



INSTRUCTION MANUAL

CONVEYER FLOW SWITCH

MODEL: PA-1E/2E EXPROSION PROOF TYPE

Meanings of indications for safety used in this Instruction Manual are as follows.



WARNING: Indicates that improper handling assumes the risk of a fatal or serious injury.



CAUTION: Indicates that improper handling assumes the risk of injury or damage to property only.

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1. Condition

This instrument is a product at the place where there is flammable vapors or combustible gas is present, to detect the presence or absence of material conveyors, ducts, in the chute. Hit by the material was put in place to paddle, switch contact output of the product instead. Is to be used to control the automatic operation of various transport machine, this output signal.

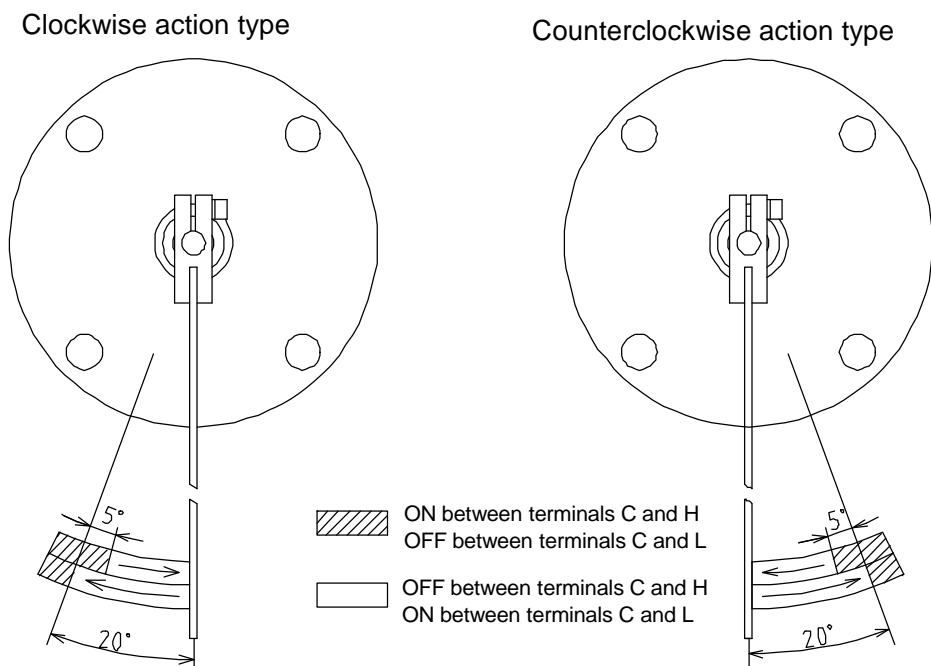
2. Outline

This product is a switch in which a signal is changed by a detected object pressing the blade.

The following diagrams show operating examples on the belt conveyor.

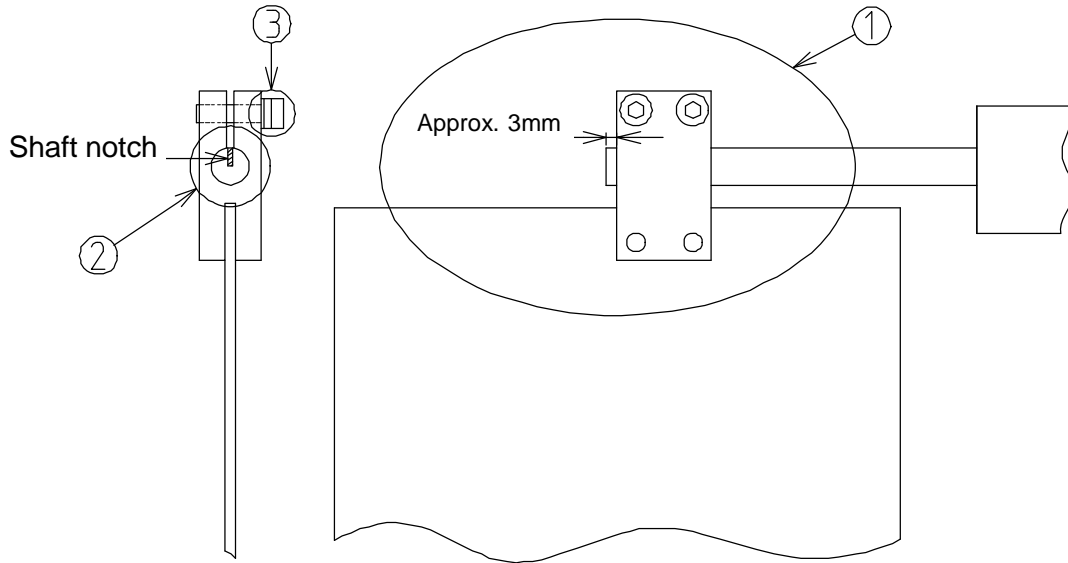
- ① Normally the blade is positioned at the standby position due to its own weight.
- ② The detected object pushes the blade up, and when the blade angle exceeds the operating angle, the signal is changed. As long as the detected object pushes the blade, this state is maintained.
- ③ If there is nothing to detect, the signal is returned.

The output is automatically switched as shown below. This product has a counterclockwise direction operation type and operation type clockwise direction.



3. Attachment of blade to shaft

- ① Insert a blade into the shaft while paying attention to the direction of the blade so that the main shaft protrudes by approximately 3mm.
- ② Adjust the notch of the shaft and the blade boss.
- ③ Reliably tighten the hex socket bolt (M5) to fix the product.



4. Model number

PA	-	2E	-	P
External pull-wire type				
P: Cable gland type				
Blank : Binding expressions screw pressure conduit				
Micro switch Rate				
Blank : AC250V 10A DC250V 0.3A DC125V 0.6A				
Z: AC250V 0.1A DC30V 0.1A				
Quantity of micro switch				
2E: 2 pcs				
1E: 1 pc				
Explosion proof type of Conveyor flow switch				

5. Specifications

Model		PA-1E	PA-2E
Installation method		Flange JIS5K65A (Equivalent)	
Output		1C	each
Contact capacity (resistance load)	Standard	250 V AC 10 A ; 250 V DC 0.3 A	
	Z type	250 V AC 0.1 A ; 30 V DC 0.1 A	
Operating angle (Standard)		Approximately 20°	
Hysteresis		Approximately 5°	
Materials used (main)	Blade	SUS304	
	Main shaft	SUS304	
	Protector tube	SUS304	
	Flanged case	Aluminum alloy	
	Cover	Aluminum alloy	
	Seal	Nitrile rubber, PTFE	
Working ambient temperature		-10~40°C	
Paint color	Case, cover	7.5BG 4/1.5	
Protection level		Explosion proof d2G4	

6. Wiring

6-1 Detachment and attachment of cover

- The cover can be attached by screwing.
- To remove the cover, loosen the screw while paying attention to the O-ring. When attaching, check that the O-ring does not twist, sufficiently tighten the screw, and reliably screw.



Caution

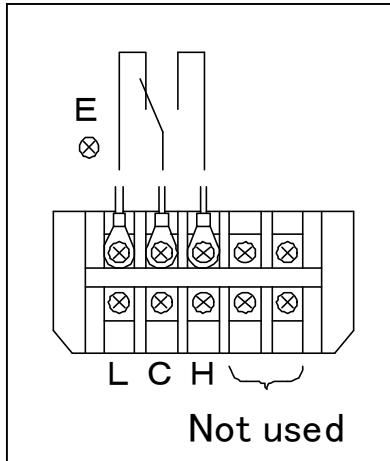
Sufficiently and reliably screw the cover.

If the product is used outdoors, rainwater and dust will enter, and this may cause a failure.

6-2. Output

(1) P A - 1 E (when nothing is detected)

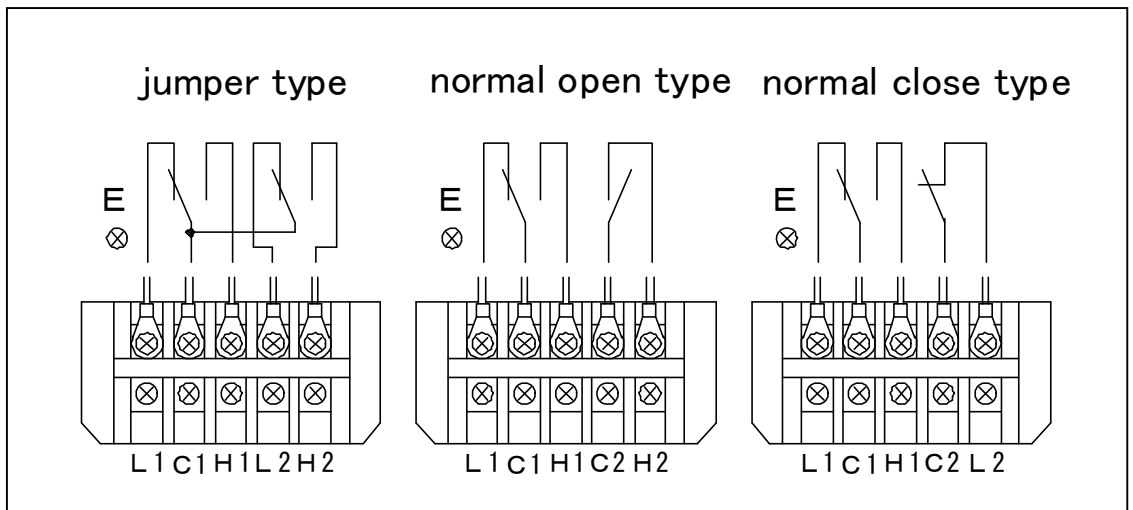
E is the internal gland terminal. The external ground terminal is located on the side of the terminal box.



(2) P A - 2 E (when nothing is detected)

There are three circuits, please confirm based on the circuit was to specify.

E is the internal gland terminal. The external ground terminal is located on the side of the terminal box.



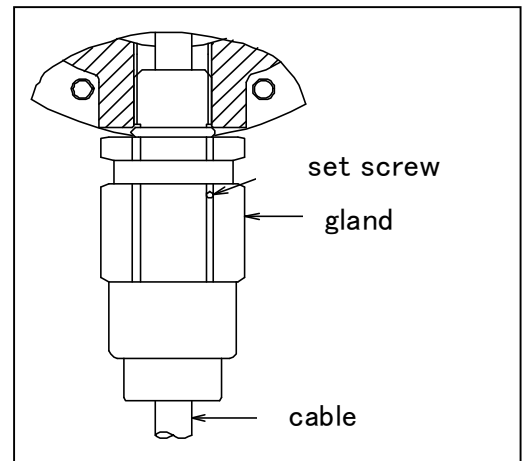
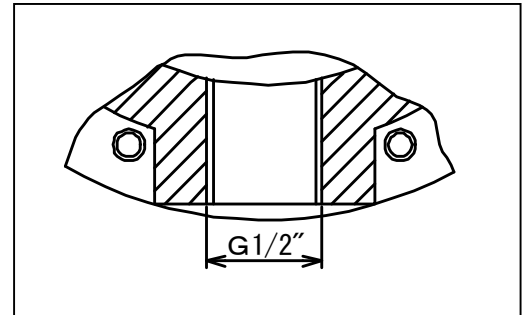
6 – 3. Method of wiring for terminal box

When drawn into the terminal box external conductors, please make sure that either method of the following points.

a. Lead-screw pressure conduit method binding expression Draw the external conductor, screw the sealing conduit and operating to Fitch(G1/2) service entrance conductors. Use the external conductor insulated wire. Tightening on the mountain was bound over in the effective portion of the screw 5, using the lock nut.

b. Cable gland type (order separately)
There is a back and forth through the cable is no longer (※) , and go by screwing down the ground cable. Tighten 1.5~2mm from where this cable is no longer move. Please tighten the set screw tightened after the loosening of ground (about on revolution to 1.5)

※ No gap between the interior of the cable as the influx of flammable gas in difficult thing is finished
Diameter $\phi 1\sim 12\text{mm}$. Please use one cross-section of the cylinder surface is smooth with no internal gaps.



7. Construction

7-1. Protect tube

