð Check for loose or detached connections in the luminaire due to deformation from compression, vibration of internal parts, dampness, etc., during long-distance transport.

ð Check whether the internal wiring and terminal block of the luminaire are loose or detached.

ð Check whether there are any loose, short-circuited, and Burning failure.

4. **While working, the motion of the X or Y axis of the fixture is not normal**

ð Check each one as per the above steps;

ð Check whether the transmission belt corresponding to the X and Y axes in the fixture is detached or broken;

ð Check whether the data feedback receiver (photocoupler) corresponding to the X and Y directions inside the luminaire is damaged;

ð Reboot and reset once.