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Instructions for Material flow detector  
ZAXLL-B V1.2



Zax Technology Co., Ltd

# 1. Overviews

Material flow detector is a device to detect whether there is material in belt conveyor. Connect the cable to the main control room, and the staff can observe the material feeding status through the indicator light. This product can also be used together with automatic sprinkler to realize the function of automatic sprinkling when there is material. Staff can take corresponding measures according to different situations of conveyor operation.

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## 2. Characteristic

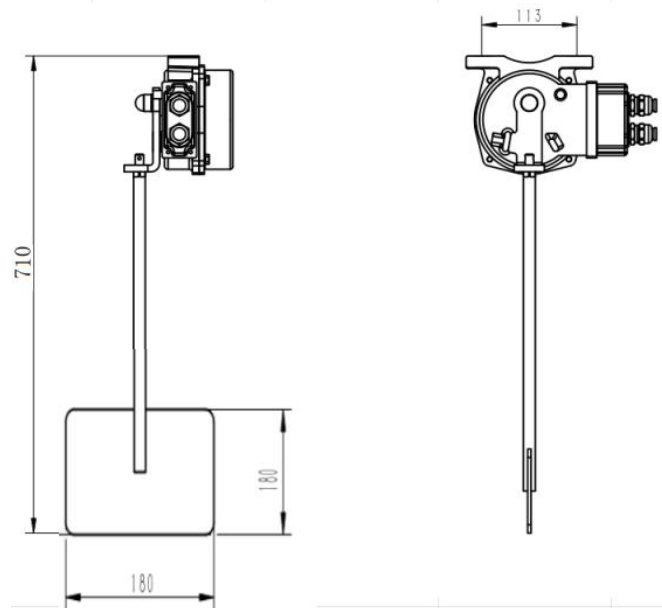
- 2.1. Adopt high-strength A-alloy precise die-casting shell, with strong impact resistant capability.
  - 2.2. The shell has high protection level, good sealing, and can be used in harsh environment.
  - 2.3. Large contact capacity, sensitive action and reliable performance.
  - 2.4. With waterproof wiring cavity, wiring is convenient.
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## 3. Parameter table

Ambient temperature	-20°C~50°C
Relative humidity	0~95%
Atmospheric pressure	80 kPa ~110kPa
Output mode and quantity	2×SPDT
Contact rating	AC380V 5A DC24V 5A
Initial position	The contact plate is perpendicular to the conveyor belt surface )
Action angle	15°±2°
Limit angle	75°
Reset mode	Automatic
Protection level	IP65
Applicable cable diameter	6 ~ 10mm

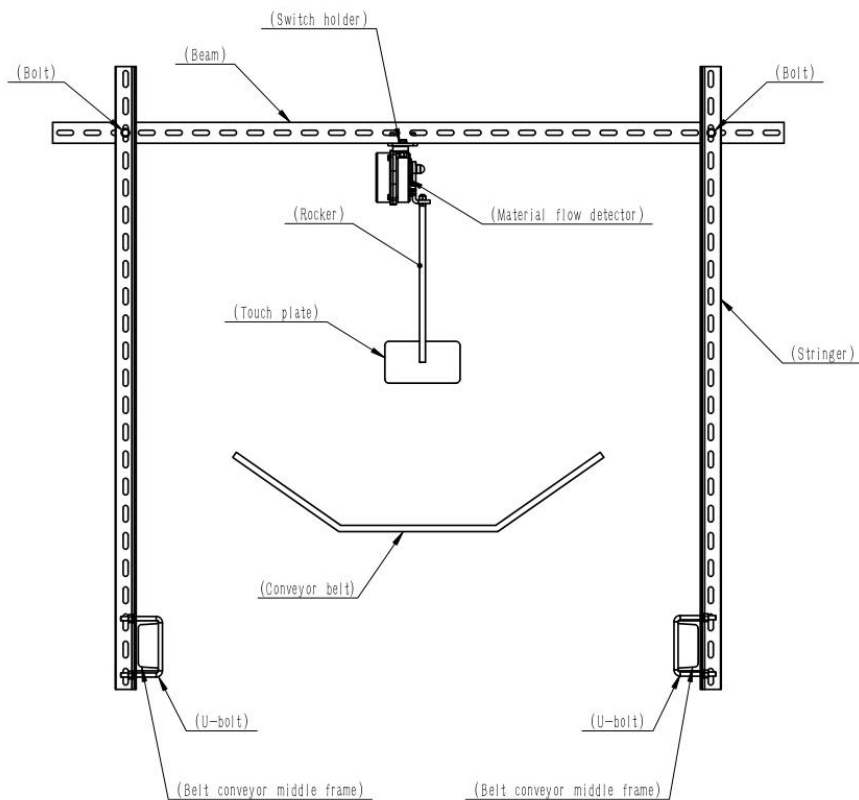
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## 4. Structure features and main dimensions



Appearance size chart ( Units: mm )

## 5. Installation indication



Installation indication diagram

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## 6. Installation instructions

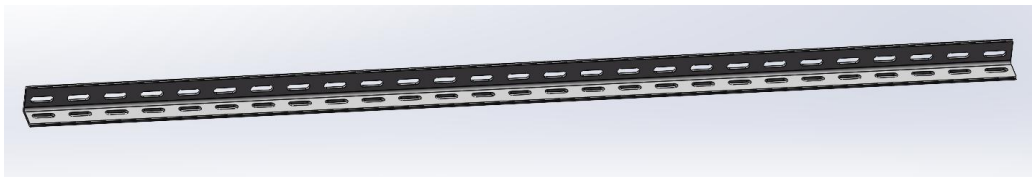
### 6.1. WARNING :

6.1.1. Do not live operation.

6.1.2. This product is non explosion proof products, please do not use in inflammable and explosive environment.

### 6.2. Prepare materials :

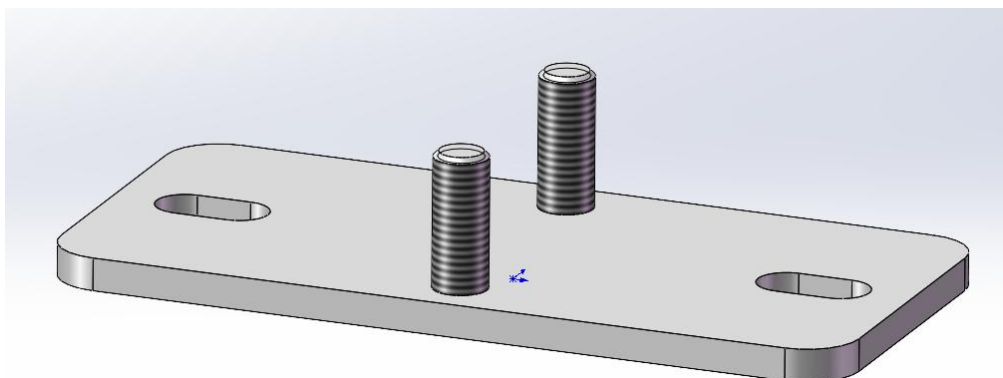
6.2.1. Stringer



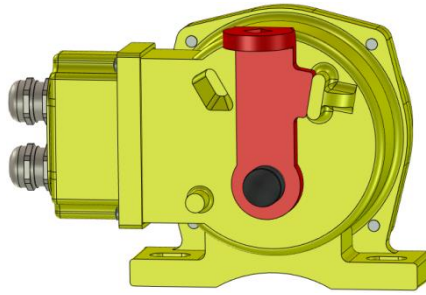
6.2.2. Beam



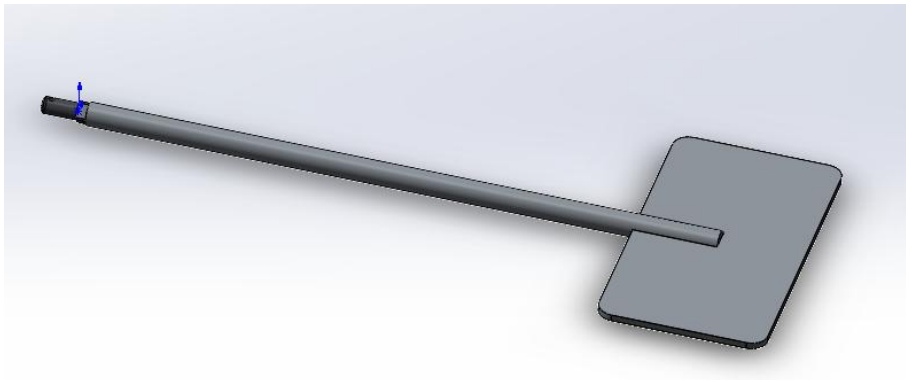
6.2.3. Switch holder



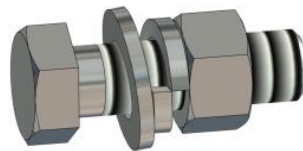
6.2.4. Material flow detector



### 6.2.5. Contact plate



### 6.2.6. Fastener

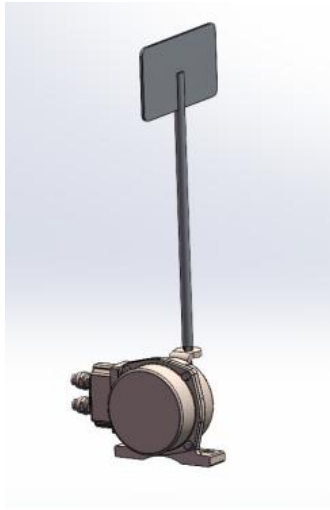


### 6.2.7. U-bolt



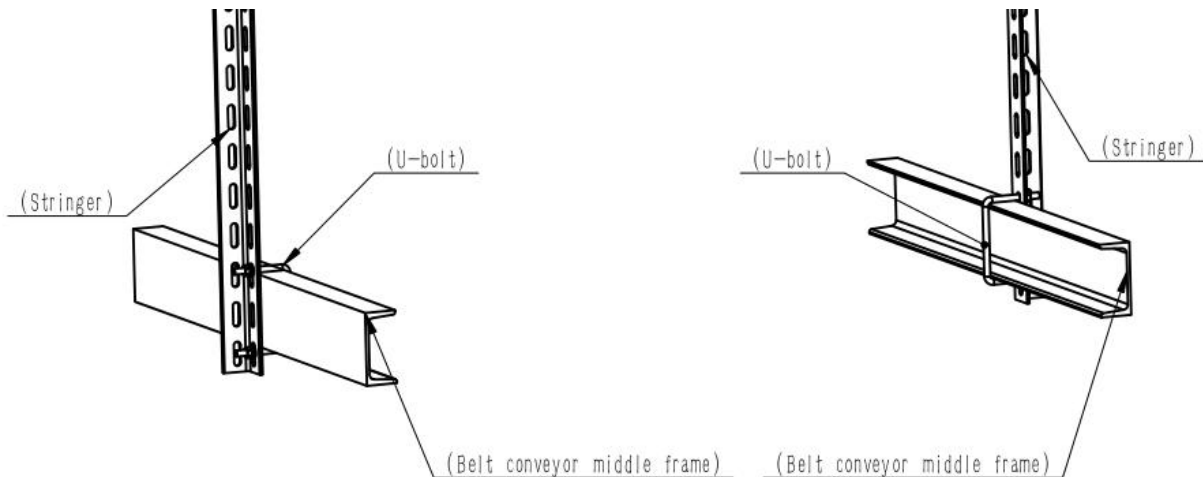
## 6.3.: Installation steps

6.3.1. Assemble the material flow detector as shown in the figure.

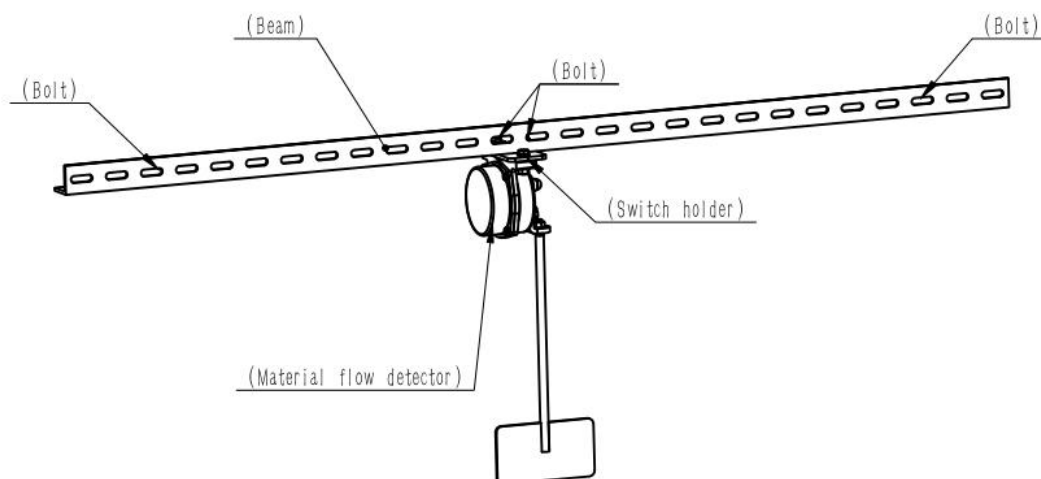


6.3.2. Users shall choose different installation positions according to different uses. It should be installed near the chute outlet of belt conveyor when it is used to detect the instantaneous state of material. As a worker safety protection device, it should be installed in the middle or back of the belt conveyor.

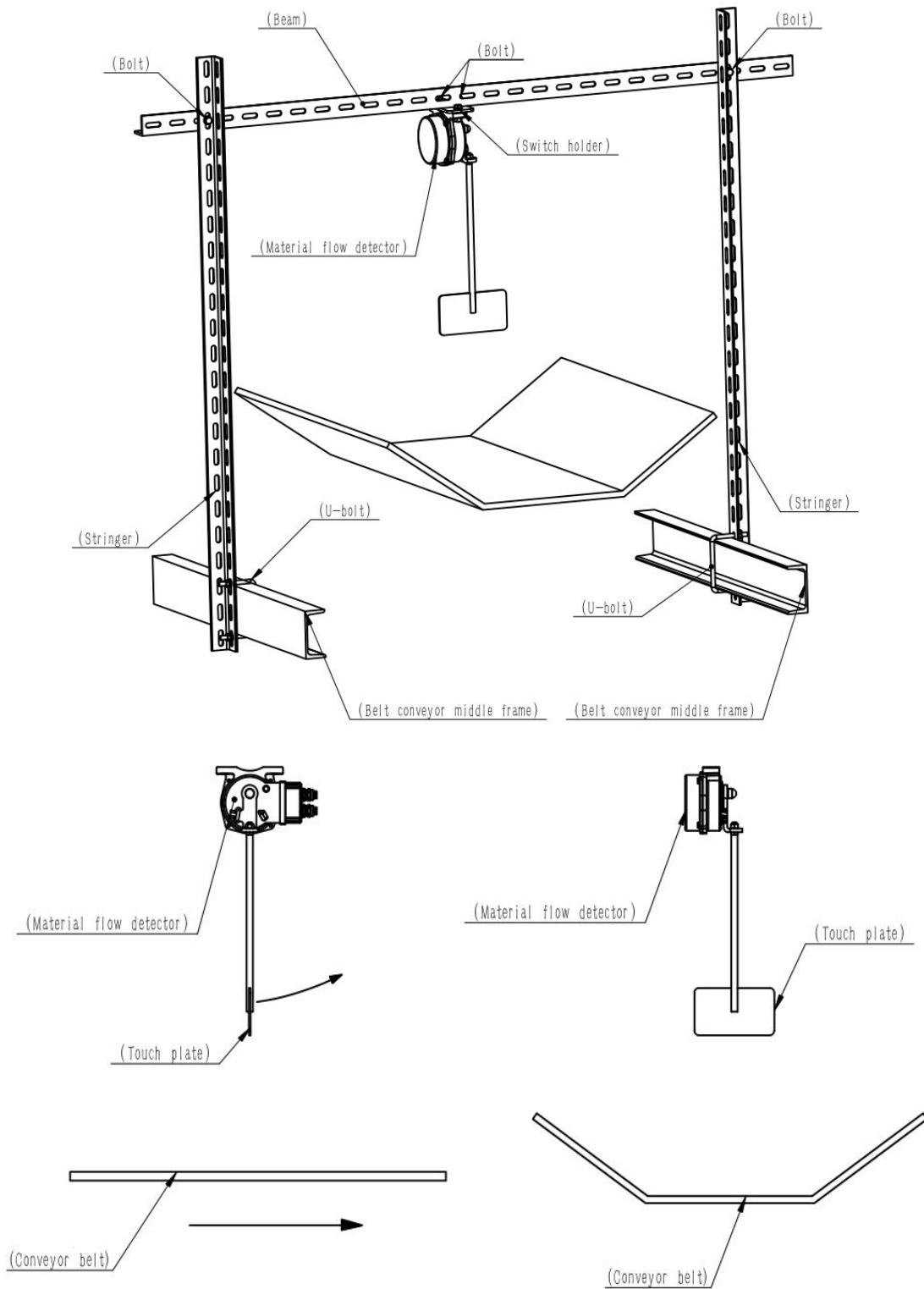
6.3.3. After determining the installation position, fix the longitudinal beams on both sides with U-bolts on the middle frame of the belt conveyor according to the installation diagram.

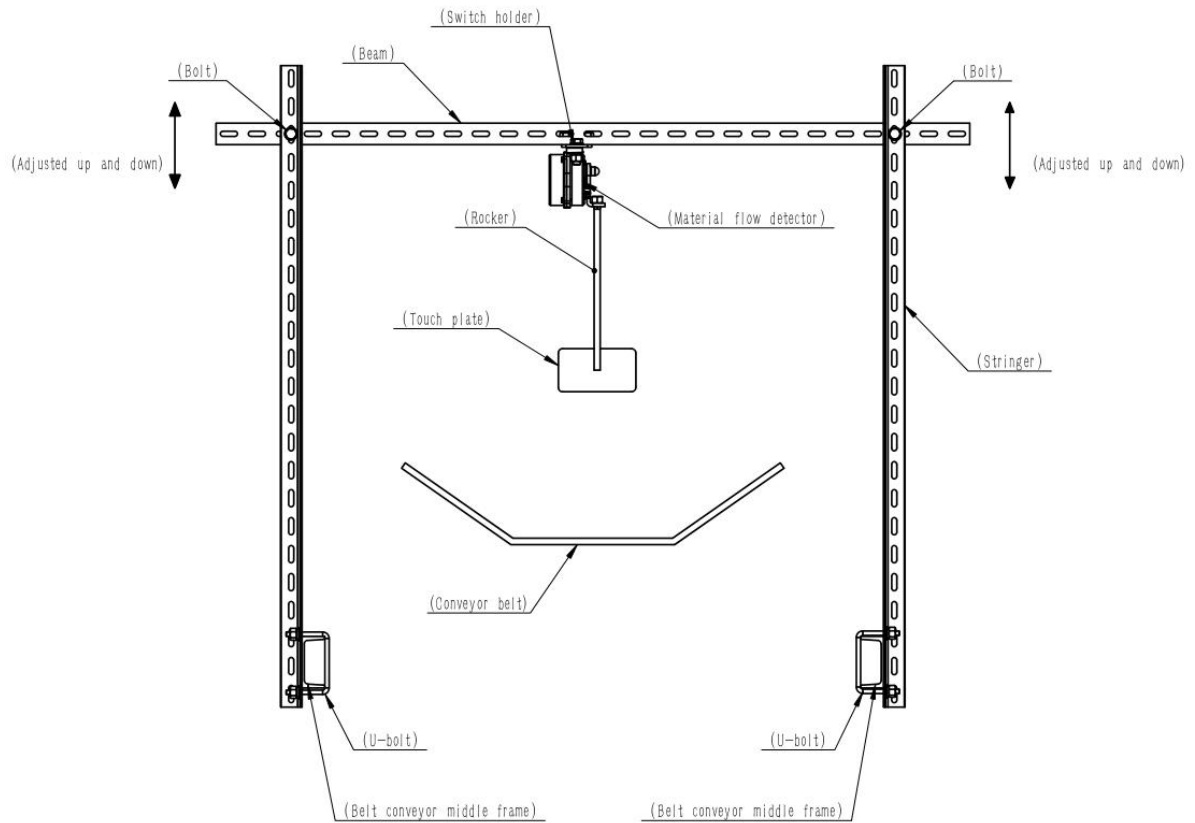


6.3.4. The feed flow detector is installed on the beam with a switch seat and secured with fasteners.



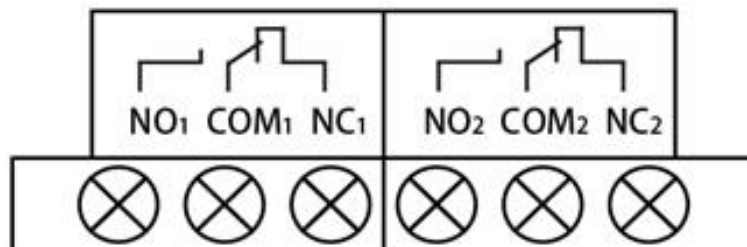
6.3.5. Use fasteners to fix the installed beam and longitudinal beam on both sides (pay attention to the running direction of the belt conveyor and the rotation direction of the material flow detector), observe and adjust the relative position of the contact plate and the belt, and finally lock the firmware. When the detector is used as a protection device, please adjust the height of the contact plate properly to ensure that the material does not touch the contact plate during transmission, so as to avoid false alarms.





## 6.4. Wiring principle

The detector has built-in wiring cavity. Open the side cover, have a row of 6P wiring terminals. Wiring terminals are marked with schematic diagram. If there is any exception, please refer to the circuit diagram on the switch.



Material flow detector wiring diagram

## 7. Working principle

When the conveyor runs without material, the contact plate is in a static state and perpendicular to the conveyor belt surface. When the conveyor belt runs with material, the contact plate is pushed by materials and deflected, when the deflection angle is more than  $20^\circ$ , the detector send out signal to realize the detection function.

## 8. Maintain

8.1. Regular check and tighten bolts and nuts in all parts;

8.2. Regular check the wear condition of contact plate, serious wear please replace in time.

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