

NAKe Series Non-contact Level Switch Installation Instruction  
SHANGHAI HUIBO AUTOMATIC GAUGE CO., LTD

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## **NAKe series Non-contact Level switch**

### **Installation Instruction**

**SHANGHAI HUIBO AUTOMATIC GAUGE CO., LTD**

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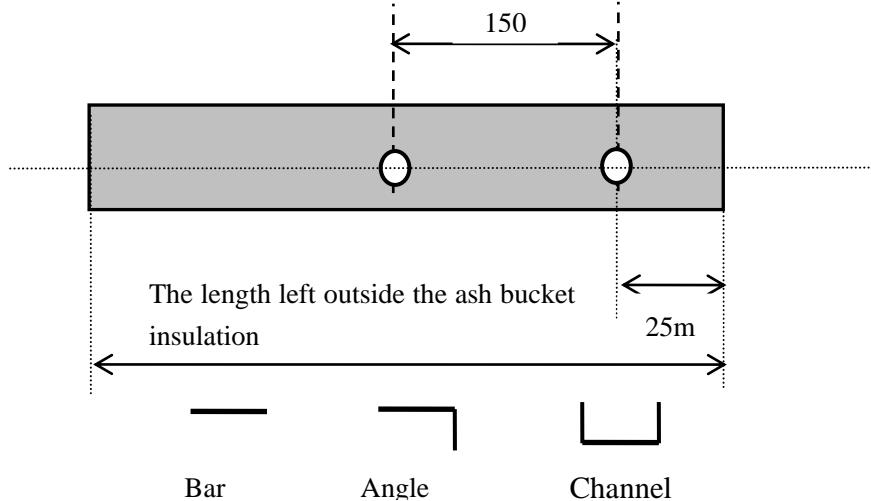
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## I. Preparation

1. #50 Angle Iron is most commonly used as Support of NAKe series Non-contact Level Switch. #50 Bar Iron and Channel Iron are also used by many users.
2. The length and opening size of the iron are shown below:



## II. Welding position on the containers

### 1. Principle of choice the position:

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- ①、 Alarm level of Ash level in the container
- ②、 Installation and maintenance convenience
- ③、 Those with heating panels should avoid them.
- ④、 Those with vibrators should avoid them

**2. Common installation locations:**

- ①、 Ash hopper, economizer ash hopper, ash storehouse to the user  
request the location of the alarm level;
- ②、 The installation position of ash pump:  
High alarm should be installed in the alarm point below 30-50 cm;  
Low alarm should be installed above the alarm point 30-50 cm.
- ③、 Installation position of coal cinder tank:  
High alarm is installed at 100-200 cm below the alarm point;  
Low alarm installed above alarm point 100-200 cm.
- ④、 Installation position of coal bunker:  
High alarm installed in the alarm point below 200-300 cm;  
Low alarm installed above alarm point 200-300 cm.

**III.Mounting of support and level gauge**

**1. Support mounting**

- ①、 Angle iron welding:

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The angle iron is horizontally welded on the outer wall of the container. Angle iron should passes through the insulating layer, if there is. Or, put on the insulation after angle iron is welded. Of cause, the angle iron could be welded on any other fixed position near the container if can make sure the Level Switch forward the container and the distance between the Level Switch and the container is less than 5cm.

Note: Make sure the Level Switch is installed outside of the insulation.

**②、Mounting Clamp Rings:**

Using 2 sets nut, spring shim and gasket fasten each clamp ring on the welded angle iron.

***Note: Using only 1 set nut, spring shim and gasket fasten the clamp will damage the clamp.***

**2. Installation of Level Switch**

- ①、Take out the Level Switch and accessories from pakage. The accessories include: Two clamp rings with six sets of nut, spring shim and gasket, one waterproof cable lock, one antenna, and 2 screws
- ②、Record the Level Switch's ID and the container number before installation. The Level Switch's ID is the lastt 4 digits of the certificate number which is cured on module panel.

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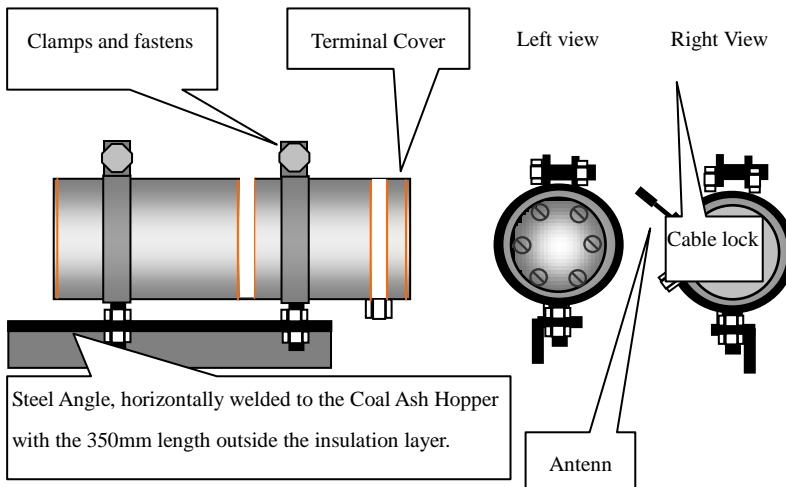
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③、Open the terminal Cover(with glass window). Screw up the Antenna and connect the Antenna from inside the terminal Cover.

③、Put the Level Switch into the clamp rings, with the terminals end facing out, the front end (stainless steel) pointing at the container, the distance 30-50mm from the insulation layer to the front end, and the waterproof cable lock downward.

④、Fasten the Level Switch and the clamp rings.

④、Wiring the Level Switch, and put on the terminal cover.



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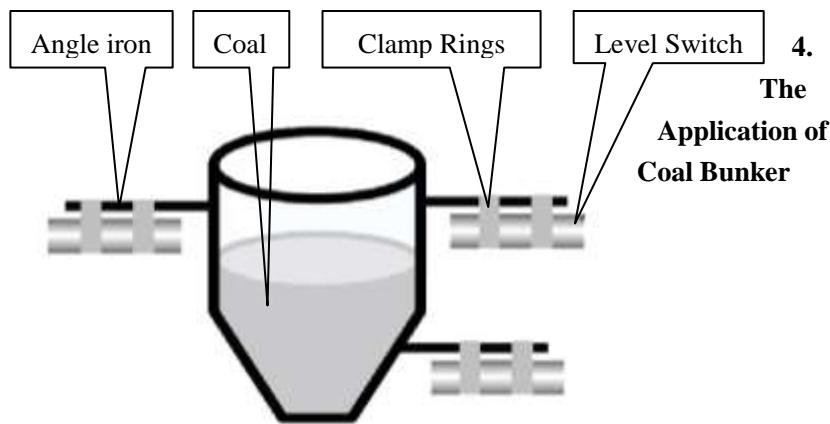
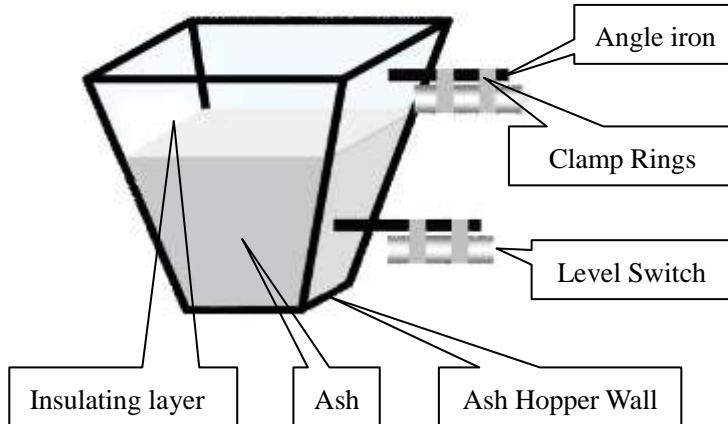
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### 3. Application of ash hopper



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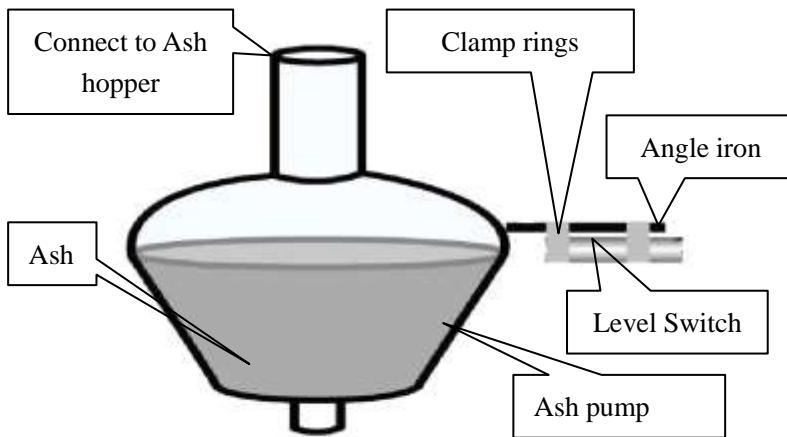
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Coal bunker wall

## 5. Application of coal ash pump



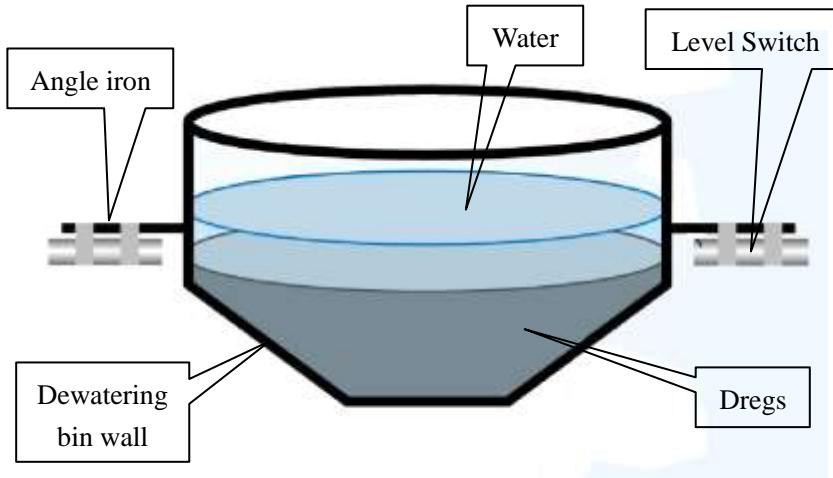
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**6. Application of alarm cinder level under the water**



## IV. Level Switch Wiring

### 1. Preparation of wiring:

①、 Rotate the Terminal Cover of the Level Switch counterclockwise, while holding the cable lock.

②、 Unplug the power cable's sheath about 50mm, Strip each core wire and exposes the copper core about the 10mm.

Unplug the signal cable's sheath about 50mm, Strip each core wire and exposes the copper core about the 10mm.

③、 Pass the cables through the cable lock, and label each core wire.

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③、Tighten the cable lock to ensure that the seal is tight. If the seal is not strong enough, apply waterproof self-adhesive tape to wrap tightly

## 2. Wiring

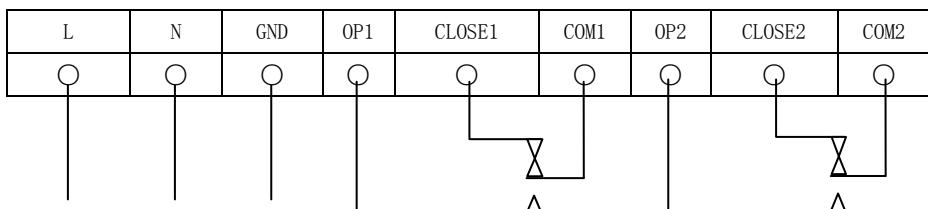
Terminals are screw free.

Single core copper wire can be inserted directly. Multi-core soft copper wire should be welded together before inserted.

Press the orange block on the terminals with a flat screwdriver, insert the core wire completely into the terminal hole, then release the orange block.

So connect each core wires.

### Switch connection terminal diagram:



Power Supply

Ground

K1

K2

### 3. Put the Terminal Cover, rotate it clockwise tightly.

***Note: cable lock and terminal cover should be tightened to***

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***prevent dust and moisture affected the life of the level switch.***

## FCC Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help important announcement

## Radiation Exposure Statement

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

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