

# BELT SPEED DETECTOR



## NO.1 INTRODUCTION

Belt skid detector (also called belt stall detector) is used to detect skidding malfunctions between belt and driving roller, it can avoid occurring serious accident by skidding malfunctions. It's widely used at the field of steel plant, power plant, mines and port.

## NO.2 WORKING PRINCIPLE

Install belt skid detector on conveyor frames between elevating belt and downward belt, proper pressure between touch-wheel of belt skid detector and belt is needed. There is no need of power of belt skid detector, when speed of belt conveyor is slower than set value, belt skid detector will output control signal, speed can be adjust as per requirement.

## NO.3 STRUCTURE FEATURES

Belt skid detector is consisted by relay, connecting shaft, touch-wheel and bracket, etc. Install simply and safety. Shell is made from aluminum alloy, surface is handled by electrostatic plastic spraying coating technology. Protection level can reach IP 67, it can work under severe conditions.

## NO.4 INSTALLATION

Weld frame on conveyor, fix bracket on frame by pin roll and cotter pins. Distance between touch wheel and belt edge is about 200-300 mm.

## NO.5 USER MANUAL

1. Start power, red light glitter, if not reach set rotate speed within 8 seconds, relay alarms, red light and green light glitter together, if reach set rotate speed, red light is always normal and enter into detection state;
2. After enter into detection state, from the first signal of deficiency of speed, if deficiency speed continues for 15 seconds, relay alarms, and green light glitter.
3. Continuously 3 seconds exceed set rotate speed, alarm cancel.
4. Press test key of simulation deficiency speed, alarm.
5. Set rotate speed
  - 1 ) 0.5 m/s 2 ) 1.0 m/s 3 ) 1.5 m/s 4 ) 2.0 m/s
  - 5 ) 2.5 m/s 6 ) 3.0 m/s 7 ) 3.5 m/s 8 ) 4.0 m/s



switch dials to ON position, for n, alarm rotate speed is 1.0 m/s,

Connection cables and Diagram

Red cable & blue cable: input AC 220V power;

Black cable: output relay, common port

## NO.6 MAIN TECHNICAL PARAMETERS

Working voltage: AC220V,  $\pm 15\%$ ;

Contact capacity: AC250V/2A;

Working temperature range:  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ;

Detect type: Contact photoelectric

Output contact: 2 normal open, 2 normal close;

Detector range: 0.2 m/s to 5.0 m/s; (dial switch adjustment)

Protection level: IP 67;

Communication: RS-485 address coding terminal device;

Communication distance: 6-core TP cable: 1.2 KM, optical cable: 50 KM.

### BELT SKID DETECTOR CONNECTION CABLE DIAGRAM

