

Touchswitch™

Belt & Pulley Misalignment Sensor

APPLICATION

Detects belt tracking and misalignment problems on bucket elevators and conveyors.

METHOD OF OPERATION

The Touchswitch is an electro-mechanical limit-switch with no moving parts, which detects tracking and misalignment problems on bucket elevators and conveyors.

When a belt misaligns or a pulley moves over and contacts the sensor, the built in solid-state electronic circuitry detects the lateral force of the belt or pulley and activates a voltage free relay contact. This relay contact is used to immediately alarm and shutdown the machine.

The face of the sensor is made from hardened and annealed stainless steel, not soft brass or aluminum, so wear life is longer when a belt contacts it. The sensor is not affected by dust or material build up and will still work when completely covered by material. An external test knob allows for quick and simple sensor/system testing.

The sensors are usually installed in pairs on opposite sides of the machine. The sensors can be connected directly to a PLC input, or for greater safety, to a central independent monitoring system, such as the T500 Hotbus or the Watchdog Elite.

FEATURES

- ▶ No Moving Parts
- ▶ Immediate Misalignment Signal
- ▶ Changeover Relay Contact Output
- ▶ Adjustable Sensitivity
- ▶ External Test Function
- ▶ Not a "Rub" Block
- ▶ CSA Class II Div. 1 Approved

PART NUMBERS/ACCESSORIES

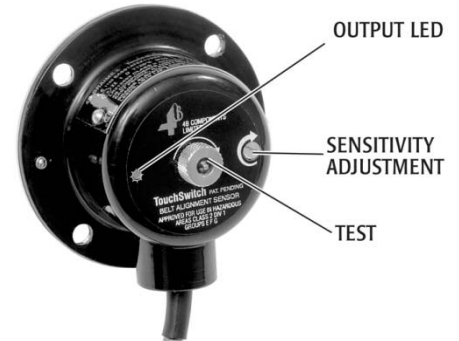
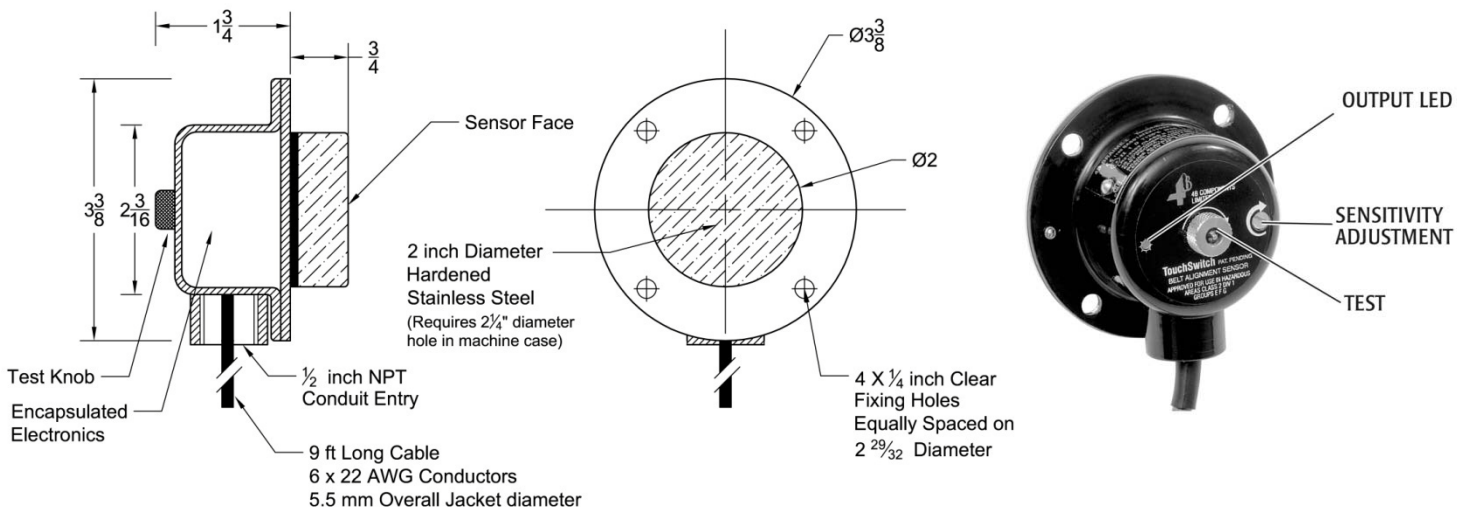
- ▶ TS2V3C Touchswitch 12 VDC
- ▶ TS2V4C Touchswitch 24 VDC
- ▶ PS3500V3 12 VDC Power Supply
- ▶ PS2000V4 24 VDC Power Supply
- ▶ T5001V46C T500 Hotbus Monitoring System
- ▶ WDC3V46C Watchdog Elite Monitoring System
- ▶ B4004V46C B400 Elite Misalignment Monitor



U.S. Patent # 6,731,219
Other Patents Pending



ATEX Approved
Versions Available



Connect the Touchswitch directly to a PLC, or use with the optional T500 Hotbus and Watchdog Elite digital monitoring systems for conveyors or bucket elevators. Belt alignment, belt speed, bearing temperature, pulley alignment, and plug condition monitoring in one complete standardized system.



Enclosed Belt Conveyor Application



Open Belt Conveyor Application

TECHNICAL SPECIFICATIONS

Touchswitch - Belt and Pulley Misalignment Sensor

TS2V3C or TS2V4C	
Supply:	12 vdc (TS2V3C), 24 vdc (TS2V4C)
Power Consumption:	60mA (TS2V3C), 50mA (TS2V4C)
LED Indication:	Red LED indicates unit is powered up and relay is energized
Adjustment:	Force sensitivity adjustment screw (1 to 12 lbs. approx.). Factory set to 8lb (3.6 Kg) approx.
Output:	Voltage free changeover relay contact rated at 5A 250 VAC, non-inductive
Body Construction:	Pressed seamless steel with epoxy paint
Face Construction:	Hardened and annealed stainless steel
Conduit Entry:	1/2" NPT
Cable Length:	9ft (3M)
Conductors:	6 at 22awg
Weight:	3 lbs
Approvals:	CSA Class II Div 1 Groups E, F, G (US and Canada), ATEX and CE (versions available)
Protections:	NEMA 4X, IP 65
Dimensions:	3.5" (89 mm) Diameter x 1.75" (44.5 mm)