

**Product Name:** Safety Light Curtain / Safety Light Grid

**Model No.:** NiC04-200-600J2L 015

**Products items inclu. :**

NC04/200-600 2BD 015, 1 set

NiC-01 H=1000mm, 2 pcs

NiC-02 H=1000mm, 1 pc

QSRN, 1 pc

QA5406, 2 pcs

**Packing List:**

NC04/200-600 2BD 015 Receiver, 1 pc

NC04/200-600 2BD 015 Transmitter, 1 pc

NiC-01 H=1000mm Floor stands H=1000mm, 2 pcs

M8 Screws, 8 pcs

NiC-02 H=1000mm, Mirror device H=1000mm, 1 pc

M8 Screws, 4 pcs

QSRN Safety relay, 1 pc

QA5406 6mts data line, 2 pcs

### NC04/200-600 2BB 006

Technical parameter:

Beam number: 4

Beam pitch: 200mm

Protection height: 600mm

Scanning range: 30-15000mm

Voltage: DC12-24V

Output: 2 Output **PNP NC** and **PNP NC**.



### Accessories

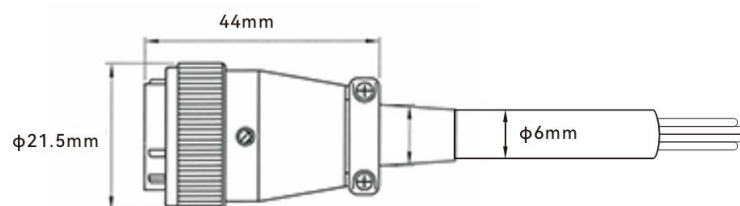
Plug connectors and cables

#### Male connector M16, 7-pin

- a. Insertion mode: threaded link
- b. Shell material: aluminum alloy (chrome plated)
- c. Insulator: thermoplastic PPS, high temperature resistance 260 °C
- d. Contact material: copper (gold plated)
- e. Patch times: 500
- f. Temperature range: - 40 °C ~ +85 °C
- g. Rated current(A):5
- h. Working voltage (AC. V):400
- i. Withstand voltage (AC. V)1200
- k. Wire gauge  $\leq 4/11$
- i: insulation resistance(M $\Omega$ ): 2000



#### Plug connectors Scale drawing



## 1. Application

- A. Light curtain can achieve full protection for the slider can be stopped at any position on the press machine.
- B. The light curtain can only achieve upper dead point protection if the slider can not be stopped at any position on the press machine
- C. Realize the regional protection for the industry manipulator, injection molding machines, packaging equipment, automation equipment, assembly wires and other dangerous work area.
- D. Used to detect and alarm object.

## 2. Requirements for working environment

- A. Resistance to environmental light: incandescent light: light receiving surface illumination 3000LX; sun light: light receiving surface illumination 10000LX
- B. Environmental temperature: Working state -10 ~ +40 °C ( but not freezing), Save state -25 ~ +55 °C
- C. Humidity: Working state: 35-85%RH, save state: 35-95%RH

## 3. Working status (including LED indicator lights, etc)

- A. When the power supply is switched on, the red light will flash if the receiver and the transmitter is misaligned.
- B. When the power supply is switched on, red light on receiver will be changed to green if the receiver and the transmitter can be aligned, while **Black wire or Brown wire** (indicate NC) input and output the same voltage (i.e., if the input voltage is 12V or 24V, then the output voltage is 12V or 24V) .
- C. If there is any object block the light curtain, the receiver will change from green to red, in the meantime **Black wire or Brown wire** wire will be disconnected (No output)

## 4. Product configuration:

One piece receiver, One piece transmitter, two pieces 6mts data lines, four pieces mesa nut

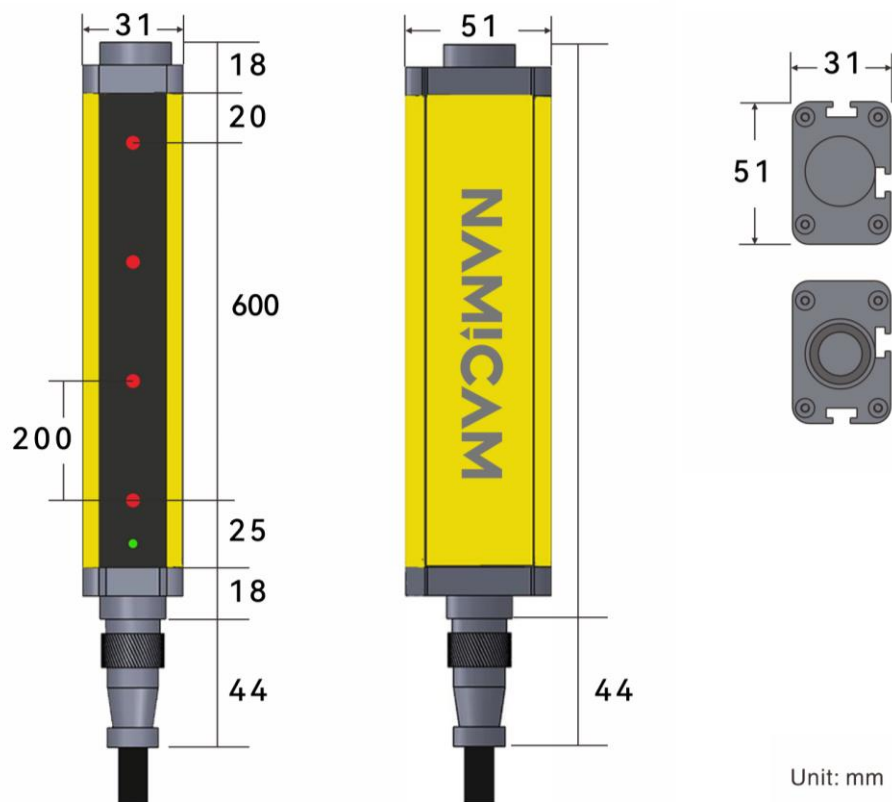
## 5. Connection Wire

- A. Transmitter:
  - Brown( wire 1) connect +24V
  - Blue( wire2) connect 0V
  - Black( wire 3), connect CP Synchronous wire
  - Red( wire 5), connect CE Synchronous wire
  - White( wire 4), connect PNP NC
  - Green( wire 6), connect PNP NC
  - Yellow and green ( wire 7) stripes grounding wire
- B. Receiver
  - Brown( wire 1) connect +24V
  - Blue( wire2) connect 0V
  - Black( wire 3), connect CP Synchronous wire
  - Red( wire 5), connect CE Synchronous wire
  - White( wire 4), connect PNP NC
  - Green( wire 6), connect PNP NC
  - Yellow and green ( wire 7) stripes grounding wire

**6. Installation way**

- A Installation method: If the transmitter and receiver are directly installed on the floor bracket through convex nuts, they are usually suitable for large machine area protection, which can protect one side, two sides, three sides and four sides.
- B. When drilling and tapping, select the correct installation position according to the common convex nuts. When drilling and positioning, pay attention to the transmitter and receiver to ensure that they are parallel to each other.
- C The transmitter and receiver are installed in the same way. They are respectively fixed with the back of the floor bracket skeleton through convex nuts and screws, with the socket end of the connector or the transmission line end facing downward.
- D Secure the transmitter and receiver parallel to each other and tighten the screws. The distance is then adjusted by parallel alignment of the reflector device

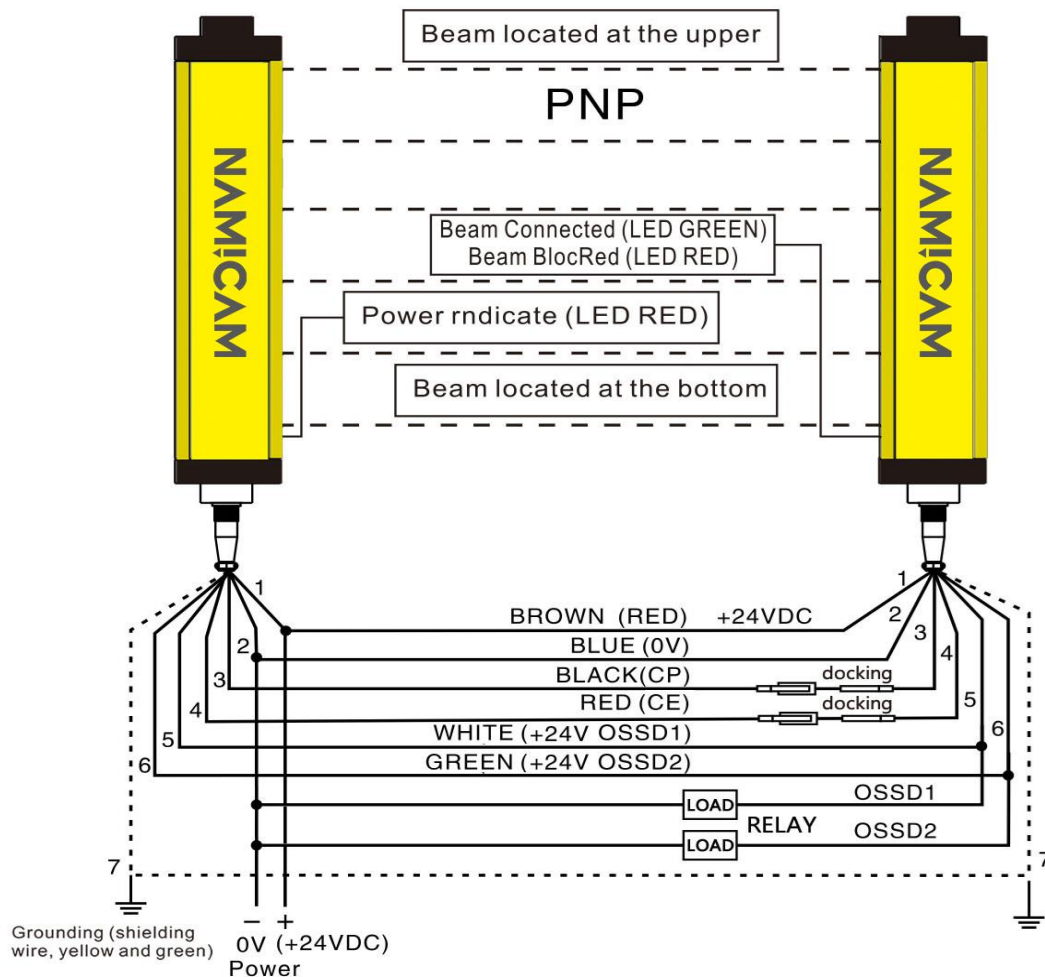
**7.Scale drawing.**



Height of detection: 600mm  
Optical axis number:4

Total length of light screen: 681mm  
Optical axis spacing:200mm

8. Wiring diagram



The photo is for PNP double output  
 seven wires connection.

**NiC-01 (Floor stand, H=1000mm)**

**NiC-02 (Reflector/Mirror device, H=1000mm)**

**Technical parameter**

Material: aluminum alloy

Thickness:2mm

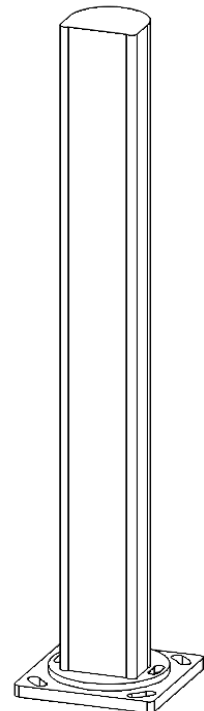
Square and round base materials: iron

Thickness:8mm and 6mm

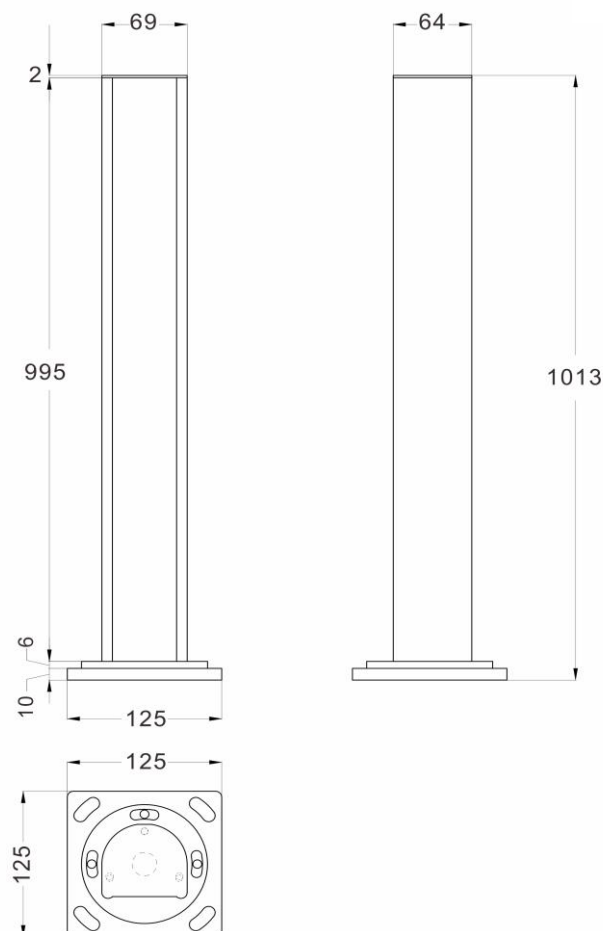
Top material: iron

Thickness :2mm

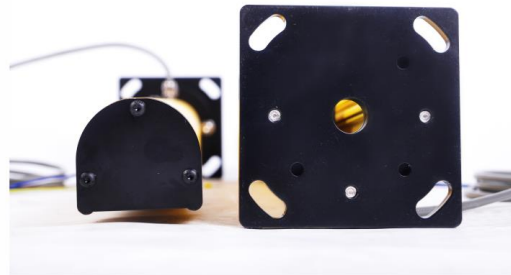
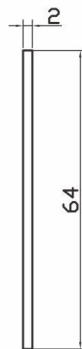
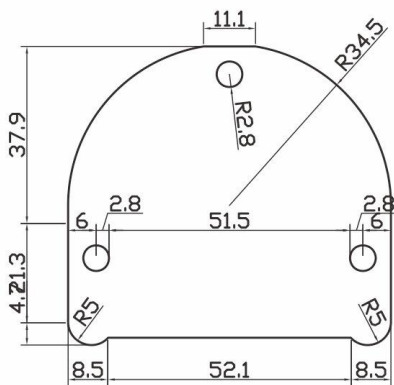
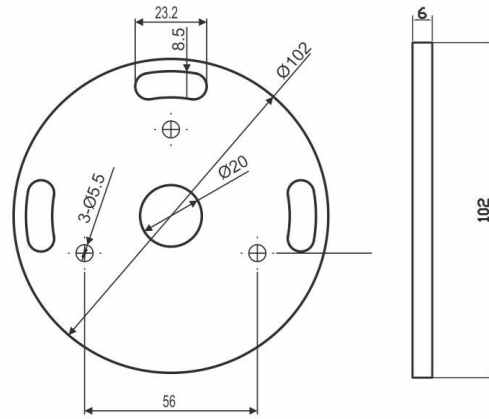
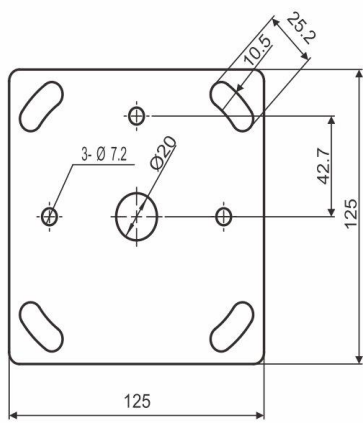
Mirror size: 992 x57 x4mm



**b Scale drawing of floor stand**



c. Dimension drawing of base and top



## Safety relay Module QSRN series

The QSRN safety relay module meets the safety requirements of EN/ISO13849-1Cat.4 and is suitable for monitoring various signals in industrial sites with high safety requirements – including emergency stop signals, safety door switch signals, safety light barrier signals, and safety light curtain signals. Outside the two-hand button signal.



### 1.Features

- Forced guidance of the relay contacts makes monitoring more efficient and safer.
- QSRN has a smaller external size and is pluggable for easy installation.
- QSRN has 3 normally open, 1 normally closed, a total of 4 sets of control output signals, and the control ability is stronger.
- QSRN - Two-way transistor signal monitoring

Monitor two transistor signals - power off switch, safety light barrier, etc.

With the peripheral circuit, the monitoring of the two normally closed switch signals can also be realized.

Full loop self-test, lock when the two signals are inconsistent.

It has a wider applicability to the residual voltage of the grating signal, and it can work stably when the residual voltage is greater than 10V.

It can monitor NPN signal and PNP signal, and has stronger adaptability.

Automatic, manual reset is adjustable. In the manual reset mode, the reset button can be detected,

a single reset is forced, and the next reset operation can be performed after the reset button is turned off.

### 2.Function

QSRN--Two-way normally closed switch monitoring

Monitor two normally closed switch signals - emergency stop button, safety door switch, etc.

Monitor the short circuit between the two signals.

Short circuit to any single switch, open circuit monitoring, lock when the switch is inconsistent.

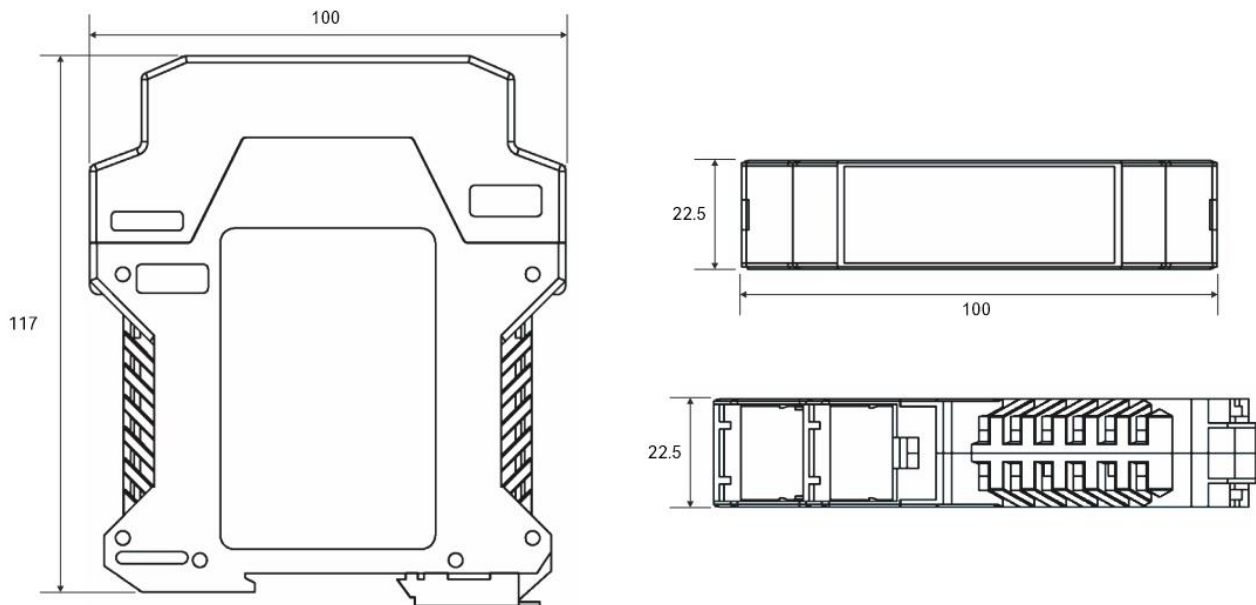
Automatic, manual reset is adjustable. In the manual reset mode, the reset button can be detected, a single reset is forced, and the reset button must be turned off before the next reset operation.



### 3 Technical parameter

Product model	<b>QSRN</b>
Power supply	
Supply voltage	24V DC
Voltage deviation	+10%/-20%
Power consumption	2.9 W
Output	
Safety relay output	3NO+1NC
Transistor signal output	<500mA 24V DC
Relay contact capacity	
AC-1	6A/250V AC/1500VA
AC-15	4A/240V AC
DG-1	6A/24V DC/150W
DG-13	4A/24V DC
Maximum switching capacity	12A (Assigned to all safety output contacts)
Contact resistance	<100mΩ
Minimum load	10mA/5V
Contact material	AgSnO <sub>2</sub> +0.2μmAu
General parameters	
Output fuse (external)	5A gL/gG
Release response time	<30ms (from input to output)
Input component tail detection resistance (contact/carpet)	1kΩ~10kΩ
Electrical endurance	80000 times
Pollution grade	2
Ambient operating temperature	-25°C ~ 85°C
Ambient operating humidity	35%-85% (Unforzen or condensation)
Impulse withstand voltage	2.5kV
IP Grade	Housing IP30, terminal IP20, it is recommended to install in IP54 cabinet body or housing
Storage temperature	-40°C ~ 105°C
Housing material	Flame resistance PA66
Dimension	117mm*100mm*22.5mm

**2. Dimension drawing**



**5. Wiring diagram**

