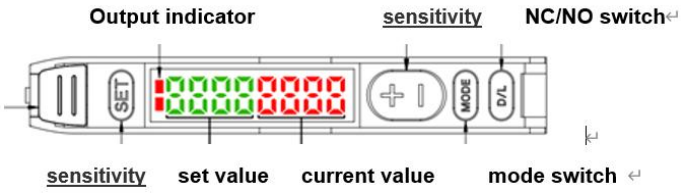
ER2-22N

Dual number display fiber optic sensor

Operating instruction

Operation panel description:



Note:

To ensure your safety, please follow the following rules:

1. This product is only for target detection. Do not use this product protects the human body or body parts, etc.

2. This product may not be used as explosion-proof products. Do not use this product in hazardous locations and/or environments with potentially explosive gases.

3. The product is DC - powered sensor. Do not use AC power. Otherwise, the product will explode or catch fire.

4. Do not wire the amplifier along the power line or high voltage cable. Otherwise, the sensor will fail or be damaged due to noise.

5. When using commercial switching regulators, Be sure to ground the frame grounding terminal and the grounding terminal.

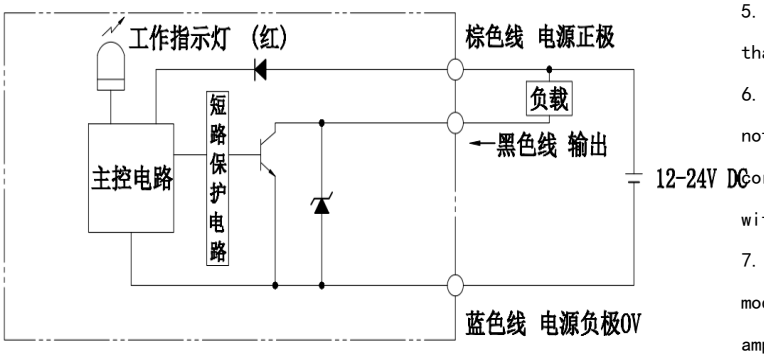
6. Do not use it outdoors or where external light can enter the light receiving surface directly.

Technical specifications:

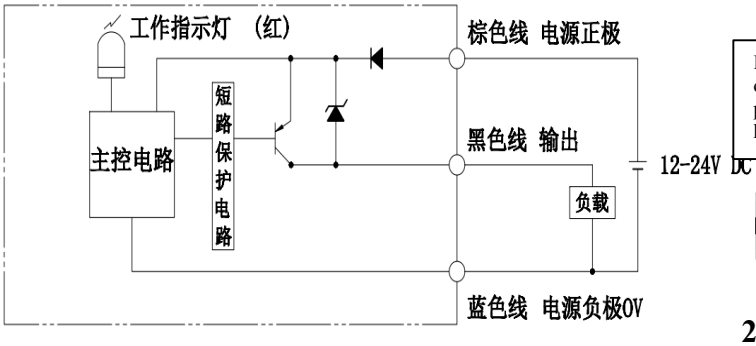
Type	ER2-22N	ER2-22P
Type	NPN output	PNP output
Power supply voltage	12-24 VDC±10%, below floating P-P 10%	
Current consumption	mA less than 40	
Light source	Red ,4-element luminescent diode	
Testing mode	Diffuse reflection, ejection (determined by fiber type)	
Detection distance	P-1 diffuse reflection 200 mm, vs 700 mm P-2 diffuse reflection 280 mm,1200 mm	
Detection output	NPN collector open circuit output, maximum input current 100 mA, external maximum voltage 30 VDC, residual voltage less than 1 V	PNP collector open circuit output, maximum input current 100 mA, external maximum voltage 30 VDC, residual voltage less than 2 V
Output status	(D/L)5S for open/open switching	
Delay function	No delay / single output delay / pull high delay / pull low delay, four output modes are optional. Three time delays adjustable :1 ms to 9999	
Response time	P--1: less than 100 uS P--2: less than 200 uS	
LED display	red output indicator, threshold display (4 bits green LED), current value display (4 bits red LED)	
Protection circuit	Power supply polarity reverse protection; output short circuit or overload protection	
Working environment brightness	Incandescent: maximum :20,000 lux, daylight: maximum :30,000 lux	
Vibration Resistance	Double amplitude Hz,10 to 55:1.5 mm,X,Y,Z axis 2 hours	
Ambient temperature	-°C25 to +55, no freeze	

Output Circuit:

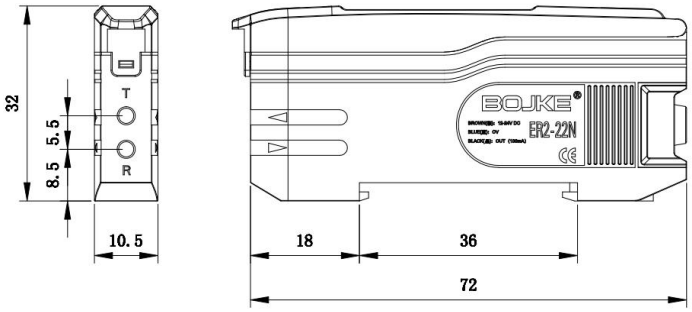
ER2-22N NPN model



ER2-22P PNP model

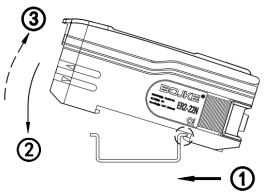


Dimensions :(mm)



Correct installation method:

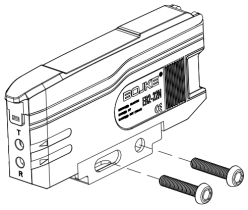
mounted on DIN track



1. Align the card slot at the bottom of the main engine with the track. Push the main engine in the direction of arrow 1 and tilt it in the direction of arrow 2.

2. The way to remove the sensor is, Moving in the direction of the arrow 1 to promote the host at the same time, towards the direction of the arrow 3 host to ascend.

Mounted to wall (for main module only)



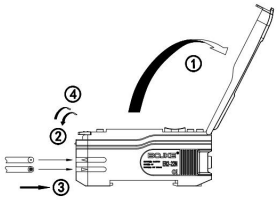
Place the modules on the optional mounting rack, install them together, and secure them with two M3 screws.

Connect optical fiber module

1. Open the dust cover in the direction shown by arrow 1.

2. According to the direction of the arrow 2 down fiber lock bar.

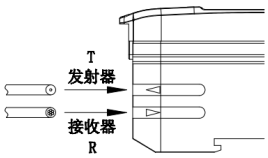
3. Insert the length of the fiber optic module mark marked optical fiber.



4. Move the fiber lock rod down in the direction shown by arrow 4.

5. If you use a thinner fiber optic module, you need to use the adapter that comes with it.

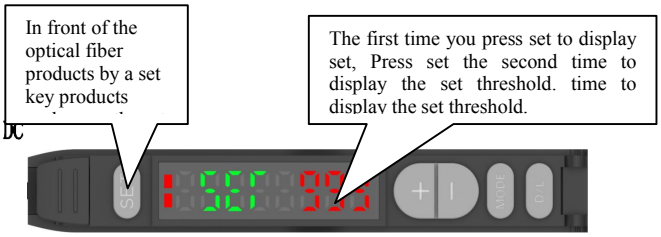
6. If the correct adapter is not connected, the thin fiber module will not be able to detect the target correctly. (Adapters are provided with fiber optic modules.)



7. If the coaxial reflective fiber module is connected to the amplifier, the single-core fiber should be connected to the transmitter side, and the multi-core fiber should be connected to the receiver side.

Product Function Setting

1. Quick threshold setting:

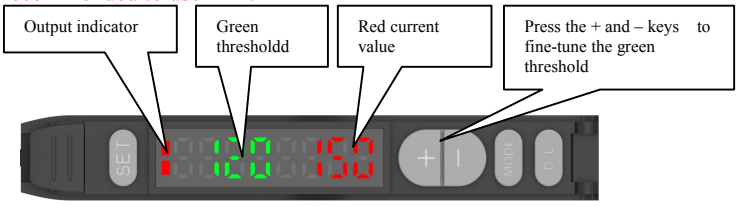


2. Manually adjust the threshold:

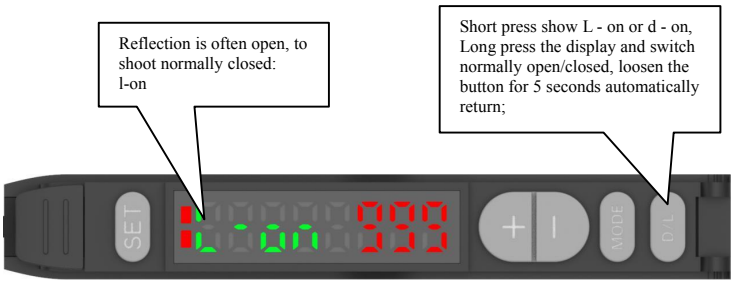
After the threshold is quickly set, you can manually press the + and - keys to fine-tune the green threshold. **The principle of threshold fine-tuning is:** No red value of product exposure < green setting value < red value of product exposure;

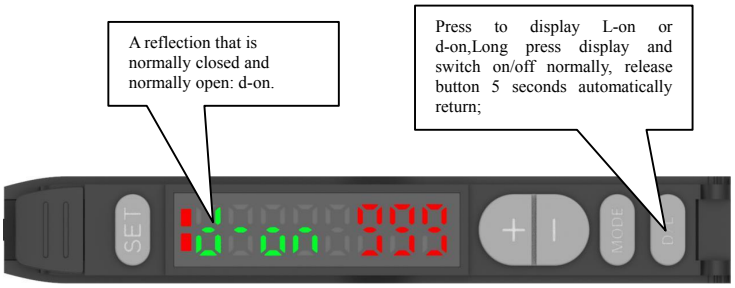
It is recommended that the red value of the product be more than 20 larger than the green threshold;

Note: When the red value is less than 100 in P--1 mode, it is recommended to use P--2.



3. Normally open/closed switch:

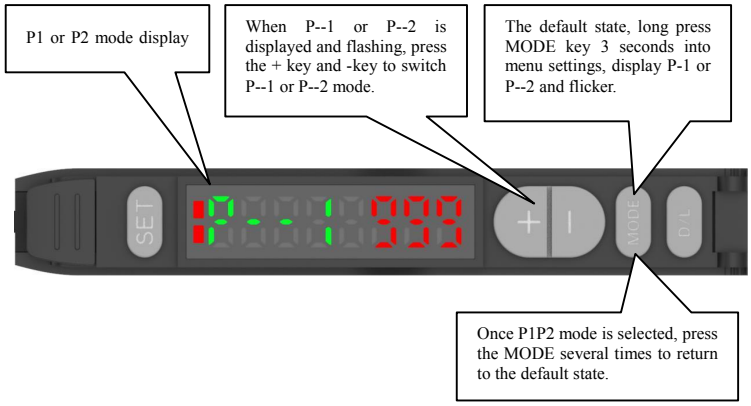




4. P1P2 mode:

P--1：The biggest test show 4095　Suggest have a difference of more than 50 products red value;

P--2：The biggest test show 9999　Suggest have a difference of more than 80 products red value;



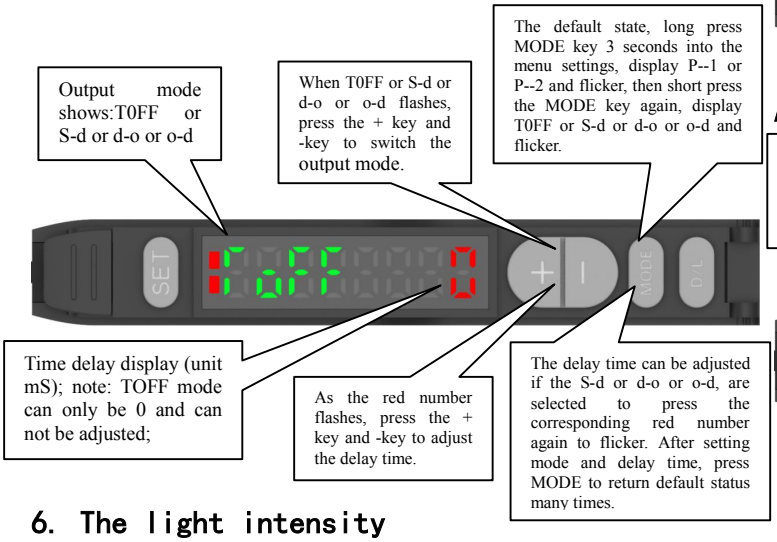
5.Output mode:

TOFF (close delay) : Product without any delay, normal output;

S-D(one-time output): After induction, regardless of the detection time, only output a set delay time width signal;

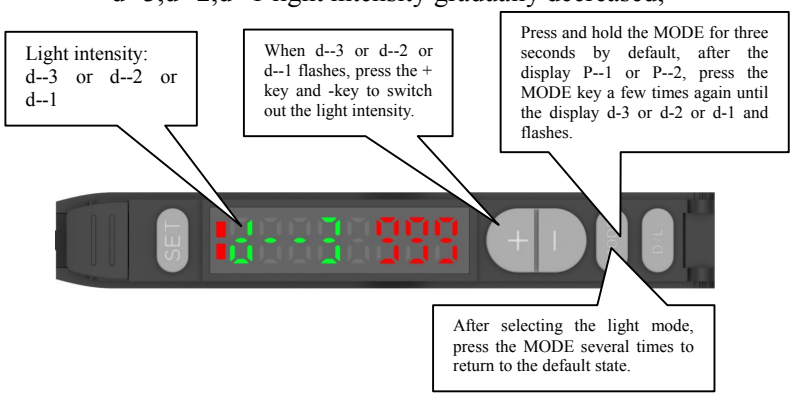
d-o(pull-up delay): Delay output, product induction, delay to the set time before output, after the product left off output; (no output if the induction time is less than the set delay time)

o-d(pull-down delay): Output delay, output the set delay time width signal after the product induction leaves;



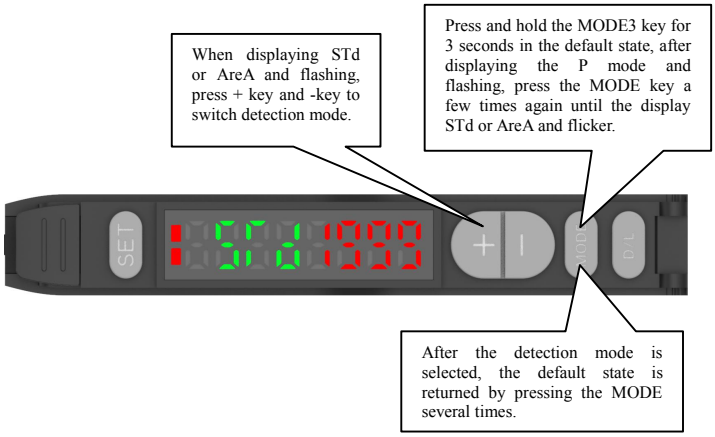
6. The light intensity

d--3,d--2,d--1 light intensity gradually decreased;

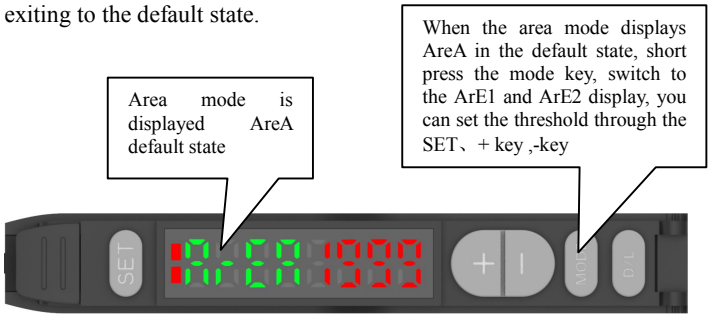


7. Detection mode:

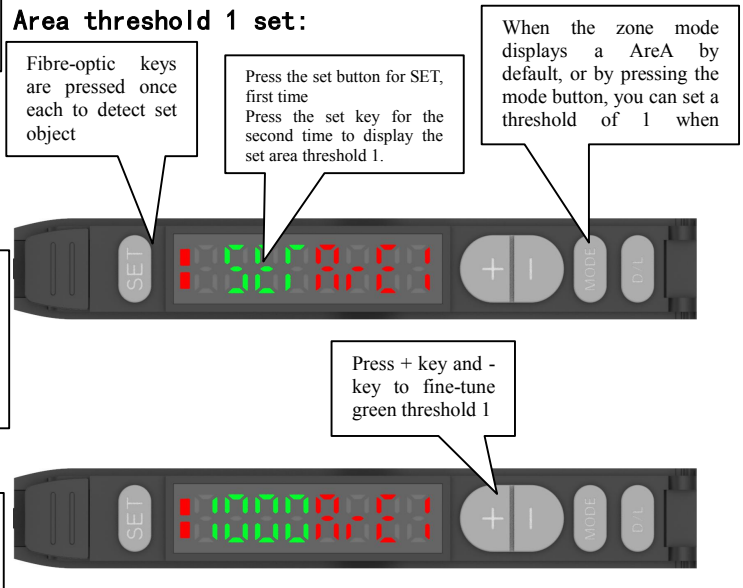
Detection mode	Mod Description
STd	Normal mode
AreA	Regional detection pattern



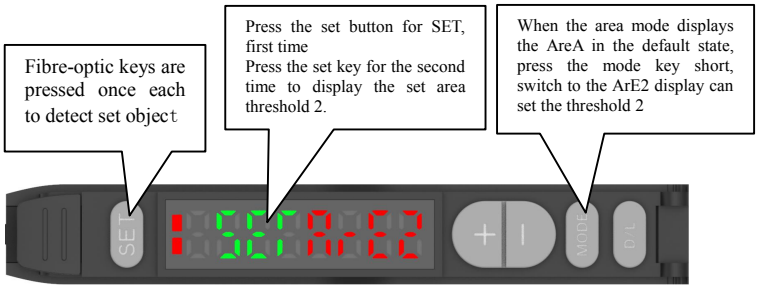
If AreA is selected in detection mode, it will be displayed when exiting to the default state.

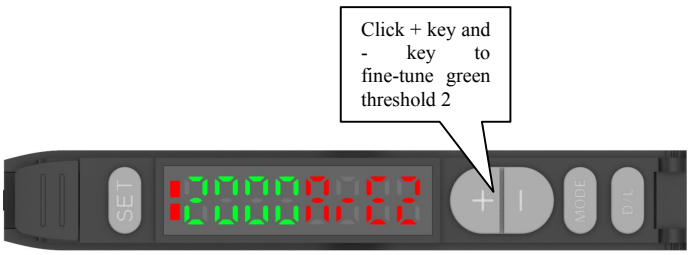


Area threshold 1 set:



Area threshold 2 set:

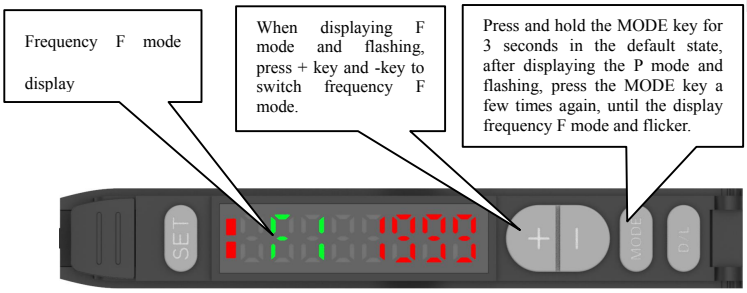




Note: the threshold value 1 and 2 are no matter high or low, the product will automatically identify the high threshold value and the low threshold value; There is a step difference between threshold 1 and 2. When threshold 1 and threshold 2 are too close to each other, the product automatically widens the value difference between threshold 1 and threshold 2.

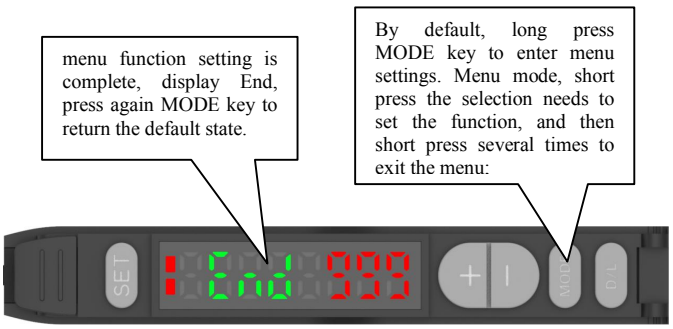
8. Detection frequency selection:

When multiple products are detected near each other, different frequencies can be selected to stagger and interfere with each other. Four operating frequencies are available: F1, F2, F3 and F4



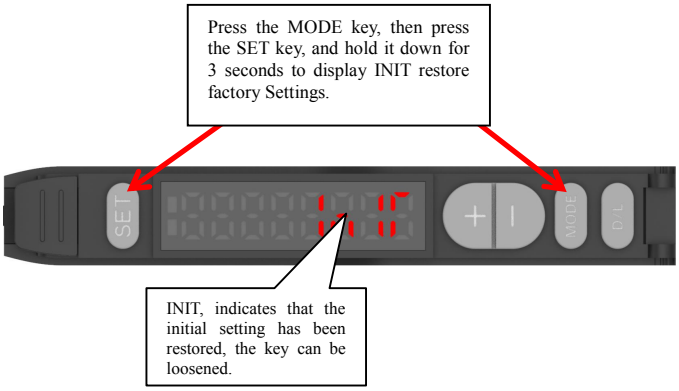
9. Return to default:

In any menu mode, no action for 30 seconds automatically returns the default state.

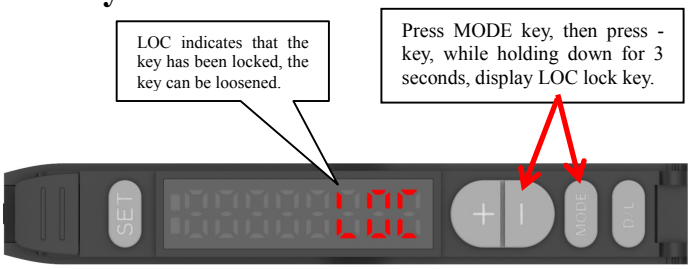


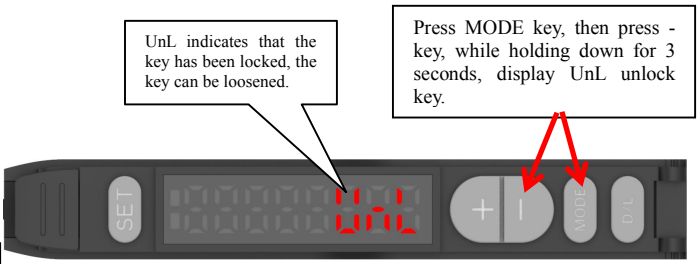
10. Restore factory Settings:

P mode: P--1 mode;
Output: TOFF didn't delay, normal output;
The light intensity: d - 3 the strongest light;
Detection mode: normal mode
Working frequency: F1
Normally open/closed, normally open (L - on);

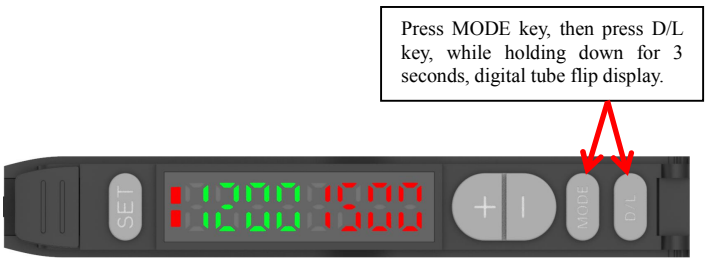


11. Key lock and unlock:





12. Flip display of digital tube:



After the inversion, it is as follows:

Product warranty

When ordering the company's products with reference to the product samples, the following warranty contents, disclaimers and applicable conditions shall be applicable when there is no special description in the quotation sheet, contract, specification, etc.

Please be sure to place your order after confirming the following.

1. Shelf life

The shelf life is one year from the date the product is delivered to the place specified by the buyer.

2. Ensure that the scope of

In the event of a breakdown of the goods purchased due to our liability during the above warranty period, we are responsible for repairing the products free of charge.

However, if the fault is caused by the following reasons, it is not within the scope of the guarantee object:

Failure caused by use outside the conditions, environment and methods of use described in our product specification

1) failure caused by using the product under conditions other than the conditions, environment and usage described in the company's product specifications

2) faults not caused by the company

3) Faults caused by alterations and repairs not made by the company

4) The usage other than that described by the company is carried out

5) After the goods are shipped, due to unforeseen scientific level may cause problems

6) Other failures caused by natural disasters, disasters and other factors not the responsibility of the company.

At the same time, the above warranty only refers to the company's products themselves, and the damage caused by the failure of the company's products is excluded from the warranty object.

3. Liability is limited

1) The company shall not be liable for any special losses, indirect losses or other related losses (equipment damage, loss of opportunity, loss of profit) caused by the products of the company.

2) When using programmable equipment, the company shall not be liable for any programming performed by a person other than the company or any consequences arising therefrom.

4. Suitable for use and conditions

1) The company's products are designed and produced for the general industry, therefore, our company's products shall not be used for the following applications and are not suitable for their use. If it is needed for the following occasions, please discuss with the sales personnel of the company to confirm the product specifications and select the product with certain leeway in rated · performance. Meanwhile, various safety countermeasures should be considered to minimize the risk of failure to the safety circuit.

a. Facilities that have a serious impact on life and property, such as atomic energy control equipment, incineration equipment, railway, aviation and vehicle equipment, medical equipment, recreational equipment, safety equipment and equipment that must comply with the special regulations of administrative agencies and individual industries.

b. Public utilities such as gas, water, electricity supply system, 24 - hour continuous operation system and other equipment requiring high reliability.

c. May endanger the personal property of systems, equipment and devices.

d. Outdoor use under similar or similar conditions.

2) When users use the company's products for occasions closely related to the safety of life and property, the danger of the system as a whole should be clearly defined. To ensure the safety, special redundancy design should be adopted. At the same time, according to the applicable purpose of the company's products in the system, supporting power distribution and setting should be achieved.

3) Please be sure to comply with all precautions and prohibitions to avoid improper use and damage caused by a third party.

5. Service scope

The company's product price does not include the dispatch of technical personnel and other service fees, if there is a demand for this, you can contact to negotiate.