

# SRT CONVEYER BELT MISALIGNMENT SWITCH OPERATION MANUAL

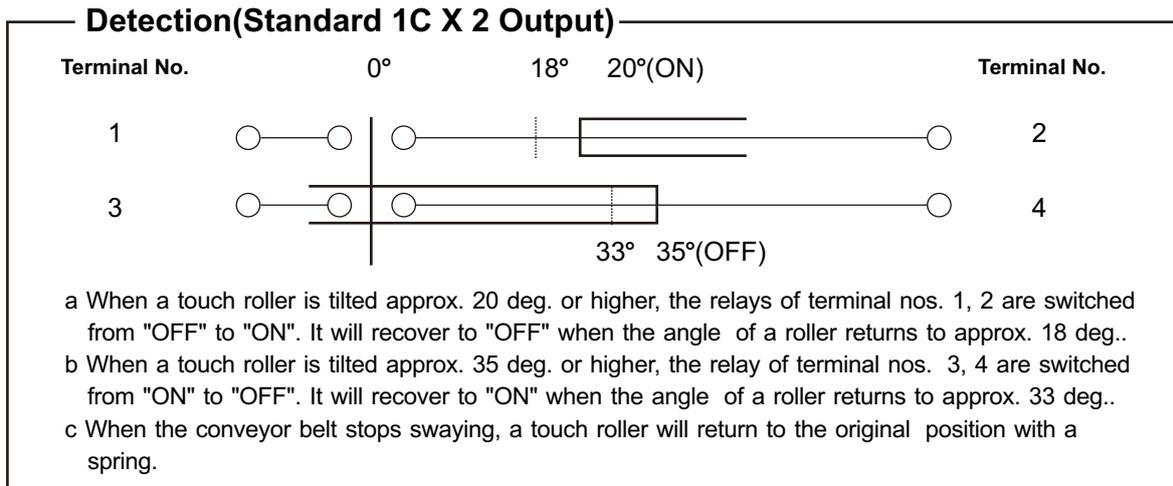
## 1. CONSTRUCTION

Fig.1 shows the construction of the Belt Sway Switch.

The touch roller ① is inclined by the deviation of the conveyor belt from a vertical position to 75°, and when the deviation is restored, the touch roller ① is returned by spring ④ to a vertical position.

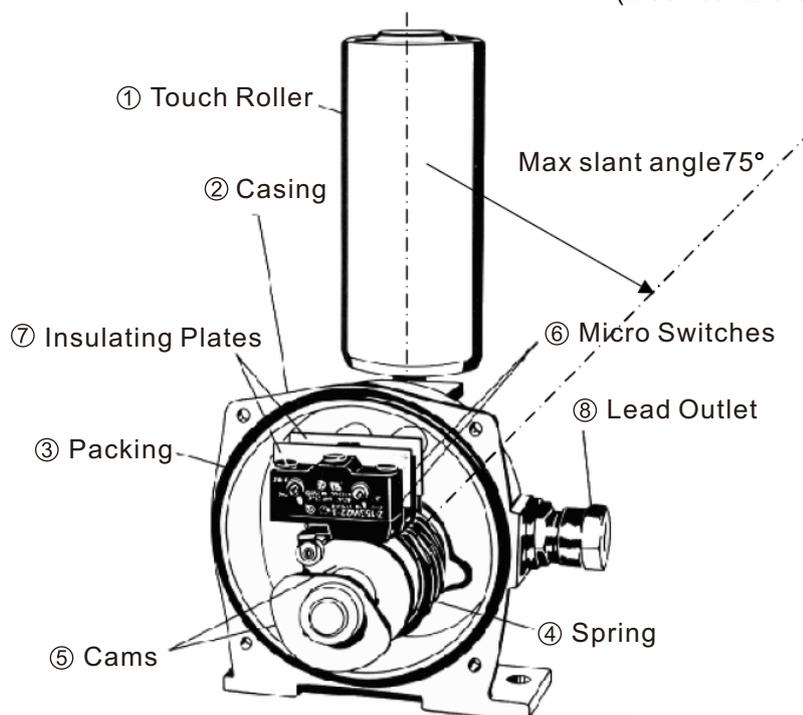
The cams ⑤ turn on or turn off the contacts of the micro switches ⑥ when the incline of the touch roller ① reaches preset degree. When the touch roller ① is above a 20° incline, the micro switch ⑥ with terminals marked 1 and 2 closes and sets off an alarm signal.

When above 35°, the micro switch ① marked 3 and 4 opens and signals an emergency stop.



In case of one contact (microswitch) output specification, Terminal No. 1-2 only.

- Number of contact: 1C x 2 output (standard)  
1C x 1 output (special)
- Allowable switching frequency: 20 times/min.
- Insulation resistance: over 100MΩ
- Dielectric strength: 2000Vac 1min
- Lifetime: over 500,000 times  
(Electrical Life of Micro Switch)



**Fig.1 Construction of Belt Sway Switch**

## 2. ENVIRONMENTAL CONDITIONS

The Belt Sway Switch should be used in the following environmental conditions; specially made products should be used at the allowable conditions noted in the approved drawing or the final drawing.

### 2-1 Temperature: -20°C~+50°C

Do not use the Belt Sway Switch in the place where there is danger of freezing.

### 2-2 Humidity 20~ 80%

### 2-3 Dust

If much dust adheres to the touch roller and it solidifies the Belt Sway Switch will not move normally. To prevent dust from adhering to the touch roller, it should be cleaned at regular intervals.

### 2-4 Explosive and Corrosive Environment

The standard Belt Sway Switch should never be used under these conditions.

## 3. INSTALLATION

### 3-1 Fitting bolts

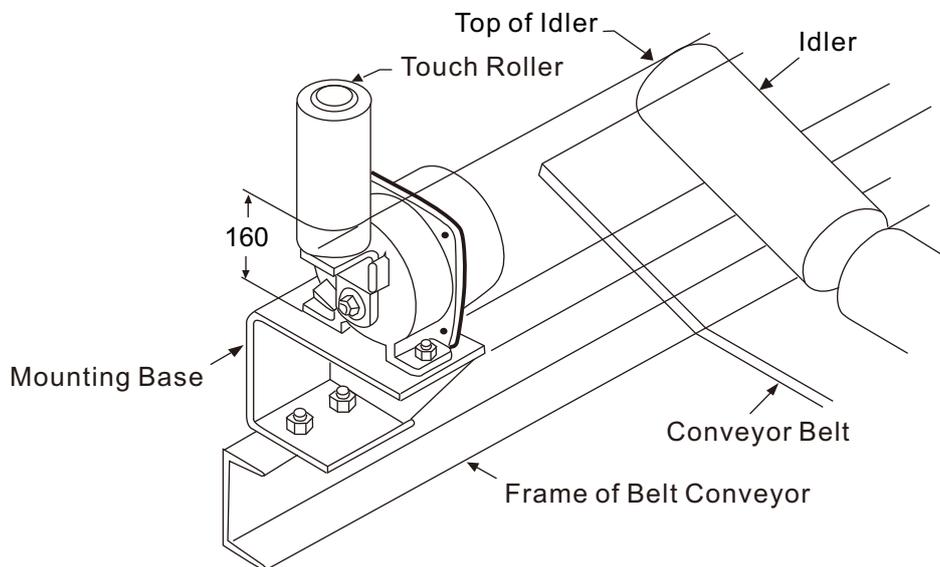
The fitting bolts should be prepared before installation, and should be fitted into the mounting holes according to their length.

### 3-2 Mounting Base

The mounting base fitted to the belt conveyor should be prepared before installation. When you are deciding the dimensions of the mounting base, refer to Fig.2.

### 3-3 Installation

Fig.2 shows an example of installation of the Belt Sway Switch. The dimension from the position of installation to the top of the idler of the belt conveyor should be fixed at 160 mm.



**Fig.2 An Example of Installation of Belt Sway Switch**

## 4. WIRING

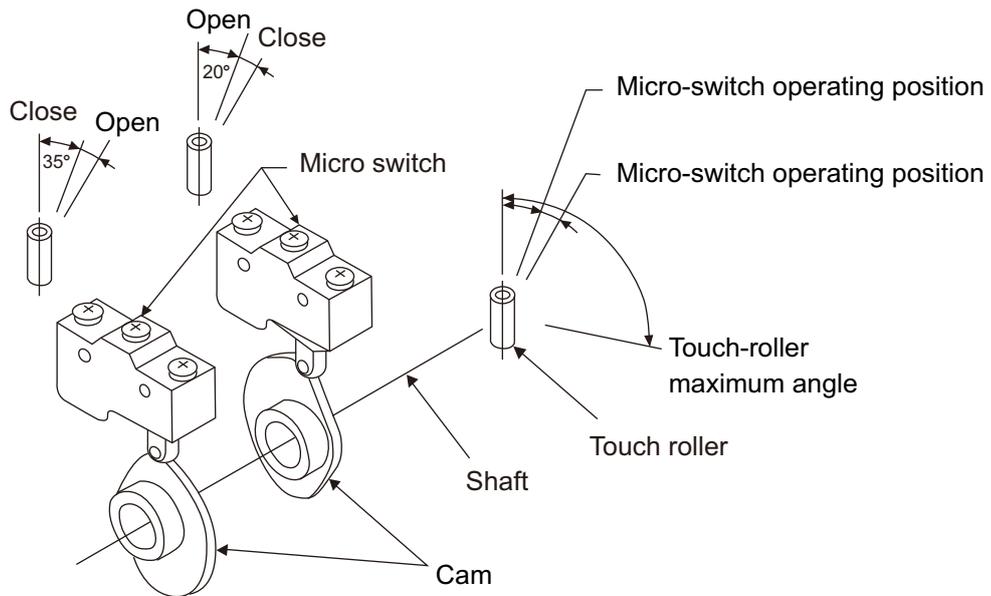
### 4-1 Cable

When wiring, please use cable with external diameter is 6~12 mm.

### 4-2 Connection

The Belt Sway Switch has two micro switches.

Connect wire leads terminals according to your use.

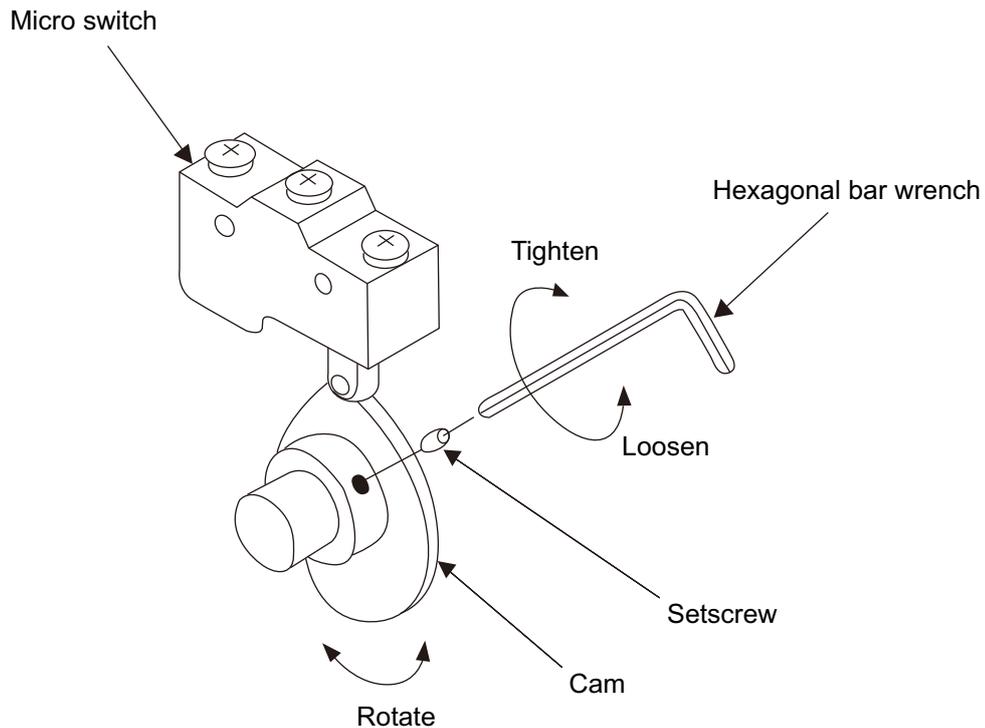


**Fig.3 Micro-switch Operating Positions**

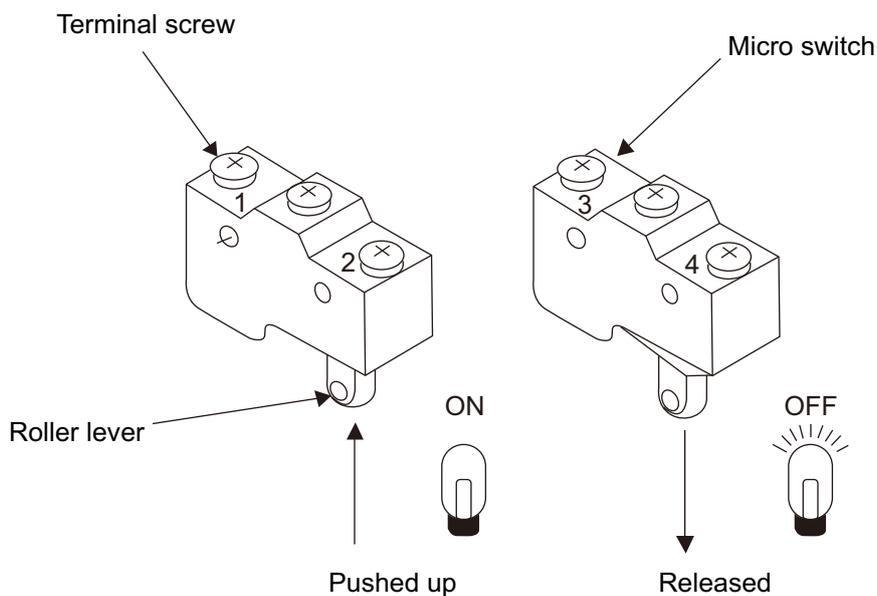
## 5. ADJUSTMENT

The Belt Sway Switch is adjusted before shipment, so no adjustment is required at installation. If adjustment of the operating positions of the micro switch is necessary, adjust the positions in the following manner.

- 5-1 Loosen the setscrew using a hexagonal bar wrench as shown in Fig 4 so that the cam can be moved smoothly.
- 5-2 Rotate the cam to the desired angle, and tighten the setscrew.
- 5-3 Move the touch roller to confirm that the micro switch is activated at the desired angle.



**Fig. 4 Adjustment of Cam**



**Fig. 5 Operation of Micro switch**

## 6. MAINTENANCE

### 6-1 Periodic Inspection

#### (1) Cleaning

Cleaning Always clean when an excessive amount of dust accumulates on the touch roller ①

#### (2) Wear of Touch Roller

Check wear of the touch roller ① . When 2 millimeters are worn off the roller, replace as explained in 6-

3.

#### (3) Confirmation of Action

Check to see if the Belt Sway Switch is working normally by testing the touch roller.

### 6-2 Lubrication

The Belt Sway Switch has no need to lubricate.

### 6-3 Replacement of Touch Roller (Refer to Fig.6)

By loosening the M12 screw nut, the touch roller can be taken off easily from the lever.

Secure the nut . when the touch roller is replaced , or the Belt Sway Switch may cause trouble if the nut comes loose .

### 6-4 Tightening of Cover

When taking off the cover of Belt Sway Switch for the sake of writing, adjusting and checking, secure the screws of the cover after working, or the Belt Sway Switch may cause trouble due to water and dust entering from between the cover and casing.

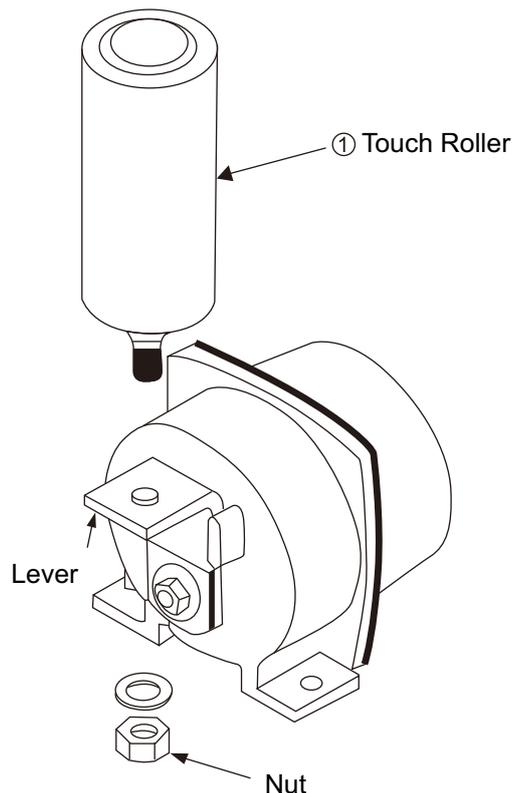


Fig.6 Replacement of Touch Roller